

PORT OF BROOKINGS HARBOR
Special Commission Meeting
Thursday, March 24, 2022 • 2:00pm
Teleconference / Meeting Room *(limited capacity)*
16350 Lower Harbor Road Suite 202, Harbor OR, 97415

Teleconference Call-In Number: 1 (253) 215-8782

Meeting ID: 771 205 4017

Passcode: 76242022

(to mute/unmute: * 6)

TENTATIVE AGENDA

1. CALL MEETING TO ORDER

- Roll Call
- Modifications, Additions, and Changes to the Agenda
- Declaration of Potential Conflicts of Interest

2. APPROVAL OF AGENDA

3. PUBLIC COMMENTS – (Limited to a maximum of three minutes per person. Please email your comments to portmanager@portofbrookingsharbor.com prior to the meeting, if you are calling in.

4. ACTION ITEMS

- A. Special District Insurance Services Employee Health Care Plan Renewal
- B. Budget Committee Members
- C. FEMA Project Preliminary Drawings & Update

5. INFORMATION ITEMS

- A. None

6. COMMISSIONER COMMENTS

7. NEXT REGULAR MEETING DATE – Wednesday, April 20, 2022 at 2:00pm

8. ADJOURNMENT

A request for an interpreter for the hearing impaired, for those who want to participate but do not have access to a telephone, or for other accommodations for persons with disabilities should be made at least 48 hours in advance of the meeting to Port of Brookings Harbor Office at 541-469-2218.

ACTION ITEM - A

DATE: March 24, 2022
RE: Special District Insurance Services Employee Health Care Plan Renewal
TO: Honorable Board President and District Board Members
ISSUED BY: Gary Dehlinger, Port Manager

OVERVIEW

- Special Districts Insurance Services (SDIS) provides our Port employees their health care plan.
- The medical/rx plan remains the same as last year, no cost increase.
- The dental plan increased 4.5%.
- Port staff recommends continuing with the current plan for the next year.

DOCUMENTS

- SDIS Renewal Application, 8 pages

COMMISSIONERS ACTION

- **Recommended Motion:**
Motion to approve SDIS employee health care plan renewal and authorize the Port Manager to sign the renewal document.



Dear Valued District Member,

Enclosed please find your 2022 Special Districts Insurance renewal packet containing your district's health plan renewal.

We're excited to share that the overall required increase for the medical/rx plan is a modest 2.7% for the 2022 plan year. (Our plans are demographically rated, so the actual renewal increase to your plan may be higher or lower, depending on your plan enrollment.)

**** OFCA rates differ.**

- We're including a graph of the plan's incurred loss ratio. The plan claims experience is improving over the past few years. Note that the optimal result is between 90-100%, as an average.
- The state of Oregon, and therefore SDIS, has adopted both chiropractic spinal manipulations and acupuncture as essential benefits. This means there will be no annual dollar maximums for these services going forward and all member cost share will count towards the out-of-pocket maximum.
- There are no other changes to the medical/rx plans or reductions in coverage.
- If you participate in our Delta Dental plans, the needed increase is 4.5%.
- **** OFCA rates differ.**

A few reminders about your plans with SDIS:

1. **Canopy (formerly Cascade Centers EAP):** All members covered by the SDIS medical/rx plan have access to services offered by Canopy at **no additional charge**. This plan was added last year at renewal, and we're pleased to say that many members are taking advantage of the broad resources that Canopy offers.
****OFCA & Public Safety districts will continue using our Public Safety EAP benefit****
2. **MDLIVE:** Don't forget about your telehealth/virtual option that is available to you and your enrolled dependents 24/7. If you haven't yet, register with MDLIVE to activate your account so it will be ready to use when you need it. There is no copay to use this service.
3. **Regence ID Cards:** New ID cards will be mailed out to all members by mid-June.
4. **Agents** will help your district in completing the 2022 Master Application renewal process.

Thank you for your partnership, and the confidence you've placed in Special Districts as your health plan of choice.



PORT OF BROOKINGS HARBOR

Quote February 17, 2022 for rates effective July 1, 2022

The premiums shown below are based on census data submitted with your proposal request. Final rates may vary if actual enrollment differs from the original census.

Minimum Employer Contribution Requirement: 75% employee & 0% dependent OR 50% employee & 50% dependent.

Minimum Participation Requirement: 75% of eligible employees & 75% of eligible dependents.

The premiums below will require review if the effective date is after: July 1, 2022

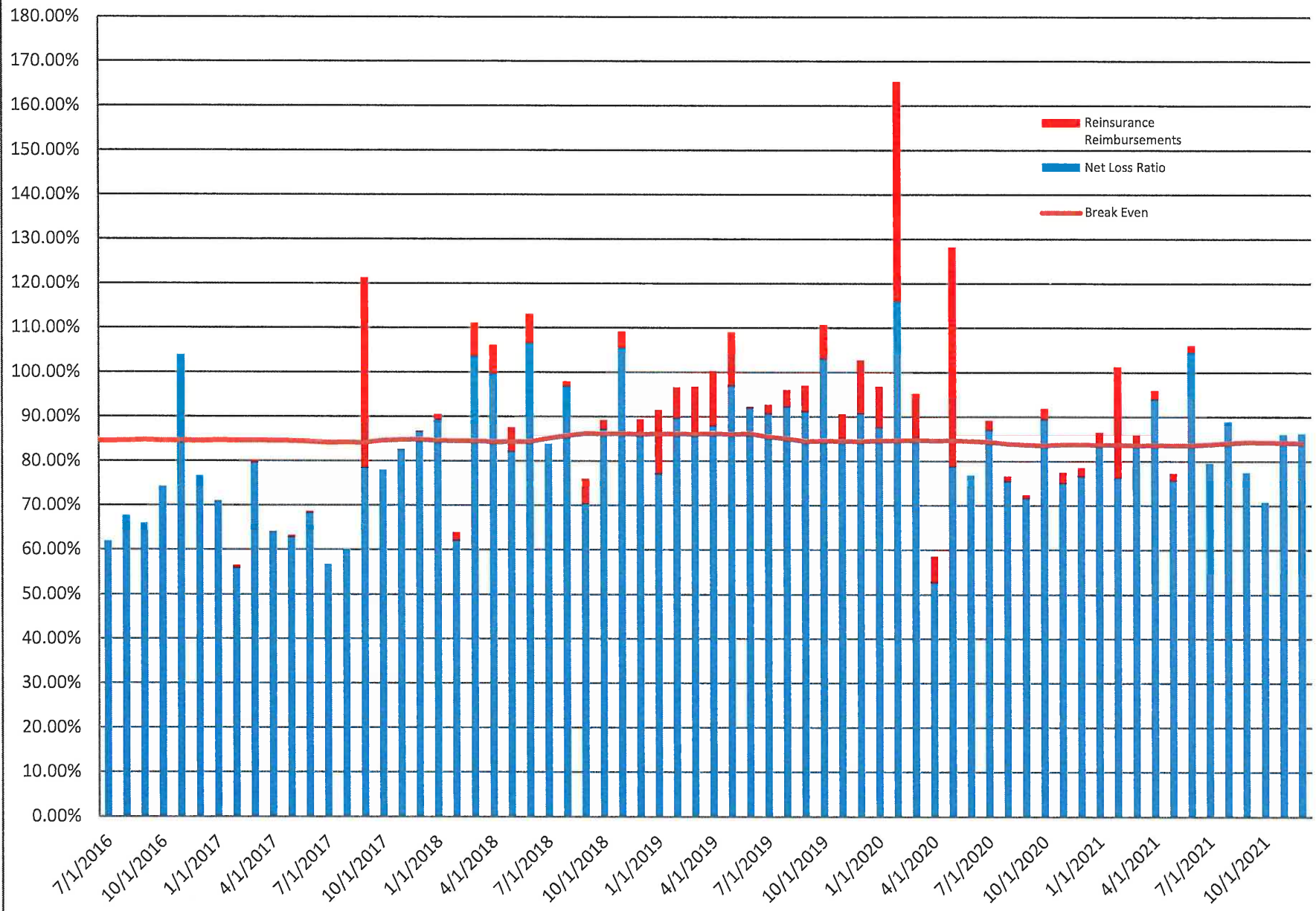
Census Counts					
	Employee Only	Employee + Spouse	Employee + Family	Employee+ Child(ren)	Total
Subscribers	9	1	0	1	11

Medical Benefit Options Available					
Plan	Employee Only	Employee + Spouse	Employee + Family	Employee+ Child(ren)	Total Monthly Premium
Blue PPO II	\$978.81	\$1,957.62	\$2,789.60	\$1,810.80	\$12,577.71
Blue PPO II-A	\$934.10	\$1,868.21	\$2,662.20	\$1,728.09	\$12,003.20
Blue PPO III	\$896.46	\$1,792.91	\$2,554.90	\$1,658.45	\$11,519.50
Blue PPO IV	\$832.93	\$1,665.85	\$2,373.84	\$1,540.91	\$10,703.13
Blue PPO V	\$802.34	\$1,604.68	\$2,286.66	\$1,484.33	\$10,310.07
Blue PPO VI	\$764.69	\$1,529.39	\$2,179.38	\$1,414.69	\$9,826.29
Blue PPO VII	\$741.16	\$1,482.33	\$2,112.32	\$1,371.15	\$9,523.92
Red PPO C	\$884.69	\$1,769.38	\$2,521.37	\$1,636.68	\$11,368.27
Red PPO D	\$851.75	\$1,703.51	\$2,427.49	\$1,575.74	\$10,945.00
Red PPO E	\$790.58	\$1,581.15	\$2,253.15	\$1,462.57	\$10,158.94
Red PPO F	\$755.28	\$1,510.56	\$2,152.56	\$1,397.27	\$9,705.35
Red PPO H	\$712.93	\$1,425.86	\$2,031.85	\$1,318.92	\$9,161.15
Red PPO J	\$691.75	\$1,383.51	\$1,971.49	\$1,279.74	\$8,889.00
Red PPO K	\$672.93	\$1,345.86	\$1,917.85	\$1,244.92	\$8,647.15
Red PPO L	\$649.40	\$1,298.80	\$1,850.79	\$1,201.39	\$8,344.79
HSA #1	\$590.58	\$1,181.16	\$1,683.15	\$1,092.57	\$7,588.95

Dental Benefit Options Available					
ODS Premier Network	Employee Only	Employee + Spouse	Employee + Family	Employee+ Child(ren)	Total Monthly Premium
Constant Dental Plan (Option I)	\$54.85	\$99.55	\$144.34	\$104.26	\$697.46
Incentive Dental Plan (Option II)	\$59.16	\$108.29	\$157.38	\$112.56	\$753.29
Willamette Dental-Ortho Included					
WDG Standard Plan (Option III)	\$46.65	\$91.60	\$140.45	\$94.55	\$606.00
WDG Standard Plan (Option IV)	\$57.75	\$113.30	\$173.75	\$117.05	\$750.10

Current Rate					
Plan	Employee Only	Employee + Spouse	Employee + Family	Employee+ Child(ren)	Total Monthly Premium
Med	\$741.16	\$1,482.32	\$2,112.31	\$1,371.15	\$9,523.91
Dental (Premier Constant)	\$52.49	\$95.26	\$138.12	\$99.77	\$667.44

SDIS - Medical/Rx/Vision/Dental Loss Ratio - (Incurred & Trended)



2022 SDIS Life & Disability Plans with Standard

The rates for the Life/AD&D plans as well as the STD plans are charged on a Per Employee Per Month (PEPM) basis. The LTD plans rates are charged as a percent of covered payroll.

Life /AD&D Plans

	Option 1	Option 2	Option 3	Option 4
Life/AD&D Schedule	\$10,000	\$20,000	\$50,000	1 X Annual Salary
Rates- PEPM	\$2.37	\$4.73	\$11.84	\$12.08
Dependent Life	\$5,000	\$5,000	\$5,000	\$5,000
Rates-PEPM	\$1.81	\$1.81	\$1.81	\$1.81

Short-Term Disability Plans

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
STD Plan	\$100 per week	\$100 per week	\$200 per week	\$200 per week	60% to \$900 per week	60% to \$900 per week
Duration	Up to 90 days	Up to 180 days	Up to 90 days	Up to 180 days	Up to 90 days	Up to 180 days
Rates-PEPM	\$4.86	\$6.68	\$9.68	\$13.35	\$20.70	\$24.84

Long-Term Disability Plans

	Option 1	Option 2
LTD	60% to \$5000	60% to \$5000
Elimination Period	90 Days	180 Days
Benefit Duration	SSNRA	SSNRA
Rates- PEPM	0.525% of covered payroll	0.415% of covered payroll

All LTD participants are also covered by Standard's EAP program.

Note: A current census is required to confirm the monthly premium for a LTD proposal.

Master Application Instructions for 2022

NO CHANGES? 3 STEPS

1. **Add district name-** see Page 1, General Information
2. **Check YES box-** see Page 1, General Information

Renew ALL Coverages AS-IS? Yes No



3. **Add contact information and sign** – see Page 3, Contact Information

Any district making changes to their coverage options, please fully complete and sign the application.

NOTE: SDIS must receive an individual enrollment form from each enrolling employee. Please submit all completed forms for your district to SDIS by May 1, 2022.

We also recommend giving a copy of each enrollment form to your payroll department so that they may initiate payroll deductions for participating employees for coverage beginning 7/1/2022.

**Please return all Master Applications by May 1
to Shelly Barker at Special Districts.**

sbarker@sdao.com

SPECIAL DISTRICTS INSURANCE SERVICES

Master Application and Renewal Confirmation Form for Group Benefit Coverage: 2022



GENERAL INFORMATION

Legal Name of Employer: _____

Business Street Address: _____

City: _____ Zip Code: _____ County: _____

Billing Address (if different than above): _____

City: _____ State: _____ Zip Code: _____

Phone No.:(_____) Fax No.:(_____)

E-Mail Address: _____

Type of District: _____ Federal I.D. No.: _____ SIC No. 9199

Name of Contact: _____ Title: _____

Renew ALL Coverages AS-IS? Yes No

If you checked **Yes** to Renew ALL coverage AS-IS, please proceed to page 3 and complete Contact Information

Internal Use Only:

Regence Group#: _____ Delta Dental Group#: _____ SDIS Group#: _____ WVD Group# _____

EXISTING INSURANCE INFORMATION

Workers Compensation / State Industrial Carrier: _____ Policy No.: _____

Are you replacing existing **group** insurance? Yes No Carrier: _____ Group No.: _____

PLAN INFORMATION

The requested **effective date** for the policy is JULY 1, 2022

Hours per week employees must work to be eligible for benefits: _____ hours per week (17.5 to 30 hrs.)

Probationary Period - New Employees are eligible for coverage the first of the month following: Date of hire 30 60 days

If probationary period is "Date of hire", is an employee hired on the first calendar day of the month eligible that same day? Yes No

In addition to same-sex domestic partner coverage, employer would like to offer opposite-sex domestic partner coverage Yes No

Employer contribution toward employee premium (percent): Employee: _____ % Dependent: _____ %

Minimum Contribution Requirements: 75% employees & 0% dependents **-OR-** 50% employees & 50% dependents

Minimum Participation Requirements: Dental Only – 100% of eligible employees & 75% of eligible dependents

Medical or Medical/Dental – 100% of eligible employees & 75% of eligible dependents if less than 5 employees

75% of eligible employees & 75% of eligible dependents if 5 or more employees

Those employees that waive due to other group coverage are excluded from participation requirements.

Does your group have an HRA or HSA? Yes No If yes, what does the employer contribute to the account: \$ _____

What is the name of your current health & dental insurance company? Health _____ Dental _____

PROBATIONARY PERIOD AND PEOPLE TO BE INSURED

Applications must be submitted for all employees and dependents to be insured.

_____ Total number of employees (include those who do not qualify for coverage)

- _____ Number of On-Call, Temporary, Substitute, Leased, and Seasonal employees

- _____ Number of employees who do not qualify due to working less than minimum hours

- _____ Number of employees who do not qualify due to eligibility waiting period requirement

- _____ Number of employees waiving coverage due to other group coverage (must submit waivers)

= _____ Total actual number of eligible employees to be insured

Employees on continuation of coverage: Applications must be submitted for all employees on continuation.

NAME	CONTINUATION EFF DATE	QUALIFYING EVENT
_____	_____	_____
_____	_____	_____
_____	_____	_____

BENEFIT PLANS REQUESTED

REGENCE MEDICAL Yes No If yes, choose a plan, or plans below.

Single Option Dual Option (Available to groups with a minimum of 10 participating employees, with no less than Five on a plan.)

Blue Options – Packaged

- PPO II – \$200 deductible
- PPO IIA – \$300 deductible
- PPO III – \$500 deductible
- PPO IV – \$1,000 deductible
- PPO V – \$1,500 deductible
- PPO VI – \$2,000 deductible
- PPO VII – \$2,500 deductible

Red Options – Packaged

- PPO C – \$300 deductible
- PPO D – \$500 deductible
- PPO E – \$1,000 deductible
- PPO F – \$1,500 deductible
- PPO H – \$2,000 deductible
- PPO J – \$2,500 deductible
- PPO K – \$3,000 deductible
- PPO L – \$5,000 deductible

HSA Plans

- HSA 1 – \$3,000 deductible

All Blue, Red and White medical plans include pharmacy, acupuncture/chiropractic, vision and Telehealth/MDLive. All HSA plans include pharmacy, vision and Telehealth/MDLive.

DELTA DENTAL PLAN OF OREGON DENTAL

Yes No If yes, choose a plan below.

- Constant Dental Plan Preventive, \$25 deductible, \$1500 annual maximum
- Incentive Dental Plan Incentive, \$0 deductible, \$1500 annual maximum

NOTE: A minimum of 10 employees must be enrolled to elect "dental only" coverage.

DELTA DENTAL PLAN OF OREGON DENTAL ORTHODONTIA

Yes No

- Ortho 1500 – 50% to \$1500 annual max, no age limit – Only available to employers with 15 or more enrolled employees

WILLAMETTE DENTAL GROUP PLANS

Yes No If yes, choose a plan below

- Standard Dental Plan \$15 General Office Visit Copay, \$0 Deductible, No Annual Maximum, Orthodontia Co-Pay \$2,500
- Enhanced Dental Plan \$15 General Office Visit Copay, \$0 Deductible, No Annual Maximum, Orthodontia Co-Pay \$1,500

Underwritten by Willamette Dental Insurance, Inc. 6950 NE Campus Way, Hillsboro, Oregon, 97124

LIFE & DISABILITY

Yes No

Group Life Insurance

- Option I - \$10,000
- Option II - \$20,000
- Option III - \$50,000
- Option IV – 1 x's Salary

Short Term Disability

- Option I Option IV
- Option II Option V
- Option III Option VI

Long Term Disability

- Option I
- Option II

Select only one (applies to Long Term Disability only):

- Employer pays 100% of premium
- Employer pays 0% of premium
- Employer & Employee share premium

Termination of Coverage

- Terminate the following coverage at renewal: Medical Dental All Lines of Coverage
 Other: _____

Reason: _____ Name of New Carrier: _____

DOCUMENT DISTRIBUTION

Electronic copy: An electronic copy of your member Summary Plan Description (SPD) and summary (SBC) **will be emailed to you** once your group has been processed. This searchable format can also be saved to your intranet or computer system for employee access.

IMPORTANT INFORMATION

Affordable Care Act – For more information on the following brief guidelines, consult with your legal or tax advisors for advice.

- **Probationary** waiting periods cannot exceed 60 calendar days. Groups may select first of the month following 1, 30, or 60 calendar days.
- Groups that have eligibility and benefit packages that favor highly compensated employees may face a penalty. You can offer coverage to all employees that meet your hourly requirement and probationary waiting period **or** conduct IRS **nondiscrimination** testing. Groups must set their hourly requirement at no more than 30 hours per week.
- **Medical plan packages** are packaged with ancillary benefits such as vision.
- **Pediatric vision and pharmacy** are required essential health benefits (EHB) for employers and are now in medical coverage.
- **Domestic partners** that meet certain criteria are eligible dependents. If not registered with a state, a signed affidavit must be submitted with the enrollment application.

SIGNATURE – PLEASE READ CAREFULLY

- I understand that eligibility standards must be adhered to for all employees, dependents, and owners. I agree to make all coverage options available to all eligible employees and dependents that satisfy eligibility requirements.
- If I submit my materials after the 10th of the prior month, my employees may not receive Member ID Cards before they are effective.
- I understand that I am agreeing to a 12 month contract period for the insurance coverage I have elected for my district.
- I understand that to participate in the SDIS insurance program I must agree to sign the Joinder of Trust Agreement to become a member of Special Districts Insurance Services Trust.

CONTACT INFORMATION

DISTRICT REPRESENTATIVE

Signature by: _____ Date: _____

Name (please print): _____ Title: _____

PRODUCER OF RECORD

Signature by: _____ Date: _____

Producer: _____ Producer No.: _____

Agency Address: _____

Phone No. : _____ Fax No. : _____ E-mail: _____

ACTION ITEM - B

DATE: March 24, 2022
RE: Budget Committee Members
TO: Honorable Board President and District Board Members
ISSUED BY: Gary Dehlinger, Port Manager

OVERVIEW

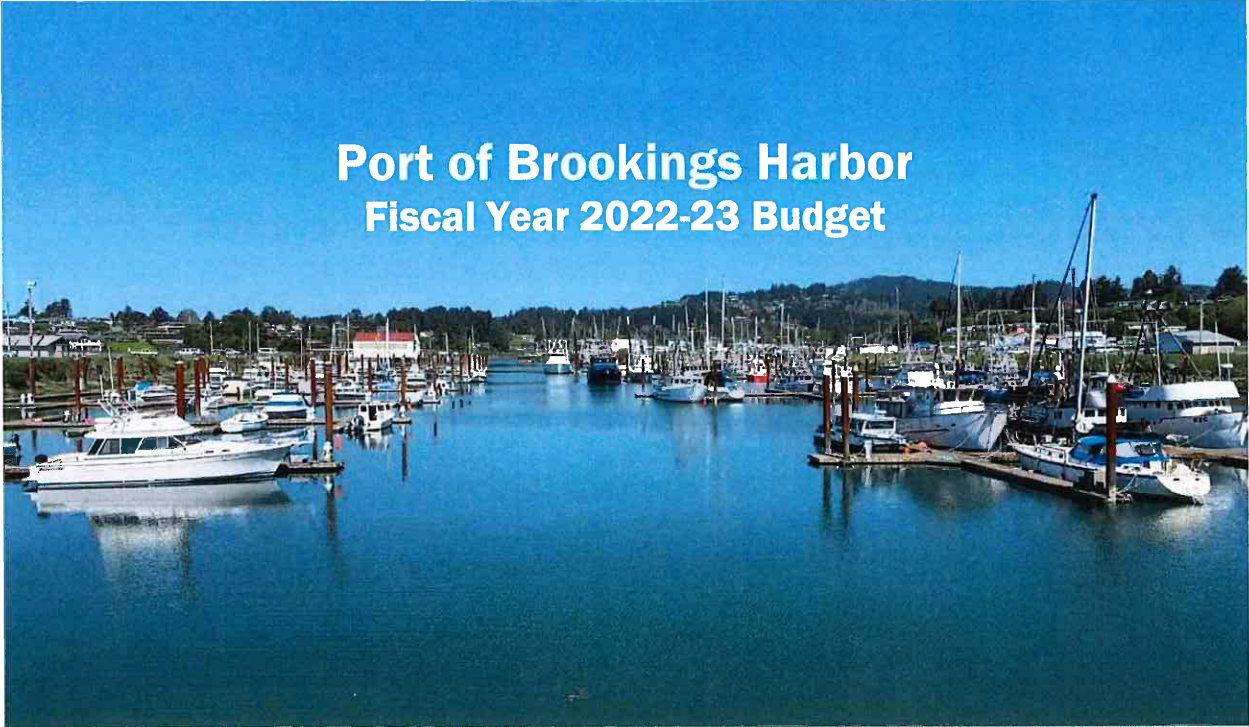
- Position No. 9 Thomas Beene gave notice on March 21, 2022 that he was resigning from the Budget Committee do to work away from the district.
- The Port received four applications to fill three vacancies at the last regular meeting. The three vacant positions were filled with one remaining application that could fill this opening.

DOCUMENTS

- Budget Committee, 1 page

COMMISSIONERS ACTION

- **Recommended Motion Option 1:**
Motion to approve new Budget Committee Member to fill vacant Position 9 Sven Erick Ronde for a one-year term.
- **Option 2:**
Motion to leave Position 9 vacant.



Port of Brookings Harbor Fiscal Year 2022-23 Budget

BUDGET COMMITTEE

Board of Commission	Term Expires
Position 1 - Joseph Speir	2025
Position 2 - Sharon Hartung	2023
Position 3 - Larry Jonas	2023
Position 4 - Richard Heap	2025
Position 5 - Kenneth Range	2025

Committee Members at Large	Term Expires
Position 6 – Al Cornell	2024
Position 7 – Wayne King	2024
Position 8 – Richard Contestabile	2023
Position 9 – Vacant	2023
Position 10 - Brett Hester	2024

Port Manager
Gary Dehlinger

Harbormaster
Travis Webster

Director of Finance & Accounting
Kim Boom

ACTION ITEM - C

DATE: March 24, 2022
RE: FEMA Project Preliminary Drawings & Update
TO: Honorable Board President and District Board Members
ISSUED BY: Gary Dehlinger, Port Manager

OVERVIEW

- FEMA and Port had a conference call on March 22, 2022 to review the project status. Jack Akin provided an update on the preliminary drawings and updated construction schedule. Jack has proposed to split up the construction to upland work and in-water work to speed up the construction. In-water work takes more permitting time and the work is limited to October 15 thru March 15.
- During the discussion, FEMA is going back to verify the previous approvals for Public Assistance (pre-disaster conditions). They are looking for maintenance records for dredging and basin slopes. FEMA verified the maintenance documents were uploaded to their Grants Portal in 2019. They will be reviewing these documents again.
- FEMA Consolidated Resource Centers (CRC) needs to see the preliminary drawings and engineers cost estimates to approve the next phase of the project. The next phase would be the construction once approved. CRC review could take up to 45 days.
- Time is of the essence if the Port wants to get paving completed at the boat yard, sediment basin built and some road construction in the gear storage area for this summer. Board approval of these preliminary drawings is needed to submit to FEMA next week to begin their 45-day review. Sometimes their reviews extend longer than 45 days depending on other national disasters and circumstances.
- Remember these drawings are not for construction. There will be some adjustments, corrections and minor changes that the Board will review and approve prior to the bidding process.

DOCUMENTS

- FEMA POBH Project Schedule, 1 page
- Commercial Roads and Stockpile Drawings, 20 pages
- Basin 2 Embankment Rock Reconstruction Drawings, 7 pages
- Boat Yard Paving Drawings, 16 pages
- Kite Park RV Resort Drawings, 10 pages
- Basin Dredging, 4 pages

COMMISSIONERS ACTION

- **Recommended Motion Option 1:**
Motion to approve submitting preliminary project drawings to FEMA for CRC approval.

GENERAL NOTES

THESE NOTES ARE INTENDED FOR USE IN INTERPRETING AND IMPLEMENTING THE TASKS SHOWN ON THE FOLLOWING CONSTRUCTION PLANS AND SPECIFICATIONS SHEETS. THESE ARE IN ADDITION TO THE OVERALL PROJECT SPECIFICATION AND BID DOCUMENTS AND CONTRACTUAL ITEMS.

THESE ARE INTENDED FOR THE USE OF THE GENERAL CONTRACTOR AND HIS/HER SUBCONTRACTORS IN THE DEMOLITION AND RECONSTRUCTION OF THE SUBJECT AREA OF THE PORT OF BROOKINGS HARBOR. USE FOR OTHER PURPOSES OR AT OTHER SITES IS NOT RECOMMENDED AND IS ACCOMPLISHED AT THE SOLE RISK OF THE USER.

THESE ITEMS ARE TO BE USED AS A SUPPLEMENT TO THE DETAILS PROVIDED ON THE PLAN SHEETS AND SPECIFICATION PAGES. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, REFERENCED REPORTS, THESE GENERAL NOTES AND OTHER ITEMS LISTED ON THIS SHEET AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.

THE EMBANKMENT REPAIR HAS BEEN DESIGNED TO RESIST ANTICIPATED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE AND SLOPE AREAS PRIOR TO COMPLETION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO JOBSITE SAFETY, CONSTRUCTION MEANS, METHODS, AND SEQUENCES, TEMPORARY SHORING, SLOPE STABILITY, FORMWORK AND BRACING, USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

CONSTRUCTION OBSERVATION BY THE ENGINEER IS FOR CHECKING FOR CONFORMANCE WITH DESIGN ASPECTS ONLY AND IS NOT INTENDED IN ANY WAY TO REVIEW AND/OR APPROVE THE GENERAL CONTRACTOR'S CONSTRUCTION PROCEDURES OR RELIEVE THE CONTRACTOR FROM PROVIDING A COMPLETED PROJECT, CONSISTENT WITH THE PLANS AND SPECIFICATIONS AND GOOD CONSTRUCTION PRACTICES. SPECIAL INSPECTION BY THE ENGINEER DOES NOT PROVIDE A CERTIFICATION OF THE PROJECT OR RELIEVE THE CONTRACTOR OF ALL RESPONSIBILITY FOR A PROPERLY CONSTRUCTED PROJECT.

STANDARDS USED FOR DESIGN

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ODOT STANDARD SPECIFICATIONS, UNLESS ELSEWHERE HEREIN SPECIFIED OTHERWISE. INTERNATIONAL BUILDING CODE (IBC) 2021; 2019 OREGON STRUCTURE SPECIALTY CODE (OSSC); AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

OTHER NOTES

1. JOBSITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL PRODUCTS AND WORKMANSHIP SHALL BE NEW MATERIALS OF GOOD QUALITY, ACCEPTABLE FOR THIS TYPE OF CONSTRUCTION. WORK TO BE ACCOMPLISHED IN A GOOD AND WORKMANLIKE MANNER.
3. ALL MATERIALS TO BE SHIPPED, HANDLED AND STOCKPILED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND GOOD CONSTRUCTION PRACTICES.
4. LOCATIONS MUST BE VERIFIED AT THE SITE WITH THE ENGINEER AND THE PORT OF BROOKINGS HARBOR REPRESENTATIVE PRIOR TO PLACEMENT.
5. ABIDE BY LOCAL, STATE AND FEDERAL BUILDING ORDINANCES, INCLUDING ALL SAFETY REQUIREMENTS, IN ALL PHASES OF THE PROJECT.
6. ALL PHASES OF THE PROJECT ARE TO CONFORM TO THE PLANS AND SPECIFICATIONS ATTACHED HERETO AND SPECIFICATIONS PROVIDED BY THE OWNER AND THE ENGINEER-OF-RECORD.
7. PROPOSED CHANGES TO PROJECT PLANS AND SPECIFICATIONS MUST BE APPROVED BY THE DESIGNER PRIOR TO ACCEPTANCE AND IMPLEMENTATION AT THE SITE.
8. PROPOSED CHANGES MUST BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL/DISAPPROVAL BY THE DESIGNER AND THE OWNER.
9. IN NO CASE SHALL CHANGES, SUBSTITUTIONS OR OMISSIONS BE MADE TO THE DESIGN OR MATERIALS WITHOUT THE WRITTEN AUTHORIZATION OF THE DESIGNER AND THE OWNER.
10. AUTHORIZATION OF A DESIGN CHANGE BY THE ENGINEER DOES NOT CONSTITUTE ACCEPTANCE BY THE PORT OF BROOKINGS HARBOR, NOR DOES IT AUTHORIZE ADDITIONAL FUNDS FOR THE CHANGES. THE PORT'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE DESIGN CHANGE AND APPLICABLE CHANGES IN THE CONTRACT AMOUNT AND/OR CONSTRUCTION TIME PERIOD PRIOR TO IMPLEMENTATION OF SUCH CHANGES.
11. PROJECT SCHEDULE AND GENERAL SEQUENCING OF ALL WORK MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND THE OWNER. SUCH APPROVAL DOES NOT RELIEVE THE CONTRACTOR OR HIS/HER SUBCONTRACTORS OF ALL RESPONSIBILITIES FOR PROPER EXECUTION OF THE SUBJECT PROJECT CONSTRUCTION.
12. SEQUENCING OF TASKS THAT REQUIRES VARYING THE INSTALLED SIZES OF PROJECT MATERIALS MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND OWNER.
13. TRAFFIC CONTROL AND SIGNAGE MUST BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE SO STATED IN THE CONTRACT. ACCESS TO THE US COAST GUARD FACILITIES MUST BE MAINTAINED DURING CONSTRUCTION.
14. CONTRACTOR MUST UNDERSTAND THAT THE PROJECT SITE IS IN A HARBOR AREA SUBJECT TO TIDAL FLUCTUATIONS. THEREFORE, SEQUENCING AND PROJECT WORK MUST TAKE INTO ACCOUNT EFFECTS OF HIGH AND LOW TIDES.
15. REPLACEMENT OF SPECIFIED PRODUCTS BY AN "EQUIVALENT" PRODUCT MUST BE APPROVED BY THE DESIGN ENGINEER AND THE OWNER. REDESIGN REQUIRED FOR USE OF ALTERNATE "EQUIVALENT" MATERIALS IS TO BE BORNE BY THE CONTRACTOR.

GRADING NOTES

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED. THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS AS SPECIFIED AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OF BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE USE OF ALTERNATE MATERIALS. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES

1. PROJECT/PURPOSE - WITH THE PURPOSE OF MAINTAINING, REHABILITATING, REPLACING, AND UPGRADING THE EXISTING WESTERN EMBANKMENT AT THE SOUTH BASIN OF PORT OF BROOKINGS. THE EXISTING EMBANKMENT WILL BE CLEARED DOWN TO SUITABLE SUBGRADE AT A SLOPE BETWEEN 1.5:1 AND 2:1. A 4FT DEEP TRENCH WILL BE EXCAVATED AT THE BASE OF THE EMBANKMENT. A 3FT DEEP LAYER OF AGGREGATE WILL BE PLACED ON TOP OF THE SLOPE AND INTO THE TRENCH
2. CONTRACTOR ACTIVITIES - CONTRACTOR ACTIVITIES ARE DESCRIBED AS EXCAVATION AND CLEARING USING A 25T EXCAVATOR. EXCAVATION AND SPREADING AT THE BASE OF THE SLOPE USING A LONG REACH EXCAVATOR. PLACEMENT OF GEOGRID. PLACEMENT OF CRUSHED AGGREGATE FROM FINE GRAVEL TO 2FT BOULDERS
3. SOIL DISTURBING ACTIVITIES - EXCAVATION WILL BE LIMITED TO EXISTING MARINA EDGES
4. NON-STORMWATER DISCHARGES - NO DEWATERING, WATER-LINE FLUSHING, PAVEMENT WASH WATERS OR IRRIGATION WATER DISCHARGES ARE PLANNED FOR THIS PROJECT.
5. ESTIMATED START DATE FOR CONSTRUCTION - 05/22
6. NEAREST SURFACE WATER BODIES - PORT OF BROOKINGS ICE HOUSE INLET IN BASIN 2 (SOUTH BASIN) AND BASIN 1, NEAR DOCK A (NORTH BASIN).
7. RECEIVING WATERS - PACIFIC OCEAN
8. SPECIAL ENVIRONMENTAL CONSIDERATIONS - SEE SECTION 10
9. DESIGNATED EPCM - THE DESIGNATED EROSION AND POLLUTION CONTROL MANAGER (EPCM) WHO WILL ASSURE COMPLIANCE WITH ALL ITEMS IN THIS PLAN IS TED FITZGERALD, PORT DIRECTOR, OR HIS DESIGNEE.
10. EROSION, SEDIMENTATION AND POLLUTION CONTROL BMPs - BEST MANAGEMENT PRACTICES (BMP) TO BE USED, WHEN APPLICABLE, TO PREVENT POLLUTION RELATED TO CONTRACTOR ACTIVITIES LISTED IN THIS SECTION ARE AS FOLLOWS: A) OFFSITE VEHICLE TRACKING AND DUST PREVENTION - MEASURES WILL BE TAKEN TO PREVENT OFFSITE TRACKING OF MATERIALS, INCLUDING SWEEPING PAVEMENTS, COVERING LOADS AND WETTING SOIL TO PREVENT DUST. THERE WILL BE NO AGGREGATE CONSTRUCTION. B) MATERIAL MANAGEMENT AND SPILL PREVENTION - ALL ON SITE FUELS WILL BE DELIVERED, HANDLED, STORED, USED, AND APPLIED SO AS NOT TO BE RELEASED INTO THE WATERS OF THE STATE/US. FUELING WILL BE ACCOMPLISHED AWAY FROM THE WORK AREA A SPILL CLEANUP KIT WILL BE AVAILABLE IF DEEMED BY THE EPCM TO BE REQUIRED. C) WASTE MANAGEMENT - HANDLING, STORAGE AND DISPOSAL OF SOLID WASTE AND/OR HAZARDOUS WASTE WILL BE DISPOSED INTO SUITABLE LANDFILL OFFSITE D) INSPECTION AND MAINTENANCE - DAILY INSPECTION AND MAINTENANCE FOR ALL CONTROLS INCLUDED IN THE POLLUTION CONTROL PLAN AND THE ESCP WILL BE PERFORMED BY THE EPCM OR HIS DESIGNEE. E) EMPLOYEE AND SUBCONTRACTOR TRAINING - EMPLOYEE AND SUBCONTRACTOR EDUCATION AT A MINIMUM WILL INCLUDE INFORMING PERSONNEL OF THE POSTED LOCATIONS OF THE POLLUTION CONTROL PLAN/EROSION AND SEDIMENT CONTROL PLAN/MSDS'S AND IMPORTANT EMERGENCY PHONE NUMBERS. EDUCATION WILL ALSO INCLUDE INFORMING PERSONNEL OF REVISED MATERIAL MANAGEMENT PROCEDURES FOLLOWING A SPILL. F) (CRITERIA 15) PRECONSTRUCTION ACTIVITY - BEFORE ALTERATION OF THE ACTION AREA, FLAG THE BOUNDARIES OF CLEARING LIMITS ASSOCIATED WITH SITE ACCESS AND CONSTRUCTION TO MINIMIZE SOIL AND VEGETATION DISTURBANCE, AND ENSURE THAT ALL TEMPORARY EROSION CONTROLS ARE IN PLACE AND FUNCTIONAL. G) (CRITERIA 16) SITE PREPARATION - DURING SITE PREPARATION, CONSERVE NATIVE MATERIALS FOR RESTORATION, INCLUDING LARGE WOOD, VEGETATION, TOPSOIL AND CHANNEL MATERIALS (GRAVEL, COBBLE AND BOULDERS) DISPLACED BY CONSTRUCTION. WHENEVER PRACTICAL, LEAVE NATIVE MATERIALS WHERE THEY ARE FOUND AND IN AREAS TO BE CLEARED, CLIP VEGETATION AT GROUND LEVEL TO RETAIN ROOT MASS AND ENCOURAGE REESTABLISHMENT OF NATIVE VEGETATION. BUILDING AND RELATED STRUCTURES MAY NOT BE CONSTRUCTED INSIDE THE RIPARIAN MANAGEMENT AREA H) (CRITERIA 17) HEAVY EQUIPMENT - HEAVY EQUIPMENT WILL BE SELECTED AND OPERATED AS NECESSARY TO MINIMIZE ADVERSE EFFECTS ON THE ENVIRONMENT; AND ALL VEHICLES AND OTHER HEAVY EQUIPMENT WILL BE USED AS FOLLOWS:
 - (A.) STORED, FUELED AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY WATER BODY, OR IN AN ISOLATED HARD ZONE SUCH AS A PAVED PARKING LOT.
 - (B.) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 50 FEET OF ANY WATER BODY.
 - (C.) STEAM-CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION TO REMAIN FREE OF ALL EXTERNAL OIL, GREASE, MUD, SEEDS, ORGANISMS AND OTHER VISIBLE CONTAMINANTS.
 - (D.) GENERATORS, CRANES AND ANY OTHER STATIONARY EQUIPMENT OPERATED WITHIN 150 FEET OF ANY WATER BODY WILL BE MAINTAINED AND PROTECTED AS NECESSARY TO PREVENT LEAKS AND SPILLS FROM ENTERING THE WATER I) (CRITERIA 18)

IN-WATER WORK PERIOD - ALL WORK WITHIN THE ACTIVE CHANNEL WILL BE COMPLETED IN ACCORDANCE WITH THE OREGON GUIDELINES FOR TIMING OF IN-WATER WORK TO PROTECT FISH AND WILDLIFE RESOURCES (ODFW 2000, OR THE MOST RECENT VERSION).

11. (CRITERIA 21) EMBANKMENT INSTALLATION - <TBC>
12. (CRITERIA 24) SUBGRADE PREPARATION - <TBC>

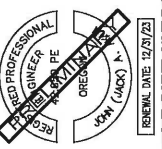
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

GEOTECHNICAL NOTE

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

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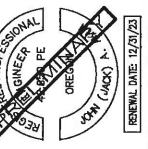
PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
COMMERCIAL ROADS AND STOCKPILE

DRAWN BY: CD/JW
 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:
C1.0
 GENERAL NOTES



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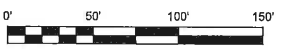
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C1.1
 EXISTING
 CONDITIONS

LEGEND

(17)	CONTOUR LABEL EX.
15	CONTOUR LABEL PROP. FG
---	CONTOUR EX.
---	CONTOUR PROP. SUBGRADE
---	FENCE LINE
---	BURIED PIPELINE
---	EXPOSED PIPELINE
---	ROW
---	ROAD CENTERLINE
---	EXTENTS SURVEY
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
---	CULTURAL VILLAGE HERITAGE SITE
+ 15.0'	SPOT ELEVATION
■ DI	AREA DRAIN
⊠	TRANSFORMER
● PP	POWER POLE
● TP	TELEPHONE POLE
⊙ LP	STREET LIGHT
+	GUY
⊗ WV	WATER VALVE
⊗ WM	WATER METER
⊗ FH	FIRE HYDRANT
⊗	SANITARY SEWER MANHOLE
⊗ CS	SANITARY SEWER CLEAN OUT
-UE-	UNDERGROUND ELECTRIC



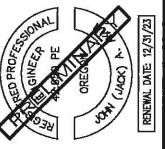
1 EXISTING CONDITIONS
 SCALE 1" = 50'





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LEGEND

17.0	CONTOUR LABEL EX.
---	CONTOUR EX.
---	CONTOUR PROP. SUBGRADE
---	FENCE LINE
---	BURIED PIPELINE
---	EXPOSED PIPELINE
---	ROW
---	ROAD CENTERLINE
---	EXTENTS SURVEY
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
---	CULTURAL VILLAGE HERITAGE SITE
+	SPOT ELEVATION
DI	AREA DRAIN
⊠	TRANSFORMER
PP	POWER POLE
PP	TELEPHONE POLE
LP	STREET LIGHT
G	GUY
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
SSM	SANITARY SEWER MANHOLE
SSCO	SANITARY SEWER CLEAN OUT
UE	UNDERGROUND ELECTRIC

1 DEMOLITION & CLEARING PLAN
 SCALE 1" = 50'



PORT OF BROOKINGS HARBOR
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COMMERCIAL ROADS AND STOCKPILE

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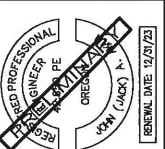
C2.0
 DEMOLITION &
 CLEARING PLAN

NOTE:
FOR SUBGRADE EARTHWORK REPORT SEE TABLE ON SHEET C2.6



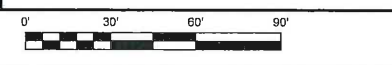
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LEGEND

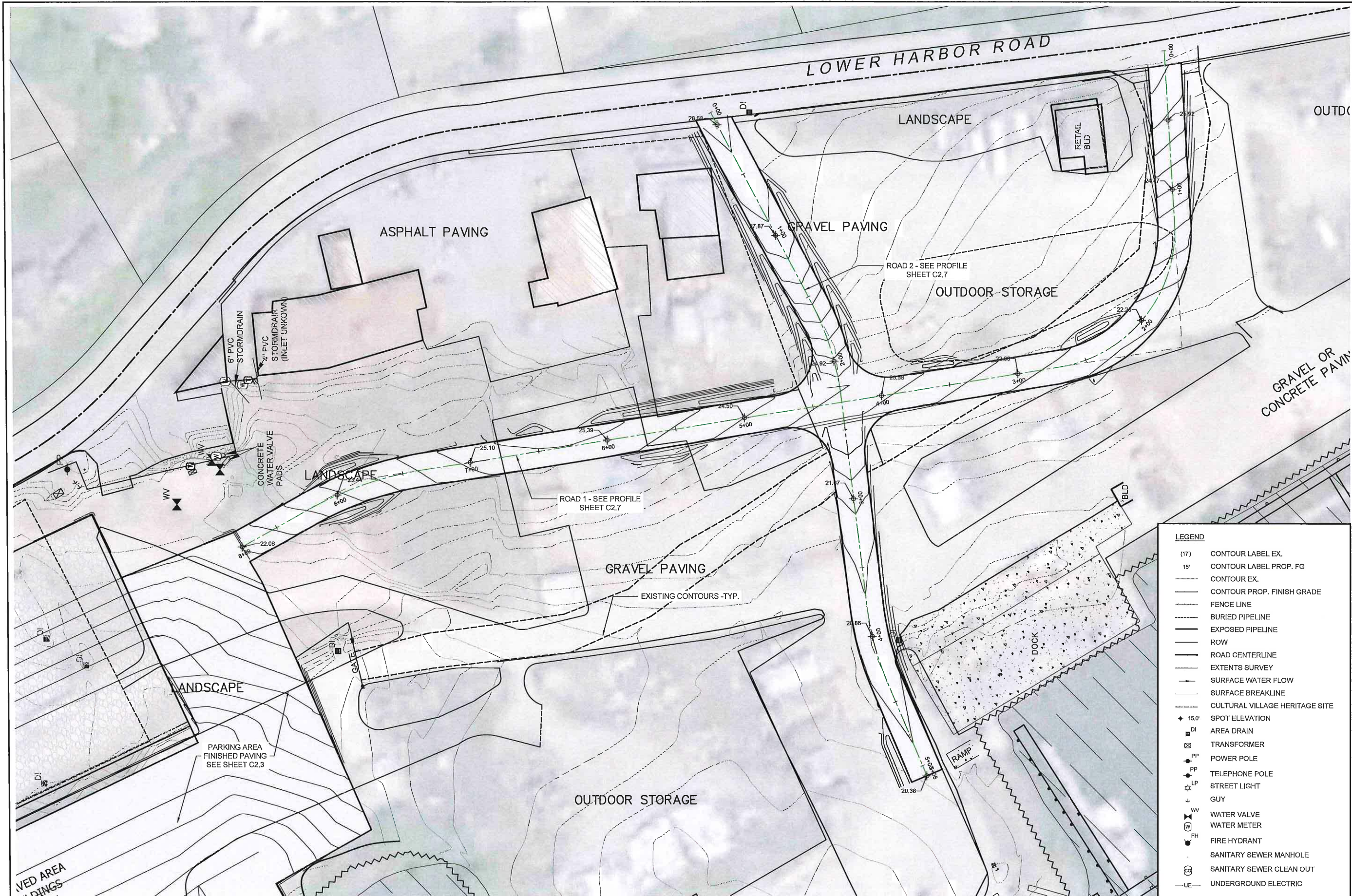
(17)	CONTOUR LABEL EX.
15'	CONTOUR LABEL PROP. FG
---	CONTOUR EX.
---	CONTOUR PROP. SUBGRADE
---	FENCE LINE
---	BURIED PIPELINE
---	EXPOSED PIPELINE
---	ROW
---	ROAD CENTERLINE
---	EXTENTS SURVEY
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
---	CULTURAL VILLAGE HERITAGE SITE
+ 15.0'	SPOT ELEVATION
DI	AREA DRAIN
⊠	TRANSFORMER
PP	POWER POLE
PP	TELEPHONE POLE
⊙	STREET LIGHT
+	GUY
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
SS	SANITARY SEWER MANHOLE
SC	SANITARY SEWER CLEAN OUT
UE	UNDERGROUND ELECTRIC



1 PARKING LOT SUBGRADE GRADING PLAN
 SCALE 1" = 30'

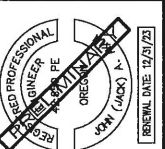
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 JOB No: 022-2202
 SHEET No:
C2.1
 PARKING
 SUBGRADE PLAN



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LEGEND

(17)	CONTOUR LABEL EX.
15'	CONTOUR LABEL PROP. FG
---	CONTOUR EX.
---	CONTOUR PROP. FINISH GRADE
---	FENCE LINE
---	BURIED PIPELINE
---	EXPOSED PIPELINE
---	ROW
---	ROAD CENTERLINE
---	EXTENTS SURVEY
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
---	CULTURAL VILLAGE HERITAGE SITE
+ 15.0'	SPOT ELEVATION
DI	AREA DRAIN
⊠	TRANSFORMER
PP	POWER POLE
PP	TELEPHONE POLE
☆	STREET LIGHT
---	GUY
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
SM	SANITARY SEWER MANHOLE
SC	SANITARY SEWER CLEAN OUT
UE	UNDERGROUND ELECTRIC

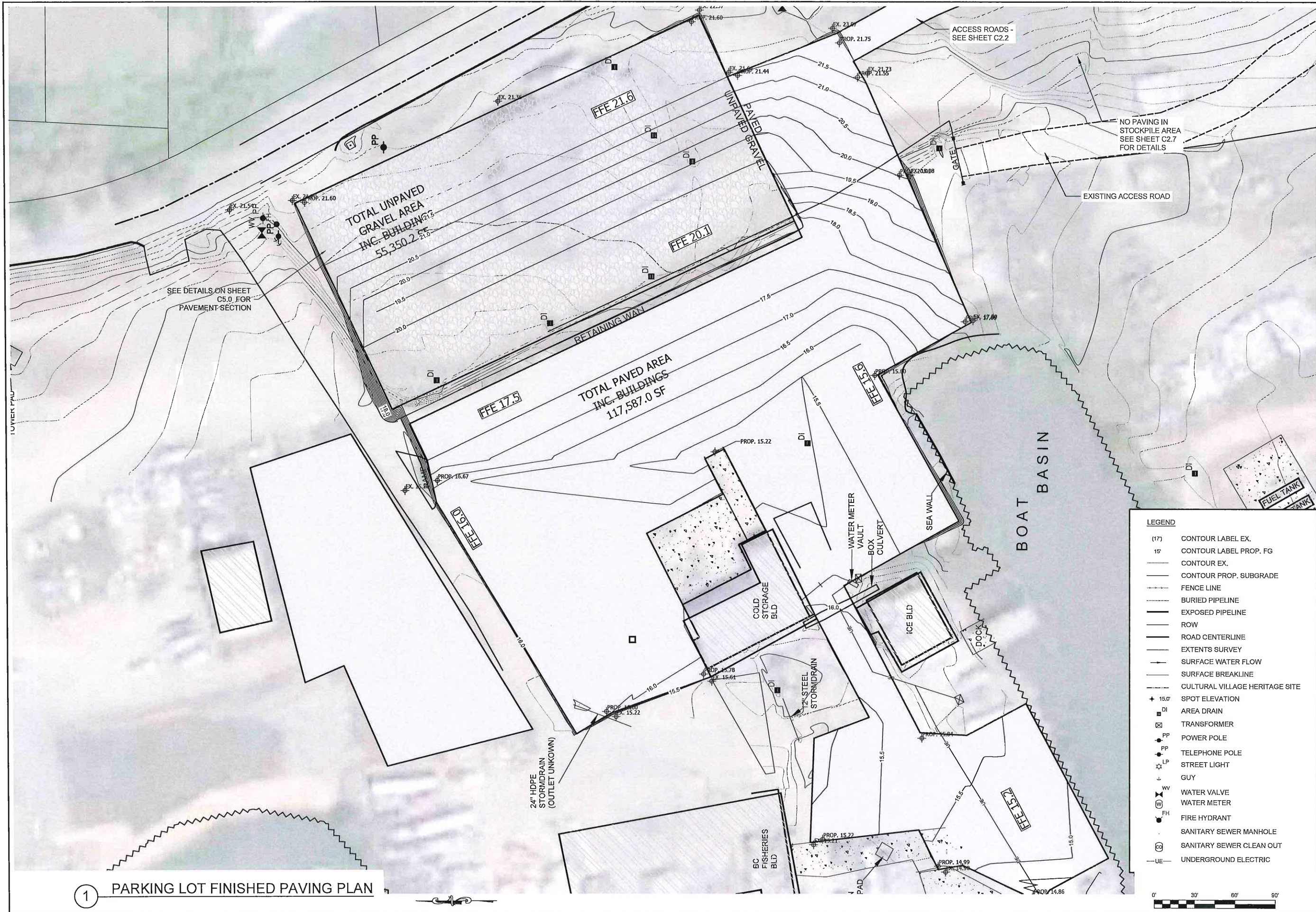
1 ROADS FINISHED PAVING PLAN
 SCALE 1" = 30'



PORT OF BROOKINGS HARBOR
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 COMMERCIAL ROADS AND STOCKPILE

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C2.2
 ROADS
 PAVING PLAN



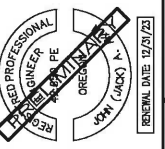
1 PARKING LOT FINISHED PAVING PLAN

- LEGEND**
- (17) CONTOUR LABEL EX.
 - 15' CONTOUR LABEL PROP. FG
 - CONTOUR EX.
 - CONTOUR PROP. SUBGRADE
 - FENCE LINE
 - BURIED PIPELINE
 - EXPOSED PIPELINE
 - ROW
 - ROAD CENTERLINE
 - EXTENTS SURVEY
 - SURFACE WATER FLOW
 - SURFACE BREAKLINE
 - CULTURAL VILLAGE HERITAGE SITE
 - + 15.0 SPOT ELEVATION
 - DI AREA DRAIN
 - TRANSFORMER
 - PP POWER POLE
 - PP TELEPHONE POLE
 - LP STREET LIGHT
 - GUY
 - WV WATER VALVE
 - WM WATER METER
 - FH FIRE HYDRANT
 - SSM SANITARY SEWER MANHOLE
 - SSCO SANITARY SEWER CLEAN OUT
 - UE UNDERGROUND ELECTRIC



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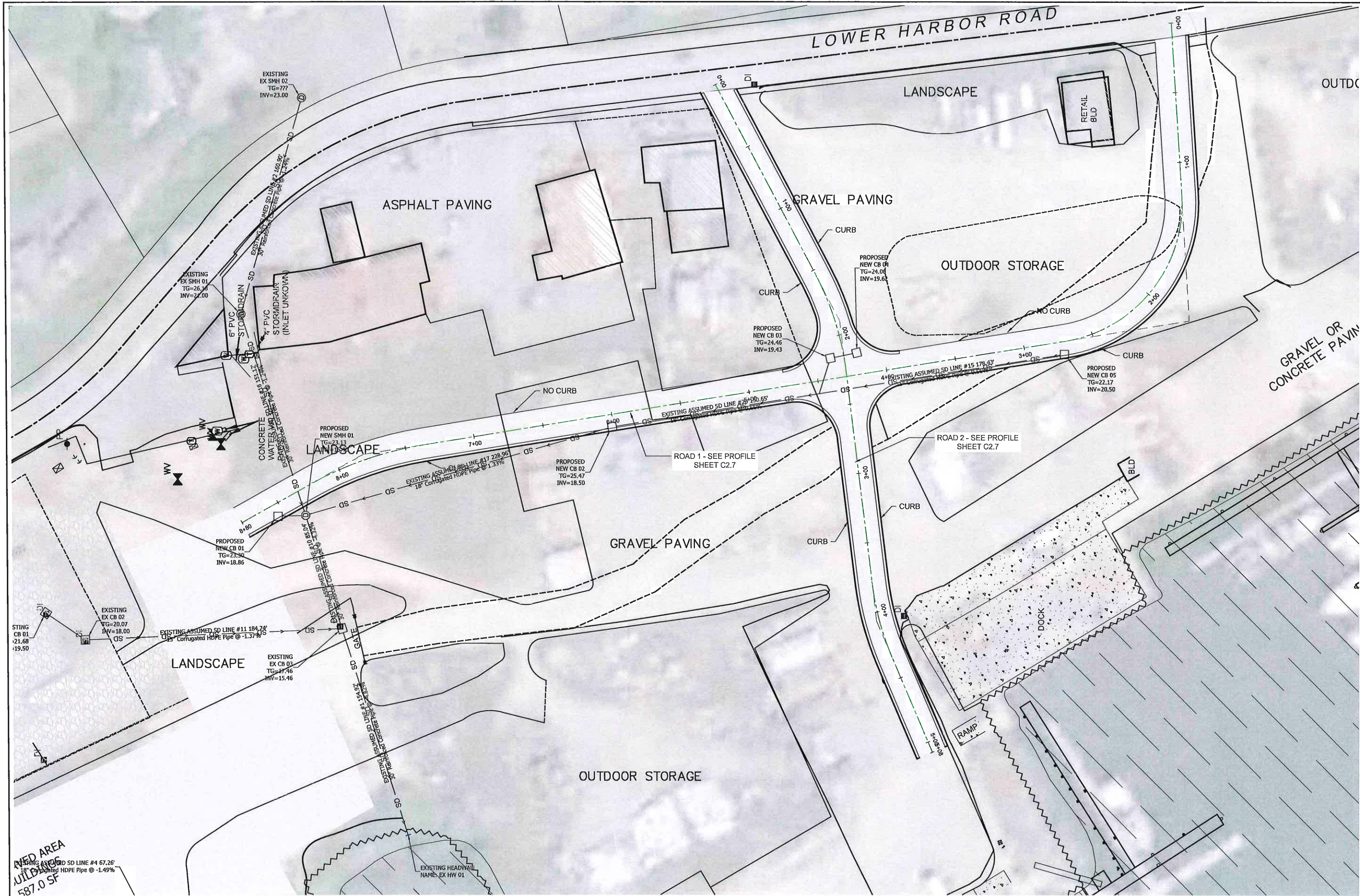
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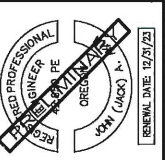
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 SHEET No:

C2.3
 PARKING LOT
 PAVING PLAN



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 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:
C2.4
 ROAD
 STORM DRAIN

1 ROAD STORM DRAIN PLAN
 SCALE 1" = 30'



EXISTING RETAIL BLD
 587.0 SF



1 PARKING LOT DRAINAGE PLAN
SCALE 1" = 30'

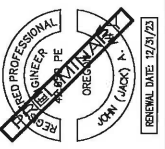
LEGEND

(17)	CONTOUR LABEL EX.
15'	CONTOUR LABEL PROP. FG
---	CONTOUR EX.
---	CONTOUR PROP. SUBGRADE
---	FENCE LINE
---	BURIED PIPELINE
---	EXPOSED PIPELINE
---	ROW
---	ROAD CENTERLINE
---	EXTENTS SURVEY
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
---	CULTURAL VILLAGE HERITAGE SITE
+ 15.0'	SPOT ELEVATION
DI	AREA DRAIN
⊠	TRANSFORMER
PP	POWER POLE
PP	TELEPHONE POLE
SL	STREET LIGHT
G	GUY
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
○	SANITARY SEWER MANHOLE
○	SANITARY SEWER CLEAN OUT
UE	UNDERGROUND ELECTRIC



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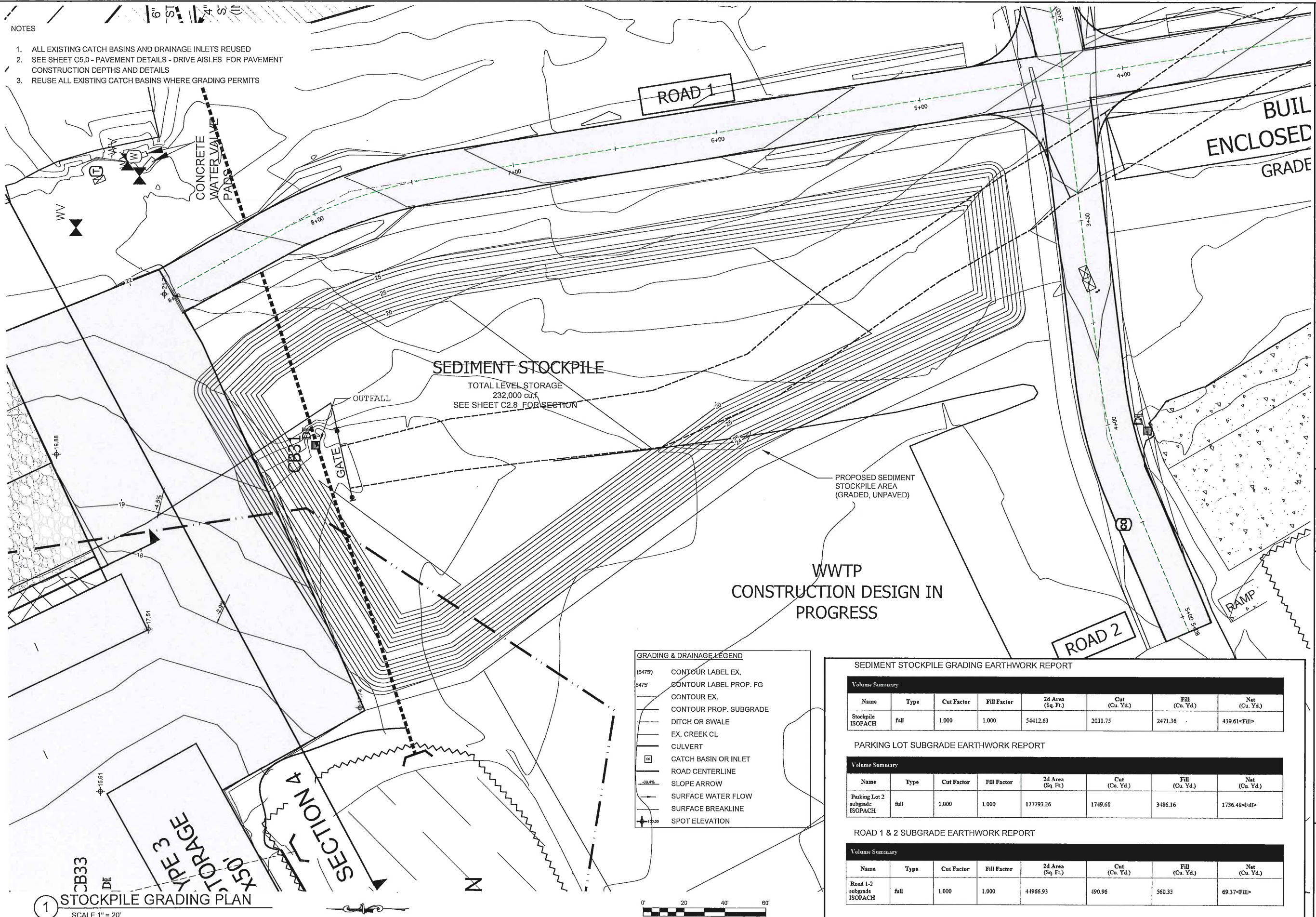
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COMMERCIAL ROADS AND STOCKPILE

DRAWN BY: CD/JW
 DATE: 3-17-2022
 JOB No: 022-2202

SHEET No:
C2.5
 PARKING
 LOT DRAINAGE

NOTES

1. ALL EXISTING CATCH BASINS AND DRAINAGE INLETS REUSED
2. SEE SHEET C5.0 - PAVEMENT DETAILS - DRIVE AISLES FOR PAVEMENT CONSTRUCTION DEPTHS AND DETAILS
3. REUSE ALL EXISTING CATCH BASINS WHERE GRADING PERMITS



SEDIMENT STOCKPILE
 TOTAL LEVEL STORAGE
 232,000 cu.ft.
 SEE SHEET C2.8 FOR SECTION

**WWTP
 CONSTRUCTION DESIGN IN
 PROGRESS**

GRADING & DRAINAGE LEGEND

(5475)	CONTOUR LABEL EX.
5475'	CONTOUR LABEL PROP. FG
---	CONTOUR EX.
---	CONTOUR PROP. SUBGRADE
---	DITCH OR SWALE
---	EX. CREEK CL
---	CULVERT
CB	CATCH BASIN OR INLET
---	ROAD CENTERLINE
---	SLOPE ARROW
---	SURFACE WATER FLOW
---	SURFACE BREAKLINE
+	SPOT ELEVATION

SEDIMENT STOCKPILE GRADING EARTHWORK REPORT

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Stockpile ISOPACH	fill	1.000	1.000	54412.63	2031.75	2471.36	439.61<Fill>

PARKING LOT SUBGRADE EARTHWORK REPORT

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Parking Lot 2 subgrade ISOPACH	fill	1.000	1.000	177793.26	1749.68	3486.16	1736.48<Fill>

ROAD 1 & 2 SUBGRADE EARTHWORK REPORT

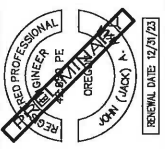
Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Road 1-2 subgrade ISOPACH	fill	1.000	1.000	41966.93	490.96	560.33	69.37<Fill>

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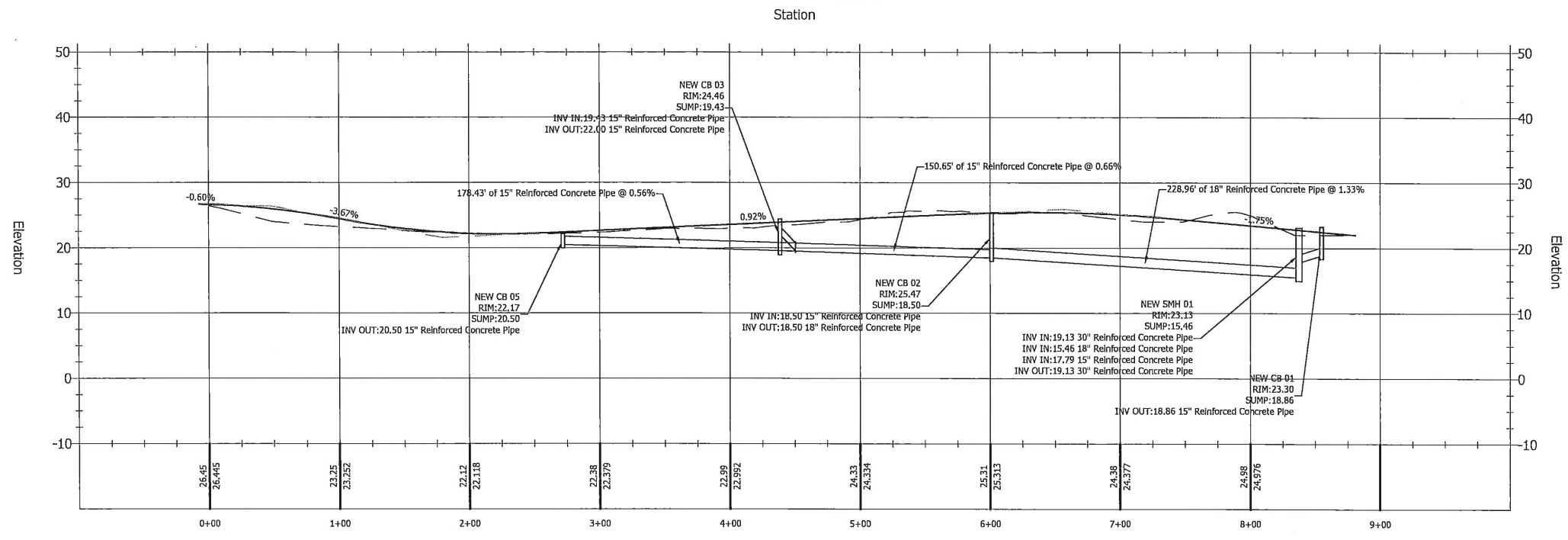
PORT OF BROOKINGS HARBOR
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 COMMERCIAL ROADS AND STOCKPILE

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 JOB No: 022-2202
 SHEET No:
C2.6
 STOCKPILE GRADING PLAN

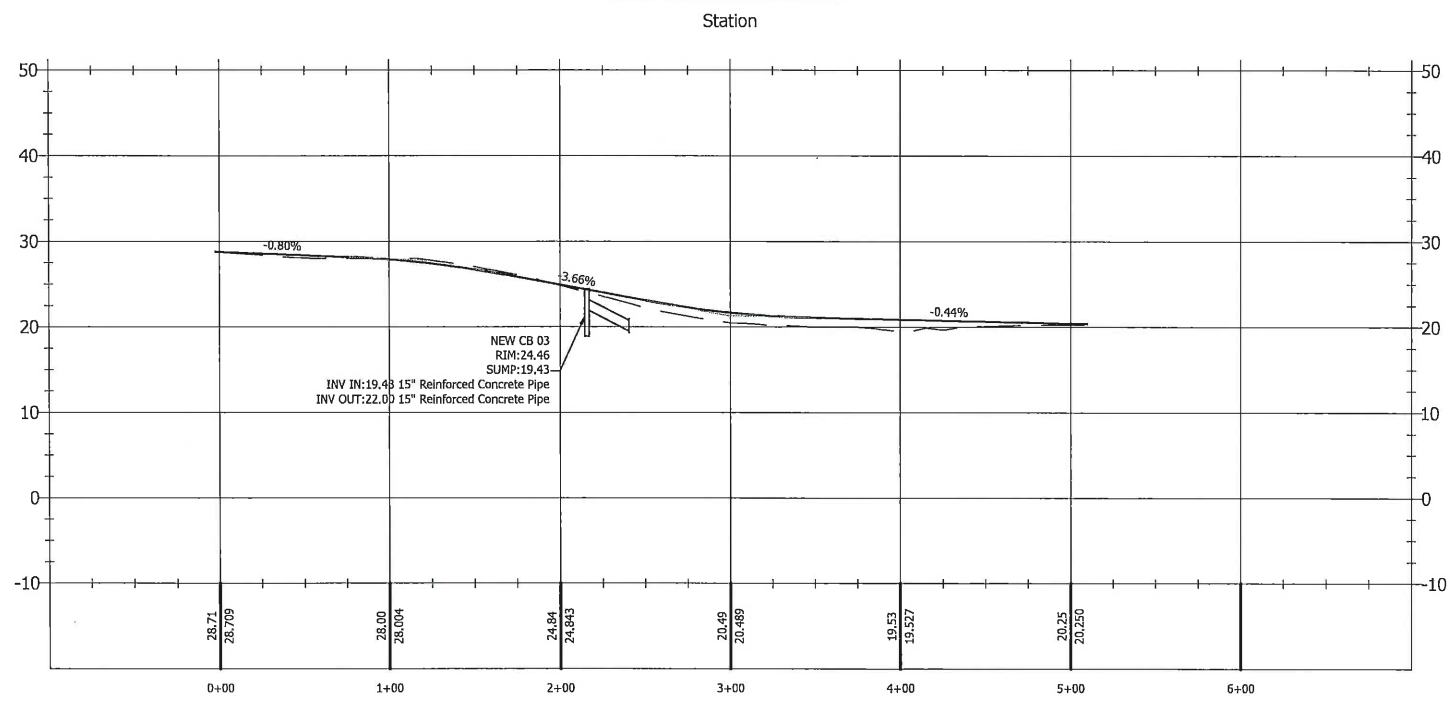
1 STOCKPILE GRADING PLAN
 SCALE 1" = 20'



Road 1 PROFILE



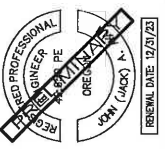
Road 2 PROFILE



1 ROAD PROFILES
SCALE - 1" = 50' H 1" = 10' V

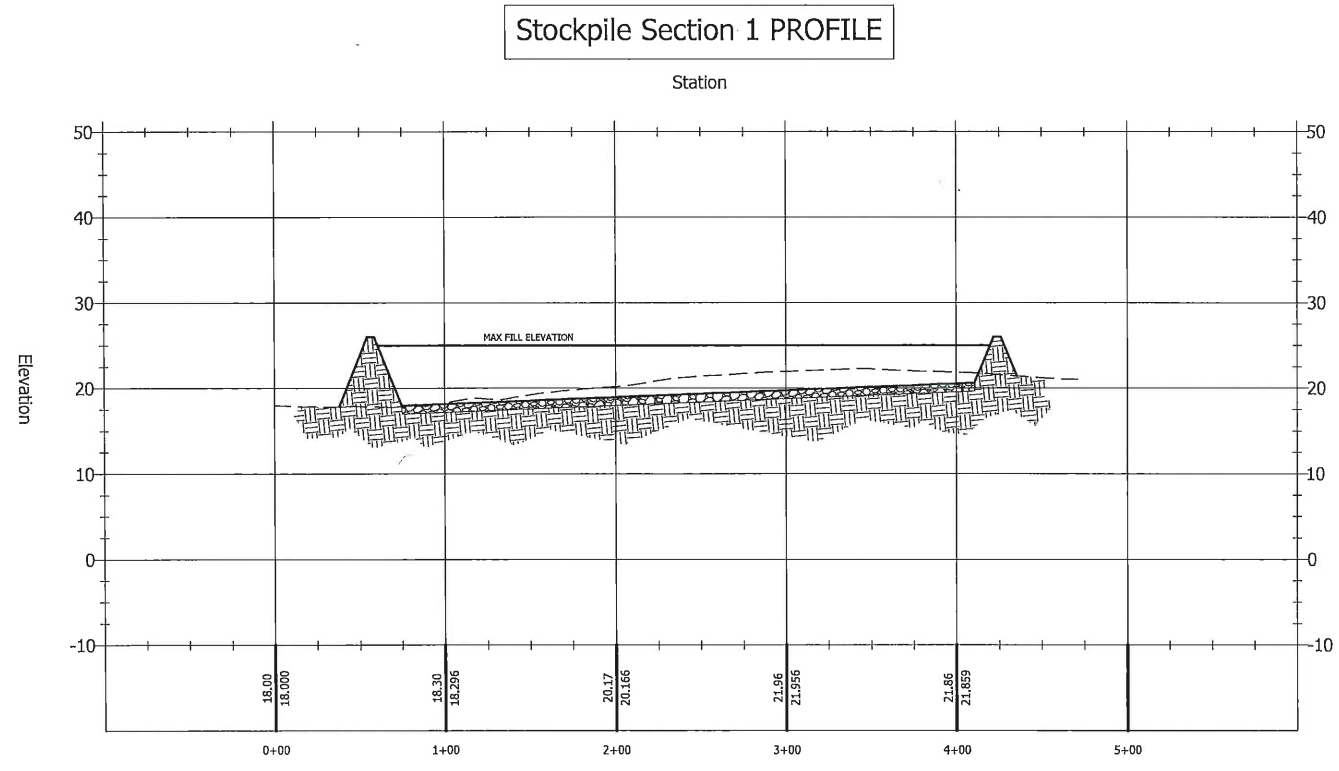
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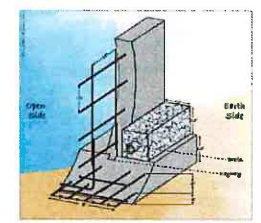


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 COMMERCIAL ROADS AND STOCKPILE

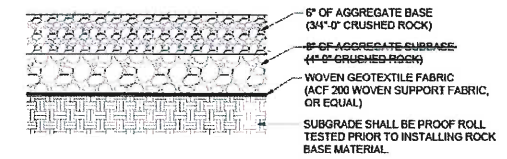
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 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:
C2.7
 ROAD
 PROFILES



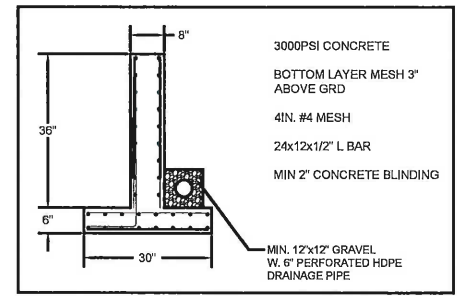
1 STOCKPILE SECTION
SCALE - 1" = 50' H 1" = 10' V



RETAINING WALL
DETAIL NTS

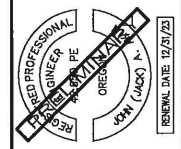


SUB-GRADE PREPARATION DETAIL



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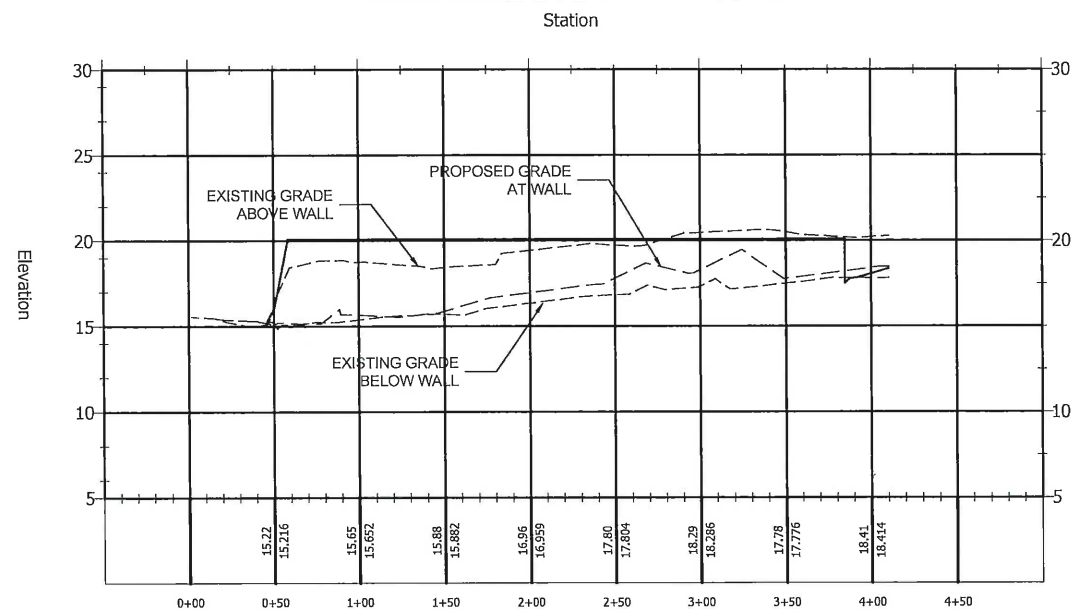


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
COMMERCIAL ROADS AND STOCKPILE

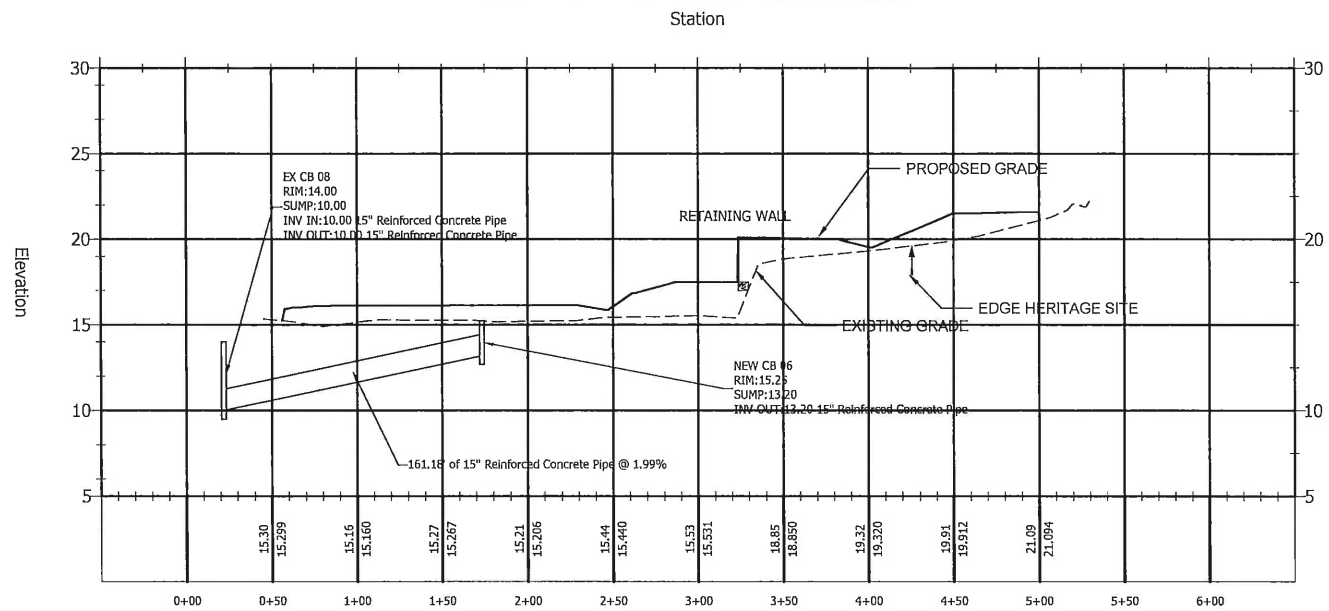
DRAWN BY: CD/JW
 DATE: 3-17-2022
 JOB No: 022-2202

SHEET No:
C2.8
 STOCKPILE
 GRADING PLAN

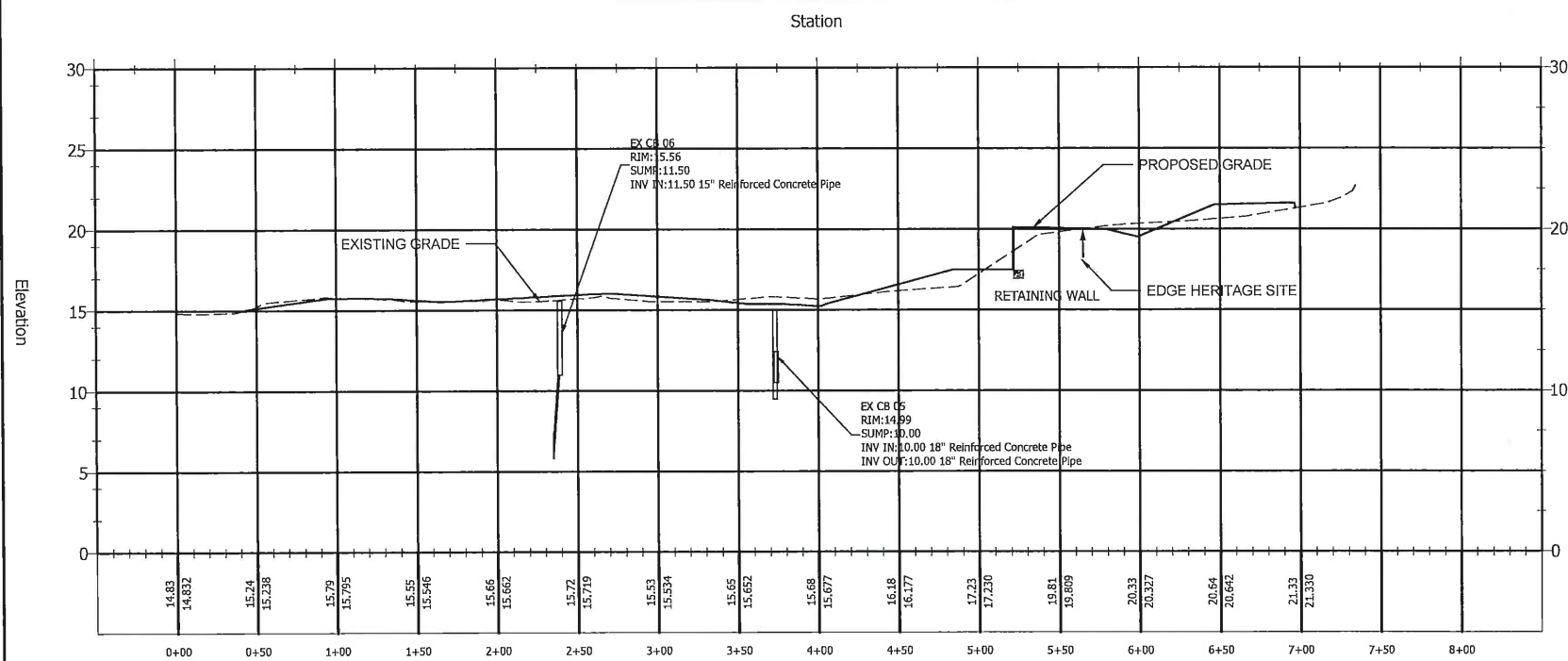
Parking Lot Section 1 PROFILE



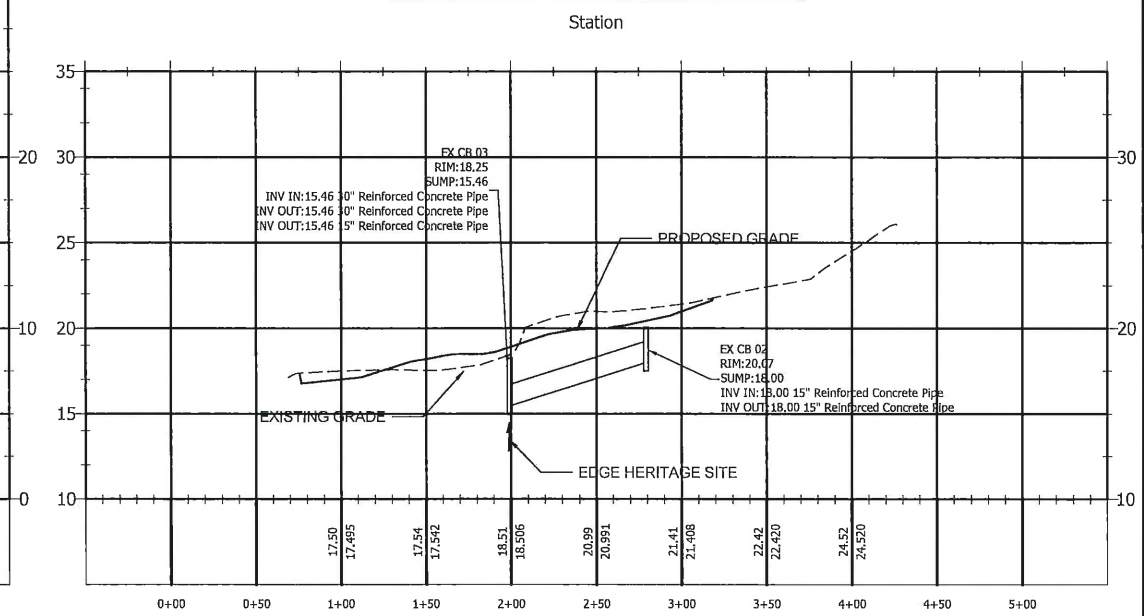
Parking Lot Section 2 PROFILE



Parking Lot Section 3 PROFILE



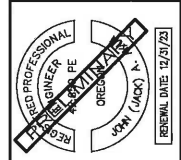
Parking Lot Section 4 PROFILE



1 PARKING LOT SECTIONS
SCALE - 1" = 50' H 1" = 5' V

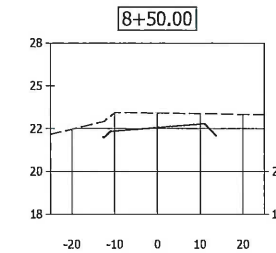
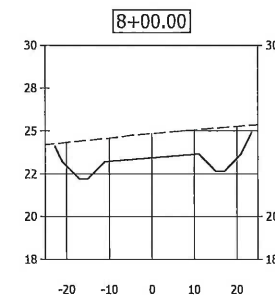
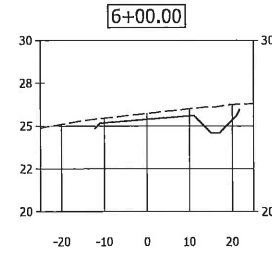
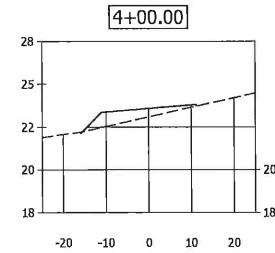
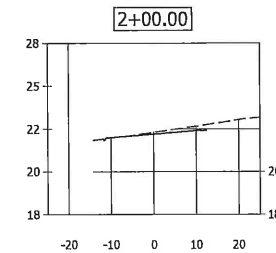
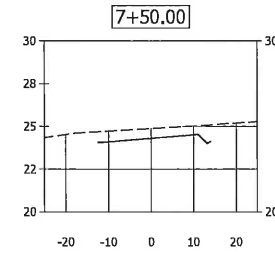
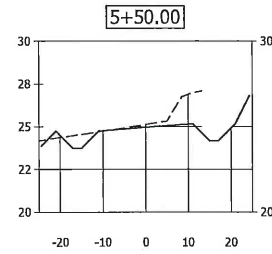
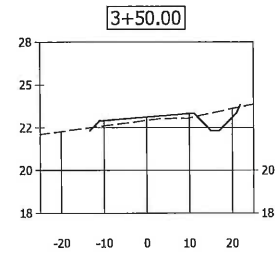
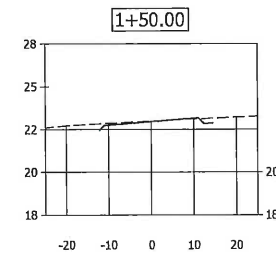
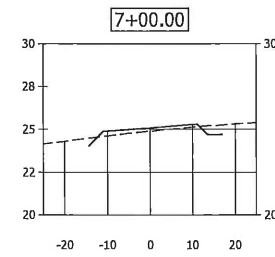
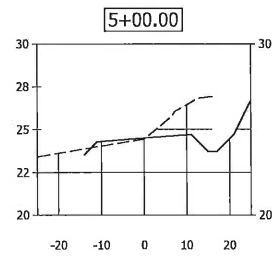
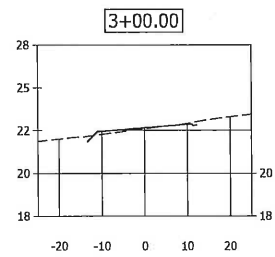
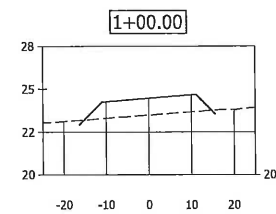
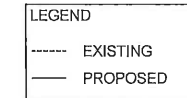
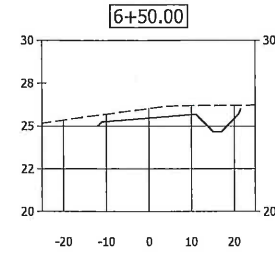
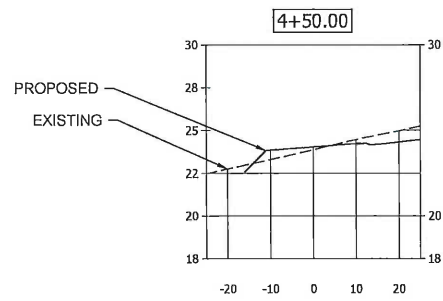
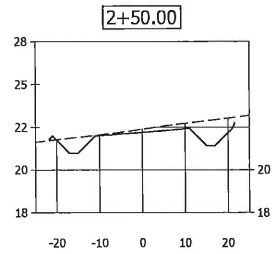
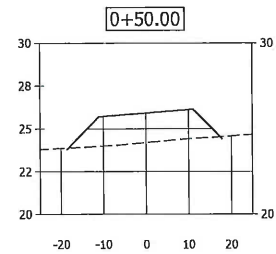
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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 COMMERCIAL ROADS AND STOCKPILE

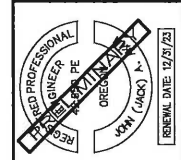
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 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:
C2.9
 PARKING
 LOT SECTIONS



1 ROAD 1 SECTIONS
SCALE - 1" = 20' H 1" = 5' V

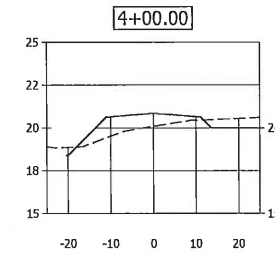
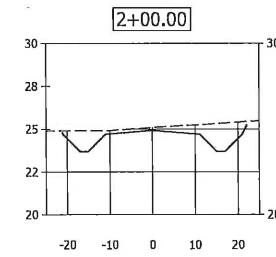
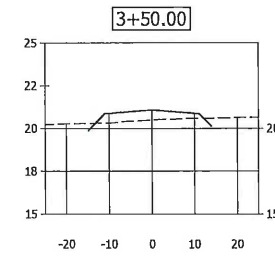
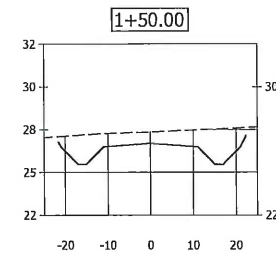
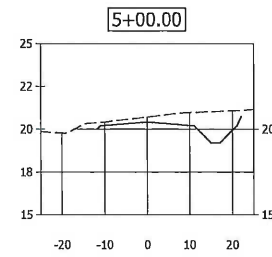
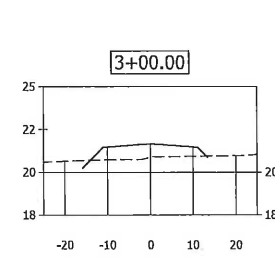
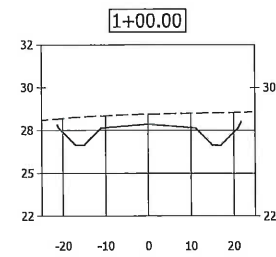
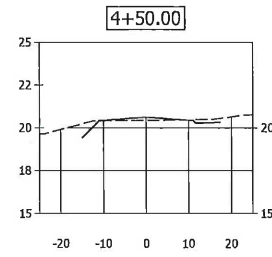
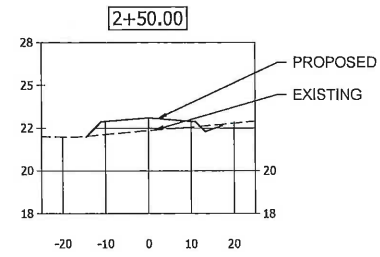
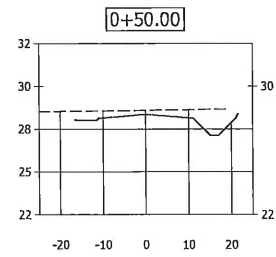
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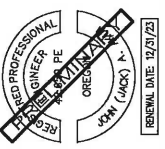
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 DATE: 3-17-2022
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 SHEET No:
C3.0
 ROAD 1
 SECTIONS



LEGEND
 - - - - - EXISTING
 ——— PROPOSED

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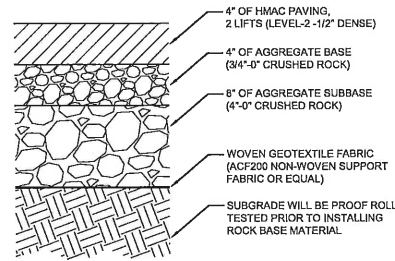


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COMMERCIAL ROADS AND STOCKPILE

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C3.1
 ROAD 1
 SECTIONS

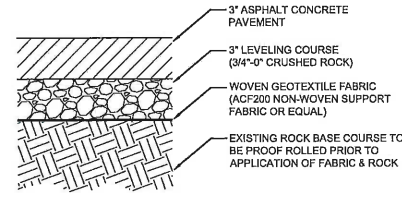
1 ROAD 2 SECTIONS
 SCALE - 1" = 20' H 1" = 5' V

PAVING IN "SOFT" AREAS

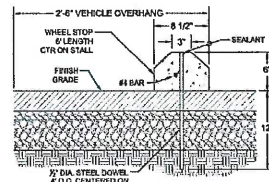


NOTES
 1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAX 6" LIFTS AND MECHANICALLY COMPACTED TO MAX 90% OF THE MAX DRY DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD
 2. JUST PRIOR TO PAVING THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING WILL BE REMOVED, RECOMPACTED AND TESTED AGAIN
 3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING WILL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED
 4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING DRY SEASON
 5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR

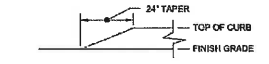
PAVING OVER EXISTING ROAD OR PARKING LOT



NOTES
 1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAX 6" LIFTS AND MECHANICALLY COMPACTED TO MAX 90% OF THE MAX DRY DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD
 2. JUST PRIOR TO PAVING THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING WILL BE REMOVED, RECOMPACTED AND TESTED AGAIN
 3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING WILL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED
 4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING DRY SEASON
 5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR



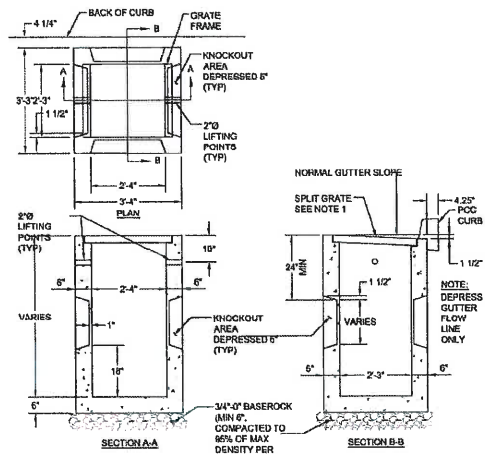
391 WHEEL STOP
SCALE: NTS



305 CURB TAPER
SCALE: NTS

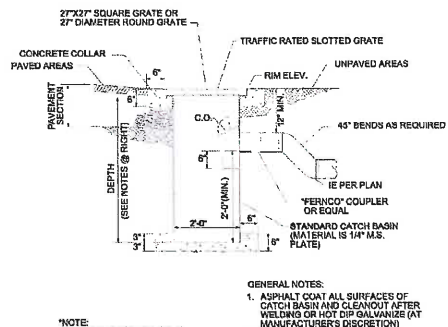
STORM DRAIN NOTES

1. ALL STORM SEWER PIPE SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
2. ALL PIPE SHALL BE PLACED ON STABLE EARTH, OR IF IN THE OPINION OF THE PROJECT ENGINEER, THE EXISTING FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH A GRAVEL MATERIAL TO SUPPORT THE PIPE.
3. THE BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6", MAXIMUM DEPTH 8"-9" THOROUGHLY TAMPING EACH LAYER. THESE COMPACTED LAYERS MUST EXTEND FOR ONE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE OTHER SIDE OF THE TRENCH. MATERIALS TO COMPLETE THE FILL OVER THE PIPE SHALL BE THE SAME AS DESCRIBED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE PRIOR TO PAVING.
5. UNLESS OTHERWISE NOTED, ALL STORM SEWER PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE. THE MATERIAL SUPPLIED UNDER THIS SPECIFICATION SHALL BE HIGH DENSITY CORRUGATED POLYETHYLENE SMOOTH INTERIOR PIPE AND SHALL BE MANUFACTURED IN CONFORMITY WITH THE LATEST AASHTO SPECIFICATIONS. COUPLERS SHALL COVER NOT LESS THAN ONE FULL CORRUGATION ON EACH ANNULAR SECTION OF PIPE.
6. CULVERT ENDS AT OUTFALLS SHALL BE BEVELED TO MATCH SIDE SLOPES. FIELD CUT OF CULVERT ENDS IS PERMITTED WHEN APPROVED BY THE CITY/PORT ENGINEER OR HIS DESIGNATED REPRESENTATIVE. CULVERT OUTFALLS SHALL BE RIPRAPPED WITH A PAD MINIMUM OF 12" THICK, EXTENDING MINIMUM OF 6' FROM DISCHARGE POINT.
7. ALL STEEL PIPES, CULVERTS, TANKS AND OTHER STEEL PARTS OF ANY STORM DRAINAGE SYSTEM SHALL BE GALVANIZED OR HAVE A TREATMENT 1 ASPHALT COATING OR BETTER AS SPECIFIED IN THE ODOT STANDARD SPECIFICATIONS. ALUMINUM AND CONCRETE PIPES AND STRUCTURES DO NOT REQUIRE A TREATMENT 1 COATING.
8. STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED PRIOR TO ENGINEER/JURISDICTIONAL ACCEPTANCE.
9. ALL PIPES SHALL MINIMUM OF 12" COVER AT THE TOP OF THE BELL, OR PIPES SHALL HAVE MINIMUM COVER PER THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS GREATER.
10. CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO CENTER OF GRATE.
11. 100-FT MAX LINEAR RUN BETWEEN CLEANOUTS. 135' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.



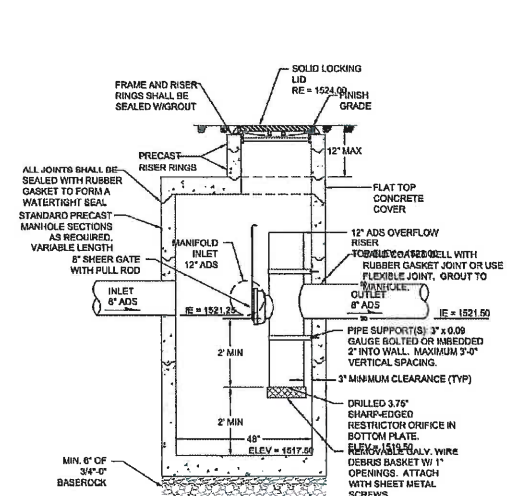
NOTES
 1. GRATE AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION. GRATE AND FRAME TO BE ODOT Q-2 TYPE 2 (BICYCLE SAFE).
 2. FOR PRECAST BOX, CURB MUST BE HAND FORMED 10' EACH SIDE OF CATCH BASIN.
 3. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
 4. CATCH BASIN AND GRATE SHALL MEET HS20 LOADING.
 5. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
 6. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

2 CATCH BASIN
SCALE: NTS



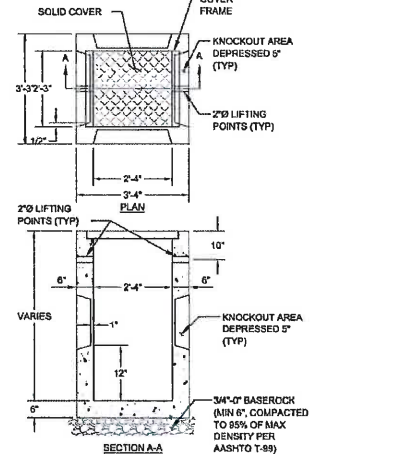
NOTES
 1. LOCATE ROUND BASIN IN PAVED AREAS, AND SQUARE BASIN ARE TO BE USED WHEN LOCATED NEXT TO CURB.
 2. ALL WELDED STEEL CONSTRUCTION
 3. 19 GAUGE STEEL MINIMUM THICKNESS
 4. OPENING ON BOTTOM OF WATERSEAL TO BE GREATER OR EQUAL TO AREA IN OUTLET PIPE.
 5. STANDARD DEPTH 48"

3 LYNCH STYLE CATCH BASIN
SCALE: NTS



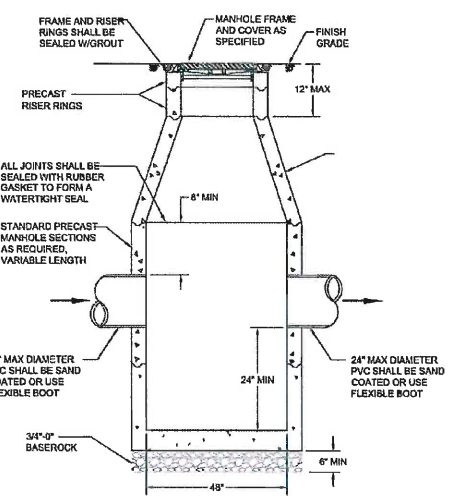
NOTE
 ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.

4 CONTROL STRUCTURE MANHOLE
SCALE: NTS (PONDS 2 & 3)



CONSTRUCTION NOTES:
 1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
 2. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
 3. JUNCTION BASIN AND GRATE SHALL MEET HS20 LOADING.
 4. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
 5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

6 JUNCTION BASIN
SCALE: NTS

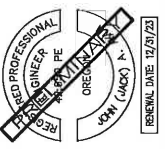


NOTE
 ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.

7 48" STORM MANHOLE
SCALE: NTS

REVISIONS	BY:	DATE:
	JA	

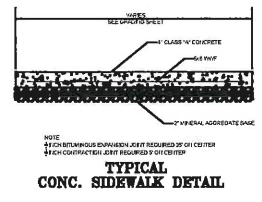
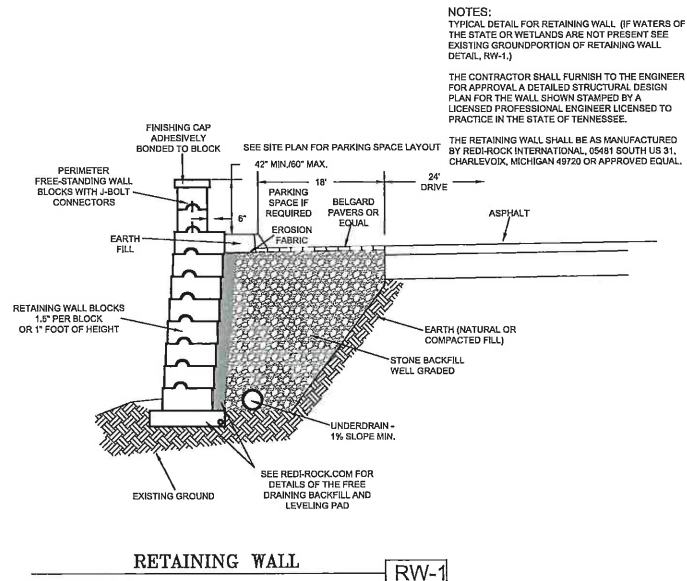
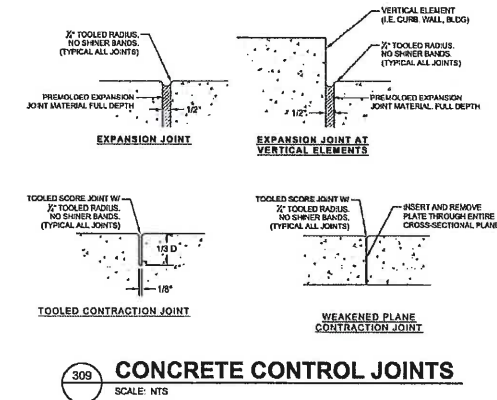
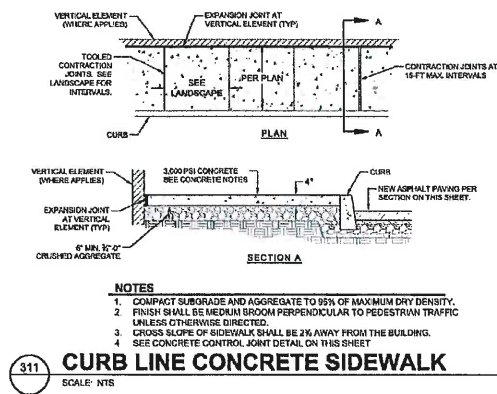
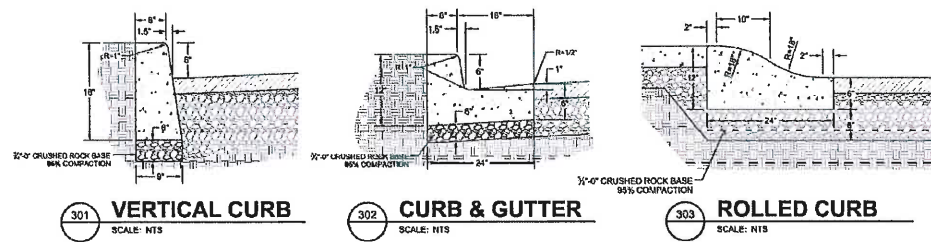
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<http://www.emcsc.com>



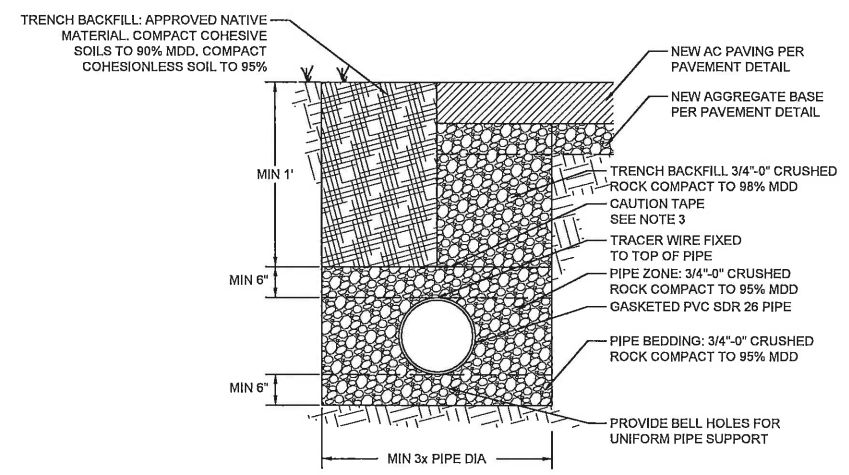
PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
COMMERCIAL ROADS AND STOCKPILE

DRAWN BY: CD/JW
 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:

C5.0
 DETAILS



STORM SEWER TRENCH DETAIL

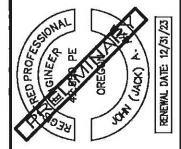


NOTES
COVER OVER PIPE MAY VARY FROM 36" TO 42" MAX UPON APPROVAL FROM ENGINEER
REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAX DRY DENSITY
SEWER: 3" POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER BELOW"

BY:	JA
REVISIONS	

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Engineers/Scientists, LLC



PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 COMMERCIAL ROADS AND STOCKPILE

DRAWN BY: CD/JW
 DATE: 3-17-2022
 JOB No: 022-2202
 SHEET No:
C5.1
 DETAILS

RD1000.dgn 05-01-2017

CONSTRUCTION ENTRANCE - TYPE 1

CONSTRUCTION ENTRANCE - TYPE 2

CONSTRUCTION ENTRANCE - TYPE 3 (TYPE 1 OR 2 WITH EXISTING CURB)

SECTION A-A

SECTION B-B

SECTION C-C

WOODEN CURB RAMP SECTION D-D

CONSTRUCTION ENTRANCE TABLE MINIMUM LENGTH	
Length (FT)	Area Of Exposed Soil (Acres)
20	0.25
50	0.25 < A < 1.0
100	A > 1.0

Notes:

- The type 1 entrance is a simple entrance without a diversion ridge or settling basin.
- The wooden ramp may be used on either type 1 or type 2 entrances in situations where there is curb and the curb is not removed for the construction entrance.

Calc. Book No. 8408 **Baseline Report Date July 2014**

OREGON STANDARD DRAWINGS

CONSTRUCTION ENTRANCES

2018

Effective Date: December 1, 2019 - May 31, 2020 **RD1000**

RD1005.dgn 11-29-2017

TYPICAL PROFILE SECTION CHECK DAMS (SHOWN WITH AGGREGATE)

AGGREGATE CHECK DAM - TYPE 1

SANDBAG CHECK DAM - TYPE 4

BIOFILTER BAG CHECK DAM - TYPE 3

Ditch Grade	MAXIMUM CHECK DAM SPACING "L"			
	H=8"	H=12"	H=18"	H=24"
10%	15'	20'	25'	30'
5%	16'	21'	26'	31'
0%	17'	22'	27'	32'
3%	18'	23'	28'	33'
2%	19'	24'	29'	34'
1%	20'	25'	30'	35'
0%	21'	26'	31'	36'
-1%	22'	27'	32'	37'
-2%	23'	28'	33'	38'
-3%	24'	29'	34'	39'
-4%	25'	30'	35'	40'
-5%	26'	31'	36'	41'
-6%	27'	32'	37'	42'
-7%	28'	33'	38'	43'
-8%	29'	34'	39'	44'
-9%	30'	35'	40'	45'
-10%	31'	36'	41'	46'
-11%	32'	37'	42'	47'
-12%	33'	38'	43'	48'
-13%	34'	39'	44'	49'
-14%	35'	40'	45'	50'
-15%	36'	41'	46'	51'
-16%	37'	42'	47'	52'
-17%	38'	43'	48'	53'
-18%	39'	44'	49'	54'
-19%	40'	45'	50'	55'
-20%	41'	46'	51'	56'
-21%	42'	47'	52'	57'
-22%	43'	48'	53'	58'
-23%	44'	49'	54'	59'
-24%	45'	50'	55'	60'
-25%	46'	51'	56'	61'
-26%	47'	52'	57'	62'
-27%	48'	53'	58'	63'
-28%	49'	54'	59'	64'
-29%	50'	55'	60'	65'
-30%	51'	56'	61'	66'
-31%	52'	57'	62'	67'
-32%	53'	58'	63'	68'
-33%	54'	59'	64'	69'
-34%	55'	60'	65'	70'
-35%	56'	61'	66'	71'
-36%	57'	62'	67'	72'
-37%	58'	63'	68'	73'
-38%	59'	64'	69'	74'
-39%	60'	65'	70'	75'
-40%	61'	66'	71'	76'
-41%	62'	67'	72'	77'
-42%	63'	68'	73'	78'
-43%	64'	69'	74'	79'
-44%	65'	70'	75'	80'
-45%	66'	71'	76'	81'
-46%	67'	72'	77'	82'
-47%	68'	73'	78'	83'
-48%	69'	74'	79'	84'
-49%	70'	75'	80'	85'
-50%	71'	76'	81'	86'
-51%	72'	77'	82'	87'
-52%	73'	78'	83'	88'
-53%	74'	79'	84'	89'
-54%	75'	80'	85'	90'
-55%	76'	81'	86'	91'
-56%	77'	82'	87'	92'
-57%	78'	83'	88'	93'
-58%	79'	84'	89'	94'
-59%	80'	85'	90'	95'
-60%	81'	86'	91'	96'
-61%	82'	87'	92'	97'
-62%	83'	88'	93'	98'
-63%	84'	89'	94'	99'
-64%	85'	90'	95'	100'

Notes:

- Type 3 - stake biofilter bags with two 2" x 2" x 18" (min.) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 6" min at each joint.
- Type 4 - Tightly abut or overlap ends of sandbags at each joint.
- Spacing between check dams for all check dam types shall comply with the typical profile section shown above.

Calc. Book No. 8407 **Baseline Report Date November 2017**

OREGON STANDARD DRAWINGS

CHECK DAMS TYPE 1, 3 AND 4

2018

Effective Date: December 1, 2019 - May 31, 2020 **RD1005**

RD1010.dgn 10-01-2018

GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2

PREFABRICATED FILTER INSERT - TYPE 3

SOD PROTECTION - TYPE 6

AREA DRAIN PLAN

AREA DRAIN PERSPECTIVE VIEW

CURB INLET SEDIMENT DAM - TYPE 10

WATTLE BARRIER WITH FILTER INSERT - TYPE 11

CURB INLET PERSPECTIVE VIEW

COMPOST FILTER SOCK OR WATTLE - TYPE 7

Notes:

- Type 2 - Geotextile/wire mesh/aggregate. Place the wire mesh over the grate. Place sediment fence geotextile over the wire mesh and perimeter area around structure. Install aggregate over the geotextile fabric.
- Type 3 - Prefabricated filter inserts. Install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations. Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMPs to prevent the potential of sediments entering project storm systems. Field fabricated inserts are not allowed.
- Type 7 - Compost filter sock. Drive 2" x 2" wood stakes a minimum of 6" into ground and flush with the top of the sock. Overlap ends of sock per manufacturer recommendations.
- Type 10 - Curb inlet sediment dam. Fit curb inlet sediment dam snugly into inlet mouth. Curb inlet sediment dam is required for use with inlet filter insert where at-grade inlet grate and curb inlet are combined at a catch basin.
- Type 11 - Wattle barrier with filter insert. Install prefabricated filter insert per type 3 detail. Install wattles over opening and 3' to each side of opening tight against curb. Adjust wattle to force storm water to flow through filter insert or wattle prior to leaving the site. Adjust, replace or modify the inlet protection as needed to prevent sediment laden water from entering the catch basin.

Calc. Book No. 8402, 8406, 8407 **Baseline Report Date October 2018**

OREGON STANDARD DRAWINGS

INLET PROTECTION TYPE 2, 3, 6, 7, 10 AND 11

2018

Effective Date: December 1, 2019 - May 31, 2020 **RD1010**

RD1031.dgn 06-01-2017

BRUSH BARRIER - TYPE 5

AGGREGATE BARRIER - TYPE 6

Notes:

- Direct diverted flows from the outlet side of the rock filter barrier onto a stabilized area, such as vegetation and/or rock, or into a sediment trapping facility.
- Embed barrier a min. of 4" into the existing ground/bank/slopes.
- Use 1:3 or flatter side slope. Within the safety clear zone, use 1:2 or flatter side slopes.
- Use 4"-1" clean aggregate.

Calc. Book No. 8403, 8404, 8405 **Baseline Report Date July 2014**

OREGON STANDARD DRAWINGS

SEDIMENT BARRIER TYPE 5 AND 6

2018

Effective Date: December 1, 2019 - May 31, 2020 **RD1031**

REVISIONS

BY:	JA

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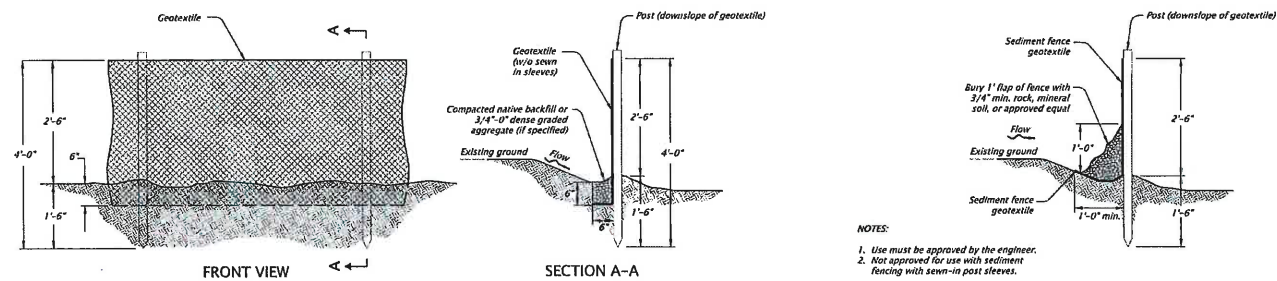
PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 COMMERCIAL ROADS AND STOCKPILE

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 DATE: 3-17-2022
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C5.2
 SWPPP
 DETAILS

REVISION DATE: 12/21/23

rd1060.dgn 11-08-2017

RD1040



SEDIMENT FENCE AND GEOTEXTILE BURY DETAIL - TYPE 1

- NOTES:
1. Use must be approved by the engineer.
 2. Not approved for use with sediment fencing with sewn-in post sleeves.

ALTERNATE SEDIMENT FENCE W/O TRENCHING - TYPE 2

NOTES:

1. Use 2" X 2" wood fence posts.
2. Posts to be installed on downhill side of sediment fence geotextile. Position posts to prevent separation from geotextile.
3. Compact filter fabric trench backfill and soil on uphill side of fence.
4. Locate fence no closer than three feet to the top of a slope.
5. Wing spacing shall comply with table 1.

TABLE 1
FENCE SPACING
FOR GENERAL APPLICATION
INSTALL PARALLEL ALONG
CONTIGUOUS AS FOLLOWS:

GRADE	MAXIMUM SPACING ON GRADE
Grade <10%	300'
10% ≤ Grade <15%	150'
15% ≤ Grade <20%	100'
20% ≤ Grade <30%	50'
30% ≤ Grade	25'

TABLE 2
POST SPACING

POST SPACING	SEDMIMENT FENCE WITH GEOTEXTILE ELONGATION LESS THAN 50%	SEDMIMENT FENCE WITH GEOTEXTILE ELONGATION 50% OR MORE
6'		
4'		

CALC. BOOK NO. 6403, 6404, 6405

BASELINE REPORT DATE: November 2017

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

SEDIMENT FENCE

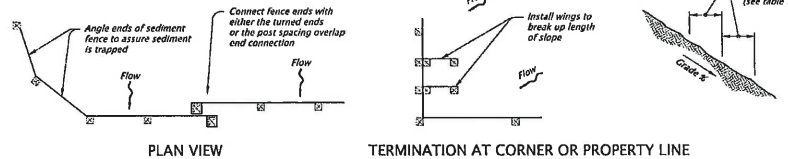
2018

DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

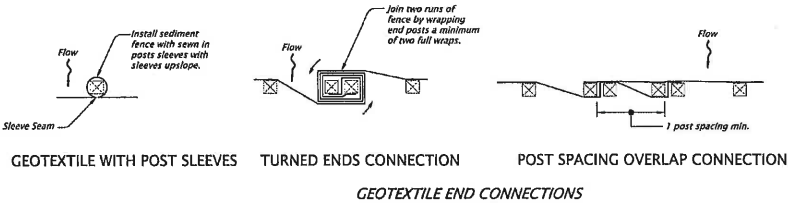
Effective Date: December 1, 2019 - May 31, 2020

RD1040



PLAN VIEW

TERMINATION AT CORNER OR PROPERTY LINE



GEOTEXTILE WITH POST SLEEVES

TURNUED ENDS CONNECTION

POST SPACING OVERLAP CONNECTION

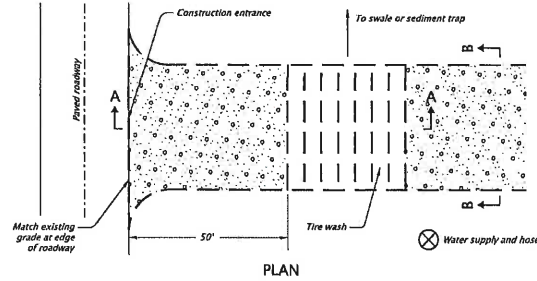
GEOTEXTILE END CONNECTIONS

Effective Date: December 1, 2019 - May 31, 2020

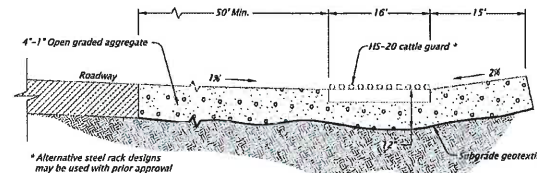
RD1040

rd1060.dgn 06-01-2017

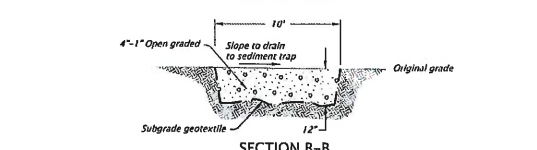
0901 GDI



PLAN



SECTION A-A



SECTION B-B

TIRE WASH - TYPE 1 (Manual Hose Wash)

3" # Extra strong grade 50 pipe

(12 Spaces @ 7')

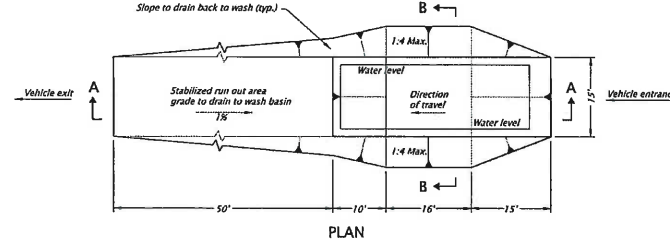
1/4" End plate full width

8-1/4" D.

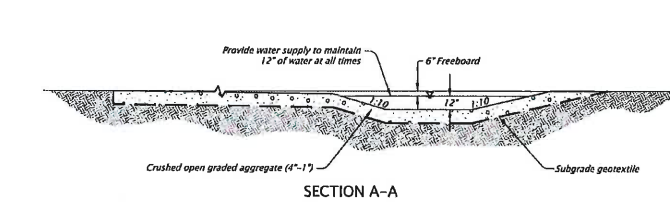
HS-20 CATTLE GUARD

Effective Date: December 1, 2019 - May 31, 2020

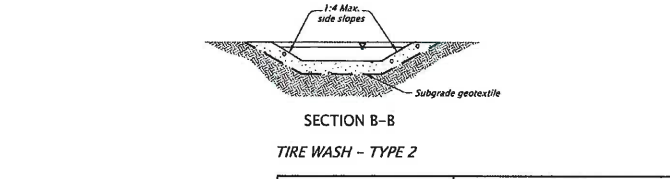
RD1060



PLAN



SECTION A-A



SECTION B-B

TIRE WASH - TYPE 2

CALC. BOOK NO. 6403, 6404, 6405

BASELINE REPORT DATE: July 2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

TIRE WASH FACILITY TYPE 1 AND 2

2018

DATE	REVISION DESCRIPTION

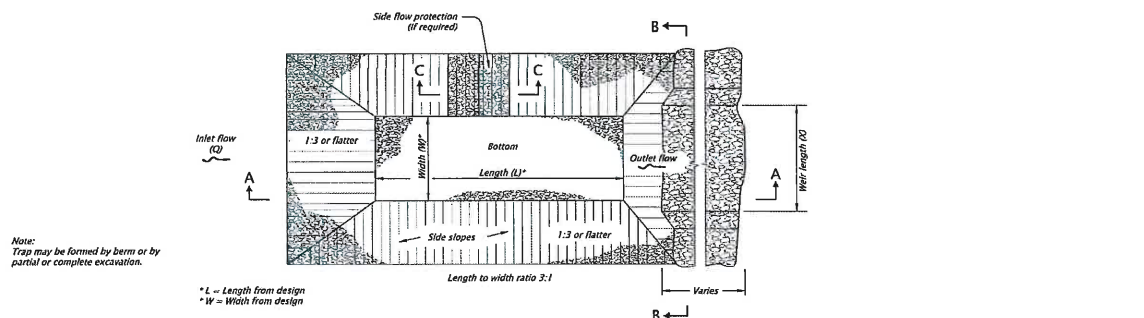
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Effective Date: December 1, 2019 - May 31, 2020

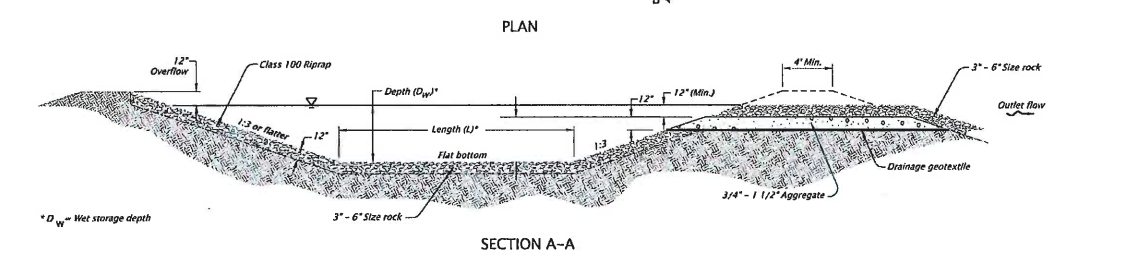
RD1060

rd1065.dgn 06-01-2017

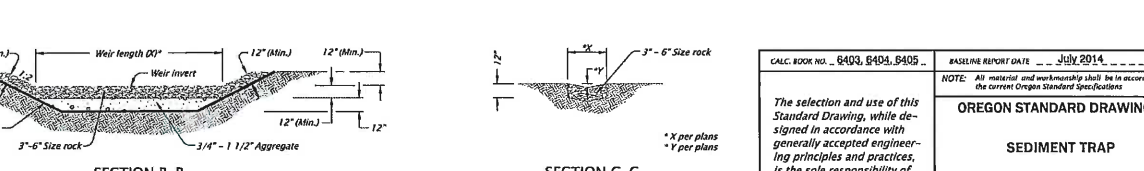
RD1065



PLAN



SECTION A-A



SECTION B-B

SECTION C-C

SEDIMENT TRAP

CALC. BOOK NO. 6403, 6404, 6405

BASELINE REPORT DATE: July 2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

SEDIMENT TRAP

2018

DATE	REVISION DESCRIPTION

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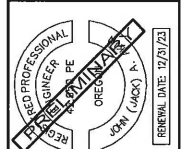
Effective Date: December 1, 2019 - May 31, 2020

RD1065

REVISIONS	BY:
	JA

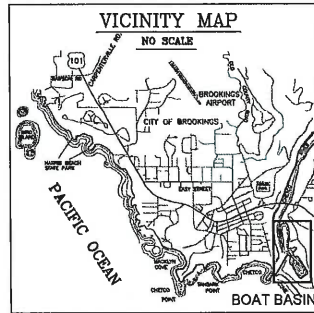
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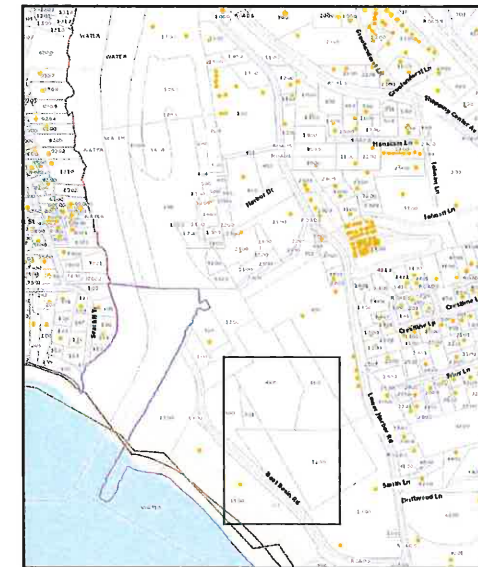
PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 COMMERCIAL ROADS AND STOCKPILE

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C5.3
 SWPPP
 DETAILS



PORT OF BROOKINGS-HARBOR
2021 CIVIL IMPROVEMENTS

EMBANKMENT ROCK RECONSTRUCTION



PORT OF BROOKINGS HARBOR
MAP OF TAX LOTS

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

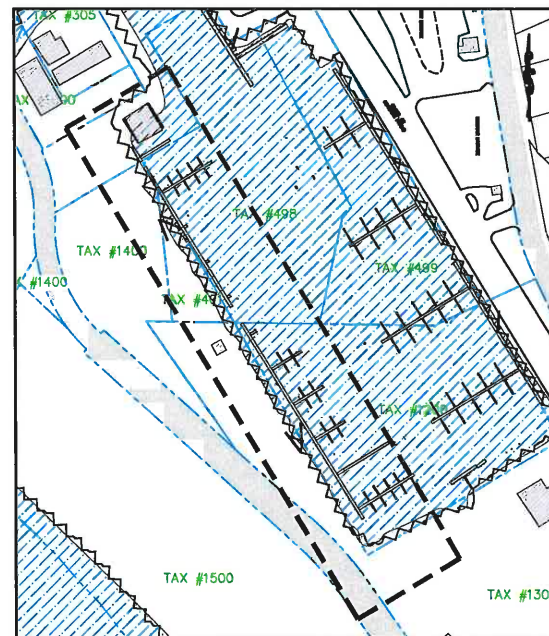
EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PRELIM GRADING NOTES

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

DRAWING REGISTER

Sheet List Table	
Sheet Number	Sheet Title
CV	Cover Sheet
001	EXISTING CONDITIONS
002	GENERAL NOTES
003	EXISTING EMBANKMENT PHOTOS
004	DEMOLITION & CLEARING
100	PROPOSED EMBANKMENT
101	PROPOSED DETAILS



PROJECT OVERVIEW

PROJECT DESCRIPTION

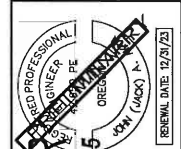
TITLE: EMBANKMENT ROCK RECONSTRUCTION
REFERENCE: 113
LOCATION: BASIN BOAT ROAD
TAX LOT(S): 1400, 1300, 401

LEGEND

	EXIST. FIRE HYDRANT		FIRE HYDRANT
	EXIST. WATER VALVE		WATER VALVE
	EXIST. BLOW OFF		WATER METER
	EXIST. WATER METER		BACKFLOW DEVICE
	EXIST. HOSE BIB		IRRIGATION WATER METER
	EXIST. IRRIGATION VALVE		AIR RELEASE VALVE
	EXIST. AIR RELEASE VALVE		BLOWOFF DEVICE ASSEMBLY
	EXIST. STORM DRAIN MANHOLE		FIRE DEPARTMENT CONNECTION
	EXIST. CLEANOUT		END PLUG
	EXIST. SANITARY SEWER MANHOLE		TEE
	EXIST. MAILBOX		SANITARY SEWER CLEANOUT
	CURB RAMP		SANITARY SEWER MANHOLE
	PARALLEL RAMP		STORM DRAIN CLEANOUT
	HANDICAP PARKING SYMBOL		STORM DRAIN MANHOLE
	PARALLEL PARKING STRIPING		ATRIUM DRAIN / BUBBLER
	BICYCLE LANE SYMBOL		CATCH BASIN INLET
	EXIST. SANITARY SEWER		CURB INLET
	EXIST. STORM DRAIN		STORM DRAIN CONTROL STRUCTURE
	EXIST. WATER		ELECTRIC BOX
	EXIST. GAS		ELECTRIC TRANSFORMER
	EXIST. ELECTRIC		LIGHTS
	EXIST. OVERHEAD POWER		CONTROL POINT
	EXIST. TELEPHONE		MONUMENT
	EXIST. FIBER OPTIC		TRAFFIC SIGNAL LIGHT
	EXIST. CURB AND GUTTER		SIGN (TRAFFIC, INFORMATION)
	EXIST. CENTERLINE		BOLLARD
	EXIST. RIGHT OF WAY		BICYCLE PARKING SPACE
	EXIST. CONTOUR		DECIDUOUS TREE
	PROPOSED CONTOUR		CONIFER TREE
	EXIST. EDGE OF PAVEMENT		NEW CONCRETE
	CHAIN LINK FENCE		NEW GRAVEL PAVING
	BARB WIRE FENCE		NEW HMAC PAVING - STANDARD
	SANITARY SEWER		NEW HMAC PAVING - HEAVY
	STORM DRAIN		NEW LANDSCAPING
	WATER		NEW RIP RAP
	GAS		
	ELECTRIC		
	CURB AND GUTTER		
	PROPOSED RIGHT OF WAY		
	FLOW LINE		
	PROPERTY LINE		

REVISIONS	BY:	CD
0		

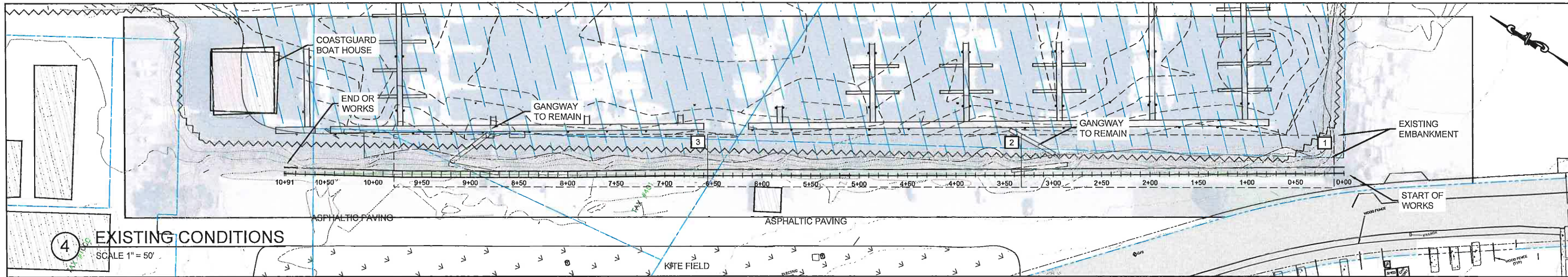
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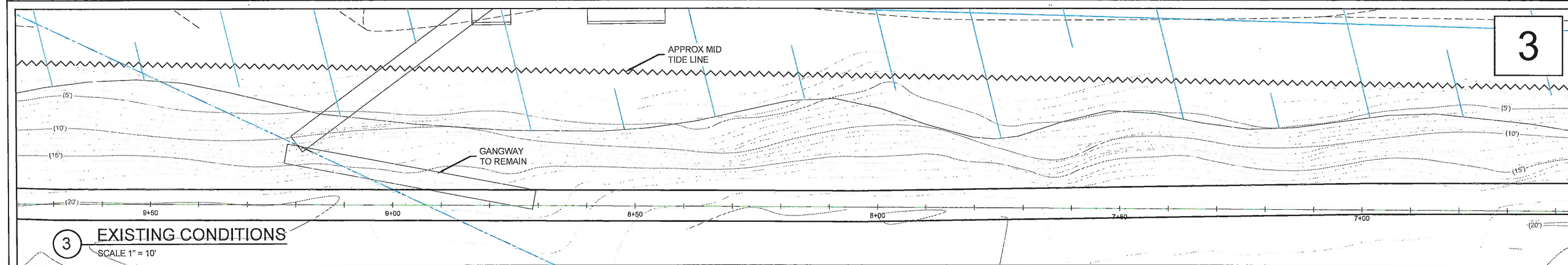
PORT OF BROOKINGS HARBOR
 163300 LCOM WHEELER AVENUE, BROOKINGS, OREGON 97515
 Embankment Rock Reconstruction

DRAWN BY:	CD
DATE:	22-Mar-2022
JOB No:	113
SHEET No:	

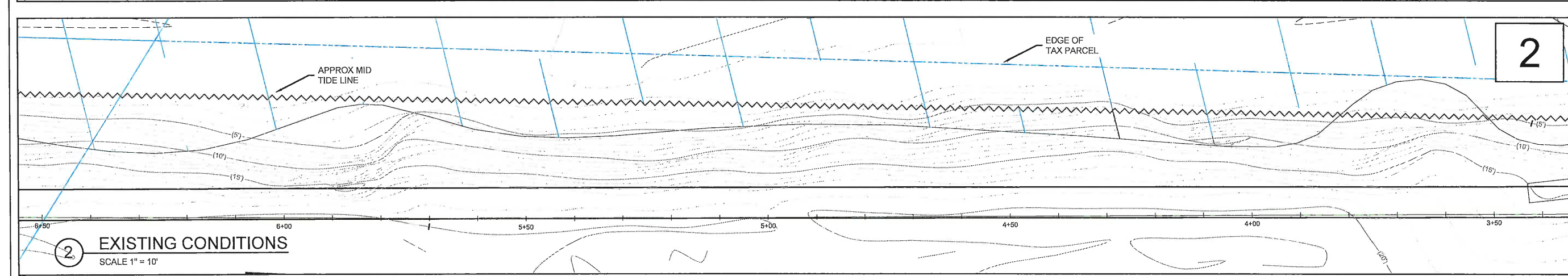




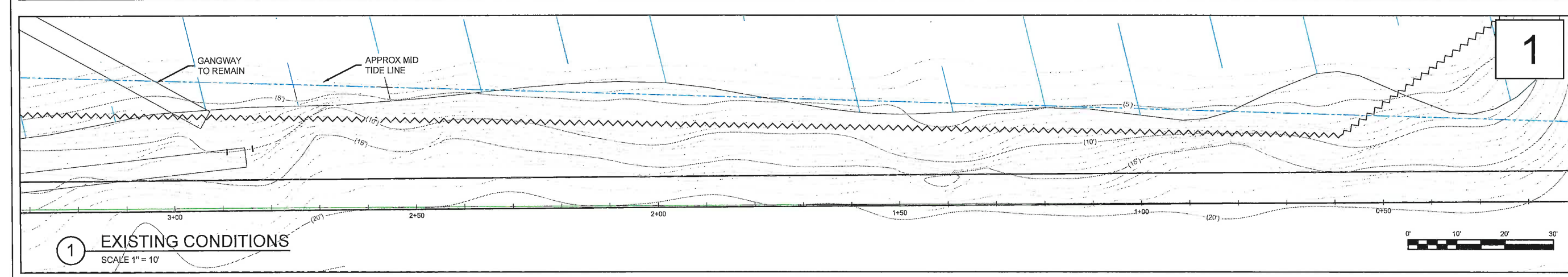
4 EXISTING CONDITIONS
SCALE 1" = 50'



3 EXISTING CONDITIONS
SCALE 1" = 10'



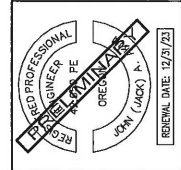
2 EXISTING CONDITIONS
SCALE 1" = 10'



1 EXISTING CONDITIONS
SCALE 1" = 10'

REVISIONS	BY:	CD
0		

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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 Embankment Rock Reconstruction

DRAWN BY: CD
 DATE: 22-Mar-2022
 JOB No: 113
 SHEET No:

001

GENERAL NOTES

THESE NOTES ARE INTENDED FOR USE IN INTERPRETING AND IMPLEMENTING THE TASKS SHOWN ON THE FOLLOWING CONSTRUCTION PLANS AND SPECIFICATIONS SHEETS. THESE ARE IN ADDITION TO THE OVERALL PROJECT SPECIFICATION AND BID DOCUMENTS AND CONTRACTUAL ITEMS.

THESE ARE INTENDED FOR THE USE OF THE GENERAL CONTRACTOR AND HIS/HER SUBCONTRACTORS IN THE DEMOLITION AND RECONSTRUCTION OF THE SUBJECT AREA OF THE PORT OF BROOKINGS HARBOR. USE FOR OTHER PURPOSES OR AT OTHER SITES IS NOT RECOMMENDED AND IS ACCOMPLISHED AT THE SOLE RISK OF THE USER.

THESE ITEMS ARE TO BE USED AS A SUPPLEMENT TO THE DETAILS PROVIDED ON THE PLAN SHEETS AND SPECIFICATION PAGES. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, REFERENCED REPORTS, THESE GENERAL NOTES AND OTHER ITEMS LISTED ON THIS SHEET AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.

THE EMBANKMENT REPAIR HAS BEEN DESIGNED TO RESIST ANTICIPATED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE AND SLOPE AREAS PRIOR TO COMPLETION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO JOBSITE SAFETY, CONSTRUCTION MEANS, METHODS, AND SEQUENCES, TEMPORARY SHORING, SLOPE STABILITY, FORMWORK AND BRACING, USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

CONSTRUCTION OBSERVATION BY THE ENGINEER IS FOR CHECKING FOR CONFORMANCE WITH DESIGN ASPECTS ONLY AND IS NOT INTENDED IN ANY WAY TO REVIEW AND/OR APPROVE THE GENERAL CONTRACTOR'S CONSTRUCTION PROCEDURES OR RELIEVE THE CONTRACTOR FROM PROVIDING A COMPLETED PROJECT, CONSISTENT WITH THE PLANS AND SPECIFICATIONS AND GOOD CONSTRUCTION PRACTICES. SPECIAL INSPECTION BY THE ENGINEER DOES NOT PROVIDE A CERTIFICATION OF THE PROJECT OR RELIEVE THE CONTRACTOR OF ALL RESPONSIBILITY FOR A PROPERLY CONSTRUCTED PROJECT.

STANDARDS USED FOR DESIGN

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ODOT STANDARD SPECIFICATIONS, UNLESS ELSEWHERE HEREIN SPECIFIED OTHERWISE. INTERNATIONAL BUILDING CODE (IBC) 2021; 2019 OREGON STRUCTURE SPECIALTY CODE (OSSC); AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

OTHER NOTES

1. JOBSITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL PRODUCTS AND WORKMANSHIP SHALL BE NEW MATERIALS OF GOOD QUALITY, ACCEPTABLE FOR THIS TYPE OF CONSTRUCTION. WORK TO BE ACCOMPLISHED IN A GOOD AND WORKMANLIKE MANNER.
3. ALL MATERIALS TO BE SHIPPED, HANDLED AND STOCKPILED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND GOOD CONSTRUCTION PRACTICES.
4. LOCATIONS MUST BE VERIFIED AT THE SITE WITH THE ENGINEER AND THE PORT OF BROOKINGS HARBOR REPRESENTATIVE PRIOR TO PLACEMENT.
5. ABIDE BY LOCAL, STATE AND FEDERAL BUILDING ORDINANCES, INCLUDING ALL SAFETY REQUIREMENTS, IN ALL PHASES OF THE PROJECT.
6. ALL PHASES OF THE PROJECT ARE TO CONFORM TO THE PLANS AND SPECIFICATIONS ATTACHED HERETO AND SPECIFICATIONS PROVIDED BY THE OWNER AND THE ENGINEER-OF-RECORD.
7. PROPOSED CHANGES TO PROJECT PLANS AND SPECIFICATIONS MUST BE APPROVED BY THE DESIGNER PRIOR TO ACCEPTANCE AND IMPLEMENTATION AT THE SITE.
8. PROPOSED CHANGES MUST BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL/DISAPPROVAL BY THE DESIGNER AND THE OWNER.
9. IN NO CASE SHALL CHANGES, SUBSTITUTIONS OR OMISSIONS BE MADE TO THE DESIGN OR MATERIALS WITHOUT THE WRITTEN AUTHORIZATION OF THE DESIGNER AND THE OWNER.
10. AUTHORIZATION OF A DESIGN CHANGE BY THE ENGINEER DOES NOT CONSTITUTE ACCEPTANCE BY THE PORT OF BROOKINGS HARBOR, NOR DOES IT AUTHORIZE ADDITIONAL FUNDS FOR THE CHANGES. THE PORT'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE DESIGN CHANGE AND APPLICABLE CHANGES IN THE CONTRACT AMOUNT AND/OR CONSTRUCTION TIME PERIOD PRIOR TO IMPLEMENTATION OF SUCH CHANGES.
11. PROJECT SCHEDULE AND GENERAL SEQUENCING OF ALL WORK MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND THE OWNER. SUCH APPROVAL DOES NOT RELIEVE THE CONTRACTOR OR HIS/HER SUBCONTRACTORS OF ALL RESPONSIBILITIES FOR PROPER EXECUTION OF THE SUBJECT PROJECT CONSTRUCTION.
12. SEQUENCING OF TASKS THAT REQUIRES VARYING THE INSTALLED SIZES OF PROJECT MATERIALS MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND OWNER.
13. TRAFFIC CONTROL AND SIGNAGE MUST BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE SO STATED IN THE CONTRACT. ACCESS TO THE US COAST GUARD FACILITIES MUST BE MAINTAINED DURING CONSTRUCTION.
14. CONTRACTOR MUST UNDERSTAND THAT THE PROJECT SITE IS IN A HARBOR AREA SUBJECT TO TIDAL FLUCTUATIONS. THEREFORE, SEQUENCING AND PROJECT WORK MUST TAKE INTO ACCOUNT EFFECTS OF HIGH AND LOW TIDES.
15. REPLACEMENT OF SPECIFIED PRODUCTS BY AN "EQUIVALENT" PRODUCT MUST BE APPROVED BY THE DESIGN ENGINEER AND THE OWNER. REDESIGN REQUIRED FOR USE OF ALTERNATE "EQUIVALENT" MATERIALS IS TO BE BORNE BY THE CONTRACTOR.

GRADING NOTES

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED. THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS AS SPECIFIED AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OF BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE USE OF ALTERNATE MATERIALS. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES

1. PROJECT/PURPOSE - WITH THE PURPOSE OF MAINTAINING, REHABILITATING, REPLACING, AND UPGRADING THE EXISTING WESTERN EMBANKMENT AT THE SOUTH BASIN OF PORT OF BROOKINGS. THE EXISTING EMBANKMENT WILL BE CLEARED DOWN TO SUITABLE SUBGRADE AT A SLOPE BETWEEN 1.5:1 AND 2:1. A 4FT DEEP TRENCH WILL BE EXCAVATED AT THE BASE OF THE EMBANKMENT. A 3FT DEEP LAYER OF AGGREGATE WILL BE PLACED ON TOP OF THE SLOPE AND INTO THE TRENCH
2. CONTRACTOR ACTIVITIES - CONTRACTOR ACTIVITIES ARE DESCRIBED AS EXCAVATION AND CLEARING USING A 25T EXCAVATOR. EXCAVATION AND SPREADING AT THE BASE OF THE SLOPE USING A LONG REACH EXCAVATOR. PLACEMENT OF GEOGRID. PLACEMENT OF CRUSHED AGGREGATE FROM FINE GRAVEL TO 2FT BOULDERS
3. SOIL DISTURBING ACTIVITIES - EXCAVATION WILL BE LIMITED TO EXISTING MARINA EDGES
4. NON-STORMWATER DISCHARGES - NO DEWATERING, WATER-LINE FLUSHING, PAVEMENT WASH WATERS OR IRRIGATION WATER DISCHARGES ARE PLANNED FOR THIS PROJECT.
5. ESTIMATED START DATE FOR CONSTRUCTION - 05/22
6. NEAREST SURFACE WATER BODIES - PORT OF BROOKINGS ICE HOUSE INLET IN BASIN 2 (SOUTH BASIN) AND BASIN 1, NEAR DOCK A (NORTH BASIN).
7. RECEIVING WATERS - PACIFIC OCEAN
8. SPECIAL ENVIRONMENTAL CONSIDERATIONS - SEE SECTION 10
9. DESIGNATED EPCM - THE DESIGNATED EROSION AND POLLUTION CONTROL MANAGER (EPCM) WHO WILL ASSURE COMPLIANCE WITH ALL ITEMS IN THIS PLAN IS TED FITZGERALD, PORT DIRECTOR, OR HIS DESIGNEE.
10. EROSION, SEDIMENTATION AND POLLUTION CONTROL BMPs - BEST MANAGEMENT PRACTICES (BMP) TO BE USED, WHEN APPLICABLE, TO PREVENT POLLUTION RELATED TO CONTRACTOR ACTIVITIES LISTED IN THIS SECTION ARE AS FOLLOWS: A) OFFSITE VEHICLE TRACKING AND DUST PREVENTION - MEASURES WILL BE TAKEN TO PREVENT OFFSITE TRACKING OF MATERIALS, INCLUDING SWEEPING PAVEMENTS, COVERING LOADS AND WETTING SOIL TO PREVENT DUST. THERE WILL BE NO AGGREGATE CONSTRUCTION. B) MATERIAL MANAGEMENT AND SPILL PREVENTION - ALL ON SITE FUELS WILL BE DELIVERED, HANDLED, STORED, USED, AND APPLIED SO AS NOT TO BE RELEASED INTO THE WATERS OF THE STATE/US. FUELING WILL BE ACCOMPLISHED AWAY FROM THE WORK AREA A SPILL CLEANUP KIT WILL BE AVAILABLE IF DEEMED BY THE EPCM TO BE REQUIRED. C) WASTE MANAGEMENT - HANDLING, STORAGE AND DISPOSAL OF SOLID WASTE AND/OR HAZARDOUS WASTE WILL BE DISPOSED INTO SUITABLE LANDFILL OFFSITE D) INSPECTION AND MAINTENANCE - DAILY INSPECTION AND MAINTENANCE FOR ALL CONTROLS INCLUDED IN THE POLLUTION CONTROL PLAN AND THE ESCP WILL BE PERFORMED BY THE EPCM OR HIS DESIGNEE. E) EMPLOYEE AND SUBCONTRACTOR TRAINING - EMPLOYEE AND SUBCONTRACTOR EDUCATION AT A MINIMUM WILL INCLUDES INFORMING PERSONNEL OF THE POSTED LOCATIONS OF THE POLLUTION CONTROL PLAN/EROSION AND SEDIMENT CONTROL PLAN/MSDS'S AND IMPORTANT EMERGENCY PHONE NUMBERS. EDUCATION WILL ALSO INCLUDE INFORMING PERSONNEL OF REVISED MATERIAL MANAGEMENT PROCEDURES FOLLOWING A SPILL F) (CRITERIA 15) PRECONSTRUCTION ACTIVITY - BEFORE ALTERATION OF THE ACTION AREA, FLAG THE BOUNDARIES OF CLEARING LIMITS ASSOCIATED WITH SITE ACCESS AND CONSTRUCTION TO MINIMIZE SOIL AND VEGETATION DISTURBANCE, AND ENSURE THAT ALL TEMPORARY EROSION CONTROLS ARE IN PLACE AND FUNCTIONAL. G) (CRITERIA 16) SITE PREPARATION - DURING SITE PREPARATION, CONSERVE NATIVE MATERIALS FOR RESTORATION, INCLUDING LARGE WOOD, VEGETATION, TOPSOIL AND CHANNEL MATERIALS (GRAVEL, COBBLE AND BOULDERS) DISPLACED BY CONSTRUCTION. WHENEVER PRACTICAL, LEAVE NATIVE MATERIALS WHERE THEY ARE FOUND AND IN AREAS TO BE CLEARED, CLIP VEGETATION AT GROUND LEVEL TO RETAIN ROOT MASS AND ENCOURAGE REESTABLISHMENT OF NATIVE VEGETATION. BUILDING AND RELATED STRUCTURES MAY NOT BE CONSTRUCTED INSIDE THE RIPARIAN MANAGEMENT AREA H) (CRITERIA 17) HEAVY EQUIPMENT - HEAVY EQUIPMENT WILL BE SELECTED AND OPERATED AS NECESSARY TO MINIMIZE ADVERSE EFFECTS ON THE ENVIRONMENT; AND ALL VEHICLES AND OTHER HEAVY EQUIPMENT WILL BE USED AS FOLLOWS:
 - (A.) STORED, FUELED AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY WATER BODY, OR IN AN ISOLATED HARD ZONE SUCH AS A PAVED PARKING LOT.
 - (B.) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 50 FEET OF ANY WATER BODY.
 - (C.) STEAM-CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION TO REMAIN FREE OF ALL EXTERNAL OIL, GREASE, MUD, SEEDS, ORGANISMS AND OTHER VISIBLE CONTAMINANTS.
 - (D.) GENERATORS, CRANES AND ANY OTHER STATIONARY EQUIPMENT OPERATED WITHIN 150 FEET OF ANY WATER BODY WILL BE MAINTAINED AND PROTECTED AS NECESSARY TO PREVENT LEAKS AND SPILLS FROM ENTERING THE WATER I) (CRITERIA 18)

IN-WATER WORK PERIOD -

ALL WORK WITHIN THE ACTIVE CHANNEL WILL BE COMPLETED IN ACCORDANCE WITH THE OREGON GUIDELINES FOR TIMING OF IN-WATER WORK TO PROTECT FISH AND WILDLIFE RESOURCES (ODFW 2000, OR THE MOST RECENT VERSION).

J) (CRITERIA 21) EMBANKMENT INSTALLATION - <TBC>

K) (CRITERIA 24) SUBGRADE PREPARATION - <TBC>

10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

GEOTECHNICAL NOTE

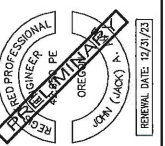
THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

1 GENERAL NOTES

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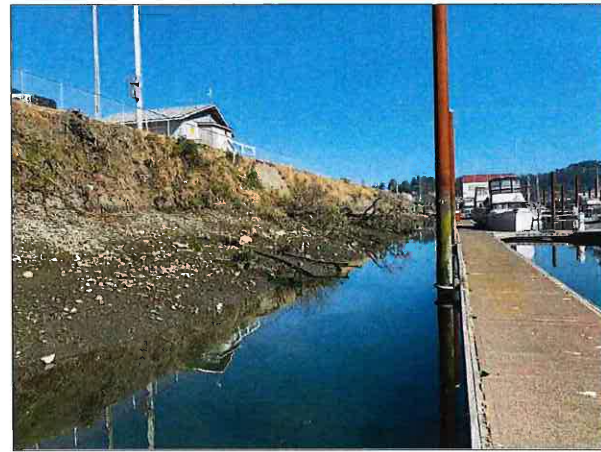
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Embankment Rock Reconstruction

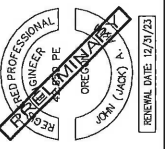
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1 EXISTING EMBANKMENT PHOTOS
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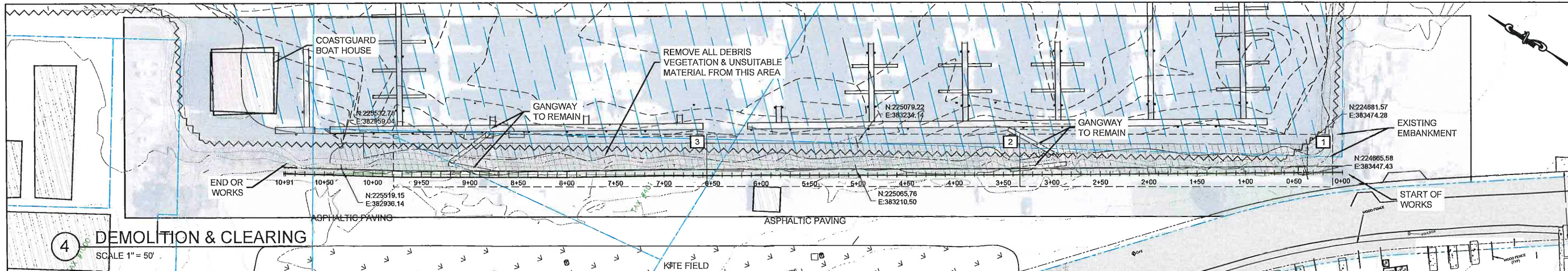
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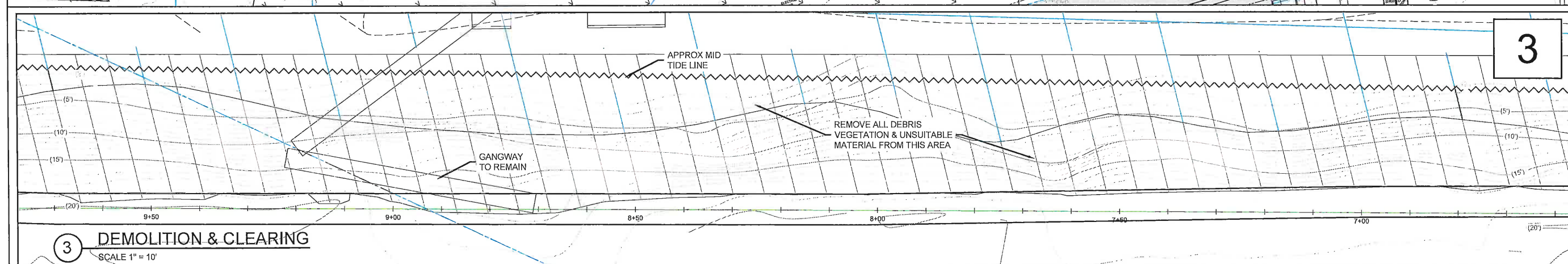


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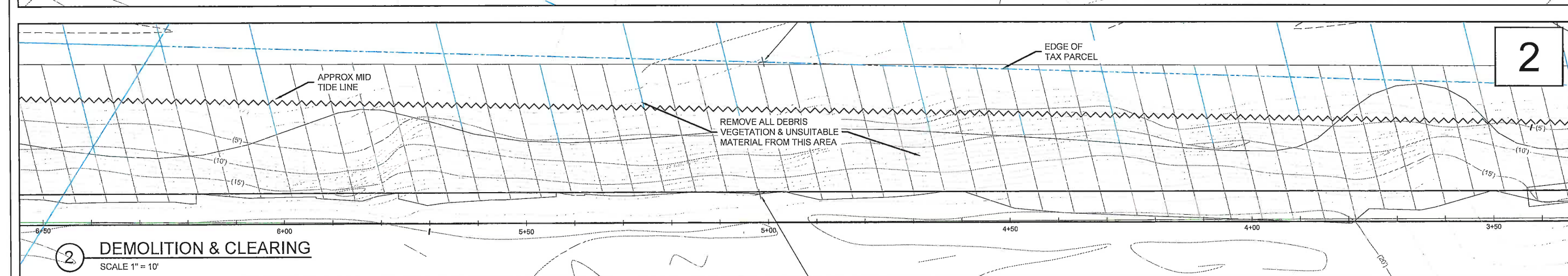
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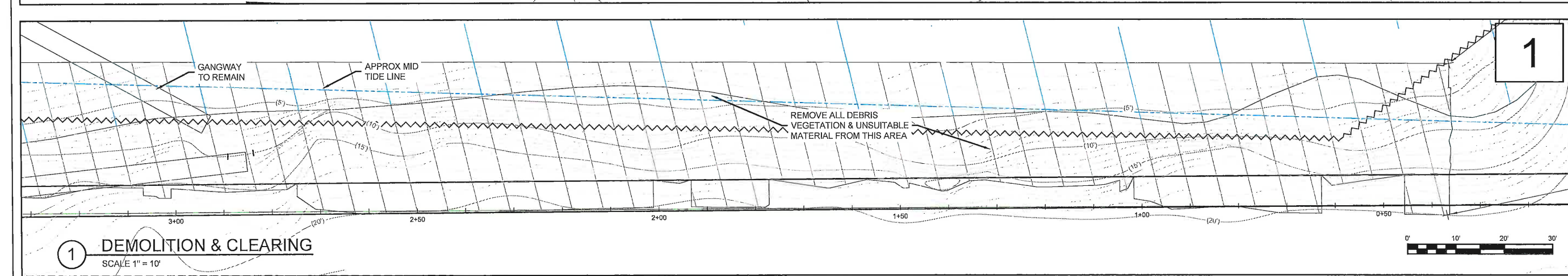
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3 DEMOLITION & CLEARING
SCALE 1" = 10'



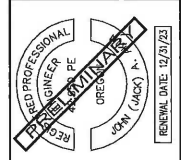
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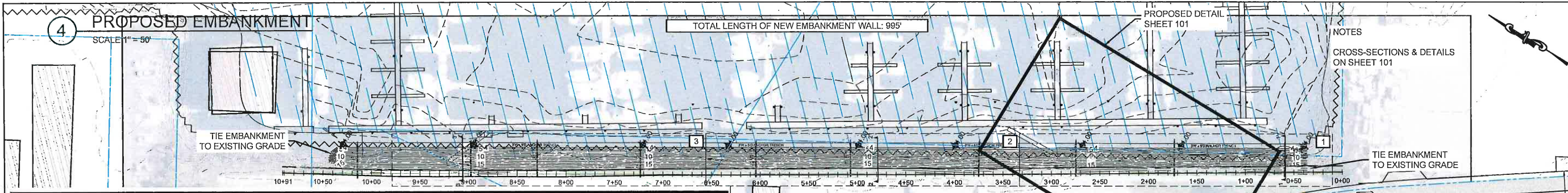
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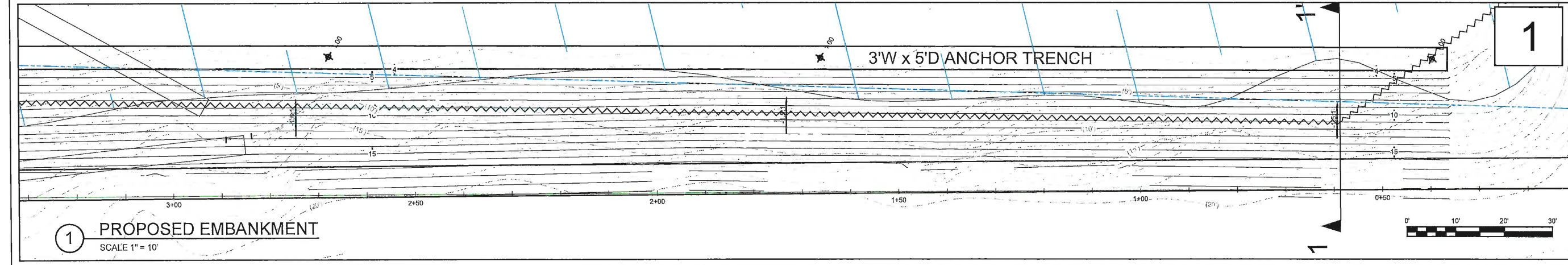
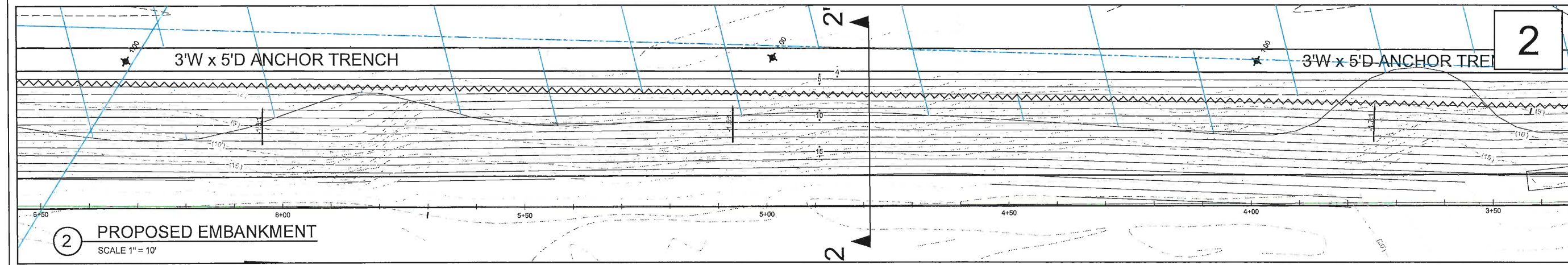
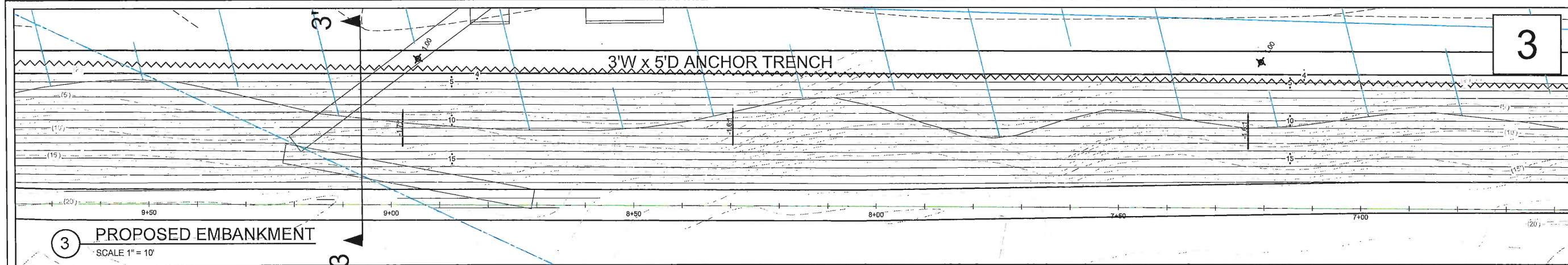
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Volume Summary

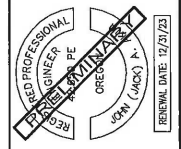
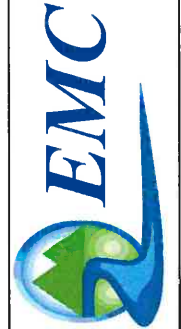
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DESIGN SPECIFICS OF ROCK & CONSTRUCTION

THE ROCK USED (IF 406 MITIGATION IS APPROVED) FOR THIS PROJECT WILL BE SPECIFIED TO FOLLOW TEST REQUIREMENTS FOUND WITHIN AASHTO 85 (APPARENT SPECIFIC GRAVITY, PERCENT ABSORPTION); ODOT TM 208A (DEGRADATION); AND AASHTO T 104 (SOUNDNESS). ALL ROCK SPECIFIED IN THIS PROJECT MUST BE ANGULAR IN SHAPE, AND THE THICKNESS OF ANY SINGLE ROCK SHALL NOT BE LESS THAN ONE THIRD OF ITS LENGTH. ROUND ROCK WILL NOT BE ACCEPTED UNLESS AUTHORIZED BY EMC. THE ROCK MUST MEET THE GRADATION REQUIREMENTS FOR THE CLASS SPECIFIED, BE FREE FROM OVERBURDEN, SPOILED, SHALE AND ORGANIC MATERIAL. NON-DURABLE ROCK, SHALE OR ROCK WITH SHALE SEAMS IS NOT ACCEPTABLE. CLASS 2000 RIP RAP IS BY DEFINITION COMPRISED OF ROCKS THAT ARE 20% BY WEIGHT OF 1400 POUNDS TO 2000 POUNDS, 30% BY WEIGHT OF 700 TO 1400 POUNDS, 40% BY WEIGHT 40 TO 700 POUNDS AND 0 TO 10% 0 TO 40 POUNDS. EITHER A FILTER BLANKET OF 16 INCH LAYER OF CLASS 50, OR SPECIFIED FILTER FABRIC WILL BE LAID BENEATH THE ROCK.

A CLAMSHELL, ORANGE PEEL BUCKET, SKIP OR SIMILAR APPROVED DEVICE WILL BE USED WHICH WILL TRANSPORT THE RIPRAP MATERIAL TO ITS FINAL DESTINATION. THIS REVETMENT REPAIR IS FOR FLOW ASSUMED TO GENERALLY BE UNIFORM, STEADY AND SUBCRITICAL. HOWEVER, RAPIDLY VARYING, UNSTEADY FLOW CONDITIONS OCCUR OCCASIONALLY, AND EXCESSIVE WAVE ACTION, HYDRAULIC JUMPS AND EXTREME FLOW TURBULENCE CAN OCCUR AT THIS LOCATION. THESE CONDITIONS ARE AMONG THE REASONS FOR THE EXTENT OF PROTECTION PROPOSED. THE LONGITUDINAL EXTENT OF THIS REPAIR SHOULD BE CONTINUOUS FOR A DISTANCE GREATER THAN THE LENGTH THAT IS IMPACTED. THE VERTICAL EXTENT OF PROTECTION REQUIRED FOR THIS REVETMENT INCLUDES DESIGN HEIGHT AND FOUNDATION OR TOE DEPTH. THE DESIGN HEIGHT OF THE RIP RAP INSTALLATION IS TO BE EQUAL TO THE DESIGN HIGH WATER ELEVATION (KING TIDE PLUS STORM SURGE) WITH ADEQUATE FREEBOARD TO ACCOMMODATE WAVE ACTION, SUPER ELEVATION FROM THE CHANNEL BEND, HYDRAULIC JUMP, AND FLOW IRREGULARITIES, PLUS ERRATIC PHENOMENA SUCH AS UNFORESEEN EMBANKMENT SETTLEMENT, ACCUMULATION OF TRASH AND DEBRIS FROM THE RIVER.

SCOUR DEPTH IS ESTIMATED AT ABOUT 4 FEET FROM THE LOWEST ELEVATION IN THE CROSS-SECTION OF THE BASIN AT THIS POINT, UTILIZING THE CONSERVATIVE ASSUMPTION OF A MEDIAN DIAMETER OF BED MATERIAL TO BE ABOUT 0.15 M. RIPRAP THICKNESS FOR CLASS 2000 IS SPECIFIED TO BE AT LEAST A 4 FOOT LAYER.

THE FILTER BENEATH THE RIPRAP AND OVERLYING THE STRUCTURAL FILL IS TO PREVENT THE MIGRATION OF FINE SOIL PARTICLES THROUGH STRUCTURAL VOIDS AND TO DISTRIBUTE THE WEIGHT OF THE ARMORING UNITS (RIPRAP) TO PROVIDE MORE UNIFORM SETTLEMENT, AND ALSO PERMITS RELIEF OF HYDROSTATIC PRESSURES WITHIN THE SOILS.

FOR THE AREAS ABOVE THE WATERLINE AT ANY GIVEN TIME THE FABRIC OR GEOTEXTILE ALSO PREVENTS SURFACE WATER FROM CAUSING EROSION BENEATH THE RIP RAP. IN ADDITION TO THE CONSIDERATIONS WITH RESPECT TO SCOUR THE FLANKS OF THIS REVETMENT ARE DESIGNED FOR UPSTREAM AND DOWNSTREAM CONDITIONS

GENERAL CONSTRUCTION, EROSION & CONTROL NOTES

FINAL BANK SLOPE WILL BE BETWEEN 1V:1.5H AND 1V:2H. BANK PREPARATION WILL CONSIST OF CLEARING DEBRIS AND MINOR GRADING. RIPRAP PLACEMENT WILL BE BY MACHINE PLACING AND HAND PLACING. HAND PLACING WILL BE PERFORMED AS SPECIFIED BY EMC ON STEEPER SIDE SLOPES. RE-HANDLING OR DRAGGING TO SMOOTH REVETMENT SERVICES TEND TO RESULT IN SEGREGATION AND BREAKAGE OF STONE AND ARE TO BE AVOIDED. STONE WILL NOT BE DROPPED FROM AN EXCESSIVE HEIGHT.

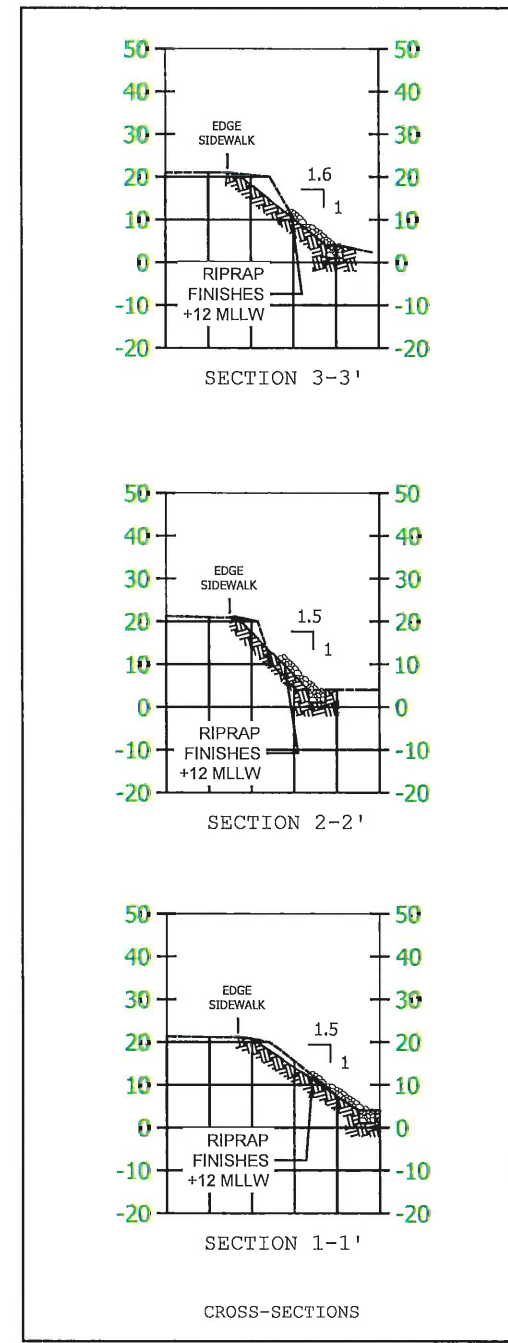
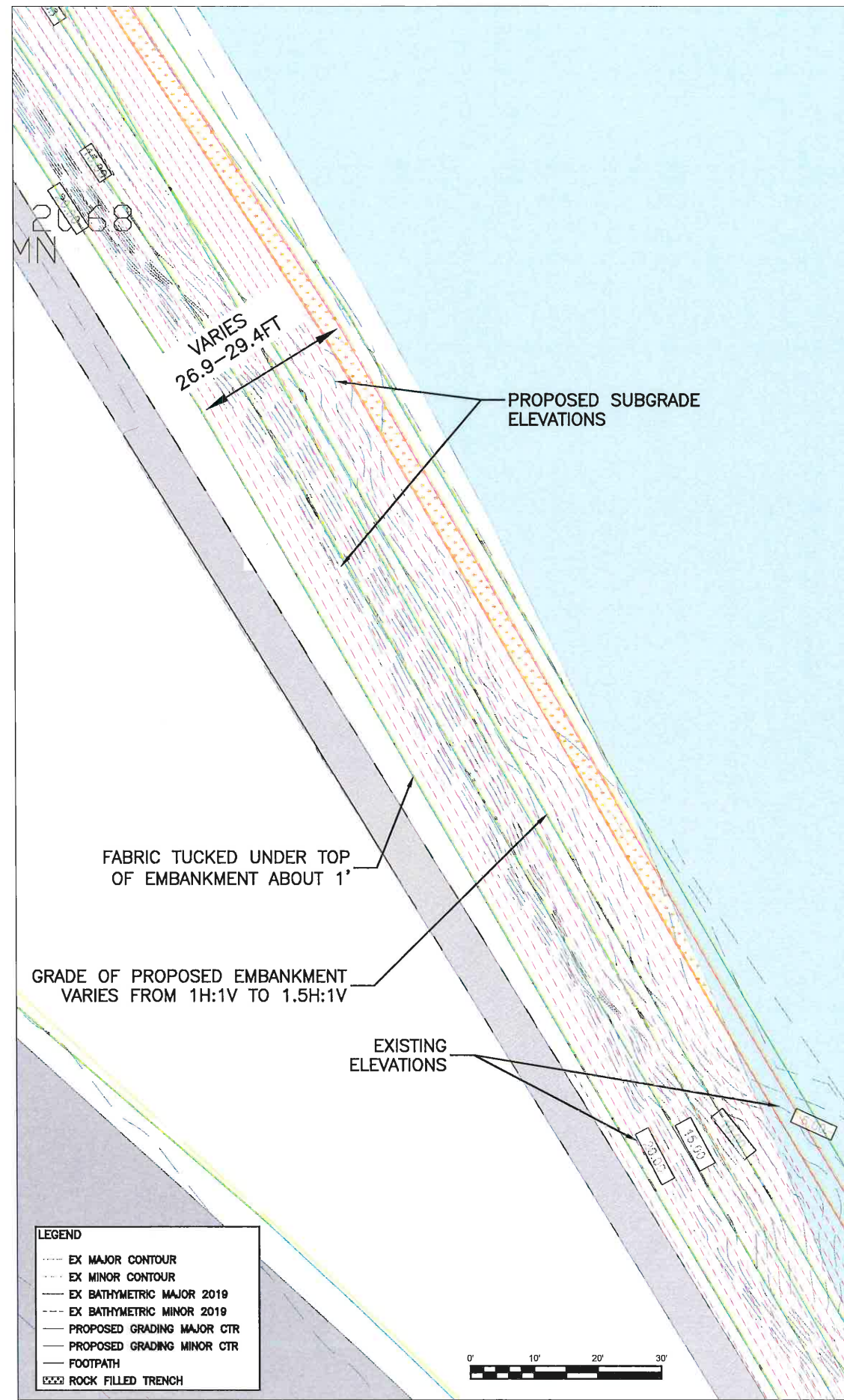
ACTIONS THAT WILL REQUIRE THE USE OF MATERIALS THAT ARE HAZARDOUS OR TOXIC TO AQUATIC LIFE (SUCH AS MOTOR FUEL, OIL, OR DRILLING FLUID), ARE INCLUDED WITHIN THE POLLUTION AND EROSION CONTROL PLAN SECTIONS OF THIS NARRATIVE, TO BE MANAGED BY EMC AND ENFORCED BY THE PORT OF BROOKINGS-HARBOR. THE PLAN INCLUDES PRACTICES TO MINIMIZE EROSION AND SEDIMENTATION ASSOCIATED WITH ALL ASPECTS OF THE PROJECT (E.G., STAGING AREAS, STOCKPILES, GRADING); TO PREVENT DEBRIS FROM DROPPING OR OTHERWISE ENTERING ANY STREAM OR WATERBODY; AND TO PREVENT AND CONTROL HAZARDOUS MATERIAL SPILLS.

EROSION CONTROLS WILL BE MONITORED AND MAINTAINED DAILY DURING THE RAINY SEASON AND WEEKLY DURING THE DRY SEASON AS NECESSARY TO ENSURE CONTROLS ARE PROPERLY FUNCTIONING. IF MONITORING SHOWS THAT THE EROSION CONTROLS ARE INEFFECTIVE AT PREVENTING VISIBLE SEDIMENT DISCHARGE, THE PROJECT WILL STOP TO EVALUATE EROSION CONTROL MEASURES. REPAIRS, REPLACEMENTS OR THE INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES WILL BE COMPLETED BEFORE THE PROJECT RESUMES.

IF APPLICABLE, MAINTENANCE WILL INCLUDE REMOVAL OF SEDIMENT AND DEBRIS FROM EROSION CONTROLS LIKE SILT FENCES OR HAY BALES ONCE IT HAS REACHED ON-THIRD OF THE EXPOSED HEIGHT OF THE CONTROL. WHENEVER PRACTICAL, NATIVE MATERIALS ARE TO BE LEFT WHERE THEY ARE FOUND AND IN AREAS TO BE CLEARED, VEGETATION IS TO BE CLIPPED AT GROUND LEVEL TO RETAIN ROOT MASS AND ENCOURAGE REESTABLISHMENT OF NATIVE VEGETATION.

HEAVY EQUIPMENT WILL BE SELECTED AND OPERATED AS NECESSARY TO MINIMIZE ADVERSE EFFECTS ON THE ENVIRONMENT (E.G., MINIMALLY-SIZED, LOW PRESSURE TIRES, MINIMAL HARD TURN PATHS FOR TRACKED VEHICLES, TEMPORARY MATS OR PLATES WITHIN WET AREAS OR SENSITIVE SOILS); AND ALL VEHICLES AND OTHER HEAVY EQUIPMENT WILL BE USED AS FOLLOWS:

- 1) STORED, FUELED AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY WATERBODY, OR IN AN ISOLATED HARD ZONE SUCH AS A PAVED PARKING LOT, OR LINED SURFACE;
- 2) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 50 FEET OF ANY WATERBODY;
- 3) STEAM-CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION TO REMAIN FREE OF ALL EXTERNAL OIL, GREASE, MUD, SEEDS, ORGANISMS AND OTHER VISIBLE CONTAMINANTS AND
- 4) GENERATORS, CRANES AND ANY OTHER STATIONARY EQUIPMENT OPERATED WITHIN 150 FEET OF ANY WATERBODY WILL BE MAINTAINED AND PROTECTED AS NECESSARY TO PREVENT LEAKS AND SPILLS FROM ENTERING THE WATER.



Nonwoven Geotextile

NOTE: APPROVED - GTX 3013-01 019 US 300NW is a nonwoven needlepunched geotextile made of 100% polypropylene staple filaments. US 300NW resists ultraviolet and biological deterioration, rotting, naturally encountered bases and acids. Polypropylene is stable within a pH range of 2 to 13. US 300NW meets the following M.A.R.V. values except where noted:

PROPERTY	TEST METHOD	ENGLISH	METRIC
Weight - Typical	ASTM D 5261	12 oz/sy	407 g/sm
Tensile Strength	ASTM D-4632	300 lbs	1,335 N
Elongation @ Break	ASTM D-4632	30%	30%
Mullen Burst*	ASTM D-3786*	580 psi	3,999 kPa
Puncture Strength†	ASTM D-4833†	180 lbs	801 N
CBR Puncture	ASTM D 6211	850 lbs	3,782 N
Trapezoidal Tear	ASTM D-4533	115 lbs	511 N
Apparent Opening Size	ASTM D 4751	100 US Sieve	0.150 mm
Permittivity	ASTM D-4491	1.00 Sec-1	1.00 Sec-1
Water Flow Rate	ASTM D 4491	75 g/min/ft²	3,055 l/min/m²
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

ROLL SIZE ROLL DIAMETER AREA WEIGHT

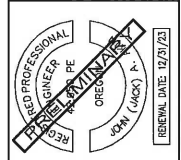
12.5' x 360'	23.0 in	500 sq yds	380 lbs
15' x 300'	25.0 in	500 sq yds	380 lbs

1 PROPOSED DETAILS
SCALE 1" = 10'

REVISIONS	BY:	CD

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EMC
 Engineers/Scientists, LLC



PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
Embankment Rock Reconstruction

DRAWN BY: CD
 DATE: 22-Mar-2022
 JOB No: 113
 SHEET No:

PORT OF BROOKINGS - HARBOR BOAT YARD PAVING PROJECT

GENERAL NOTES

- WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF THE CURRENT "OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION", ODOT/ AMERICAN PUBLIC WORKS ASSOCIATION (APWA), UNLESS OTHERWISE COVERED BY THE SPECIFICATIONS WRITTEN FOR THIS PROJECT (IF APPLICABLE), OR THE "WATER/ SEWER STANDARDS AND SPECIFICATIONS" OR THE "STANDARD DRAWINGS" OF THE CITY OF BROOKINGS.
- IN THE EVENT OF CONFLICT IN REGULATIONS AND SPECIFICATIONS GOVERNING THIS PROJECT, THE ORDER OF PRECEDENCE IS AS FOLLOWS:
 - CONTRACT SPECIAL PROVISIONS;
 - CONSTRUCTION PLANS;
 - PORT OF BROOKINGS HARBOR STANDARDS AND SPECIFICATIONS;
 - GENERAL NOTES;
 - ODOT/APWA SPECIFICATIONS FOR CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE SUBJECT TO INSPECTION AND COMPLIANCE WITH THE ABOVE APPLICABLE REGULATIONS AND SPECIFICATIONS.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL POSSESS A VALID STATE CONTRACTOR'S LICENSE PRIOR TO COMMENCING WORK ON THIS PROJECT. ALL CONTRACTORS AND SUBCONTRACTORS MUST ALSO BE CURRENTLY PREQUALIFIED WITH THE CITY OF BROOKINGS FOR THE CLASS(ES) OF WORK REQUIRED PRIOR TO ANY CONSTRUCTION.
- A MANDATORY PRE-CONSTRUCTION CONFERENCE OF ALL PARTIES SHALL BE HELD PRIOR TO ANY CONSTRUCTION.
- THE PORT OF BROOKINGS HARBOR SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY STAGE OF CONSTRUCTION.
- THE ENGINEER DOES NOT GUARANTEE THE COMPLETENESS OR ACCURACY OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD VERIFYING ANY POTENTIAL UTILITY CONFLICTS BETWEEN EXISTING UNDERGROUND UTILITIES AND THE WORK SHOWN ON THESE PLANS. THIS INCLUDES BOTH POTENTIAL UTILITY CONFLICTS SHOWN ON THESE PLANS AND POTENTIAL UTILITY CONFLICTS NOT SHOWN ON THESE PLANS BUT EITHER LOCATED, FOUND OR MARKED IN THE FIELD. WHERE POTENTIAL CONFLICTS ARE FOUND, THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NEEDED (INCLUDING PRELIMINARY POTHOLES OF THE UTILITIES AT THE POTENTIAL CONFLICT LOCATION) PRIOR TO WORK IN THE AREA TO ALLOW TIME FOR THE RESPONSIBLE AGENCY TO CORRECT THE CONFLICT (UNLESS OTHERWISE SPECIFIED ON THE PLANS). NO ADDITIONAL PAYMENT SHALL BE MADE FOR ANY EXPENSE THE CONTRACTOR MAY INCUR AS A RESULT OF HIS FAILURE TO ADEQUATELY EXPLORE, IN THE OPINION OF THE ENGINEER, POTENTIAL UTILITY CONFLICTS.
- THERE SHALL BE NO DEVIATION FROM THE APPROVED PLANS UNLESS REQUESTED IN WRITING BY CONTRACTOR AND APPROVED IN WRITING BY THE PORT OF BROOKINGS HARBOR.
- ALL UNDERGROUND UTILITIES AND SERVICE LATERALS ARE TO BE INSTALLED PRIOR TO CONSTRUCTION OF CURB AND GUTTER.
- CRUSHED ROCK BASE MATERIAL SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE PORT OF BROOKINGS HARBOR.
- CRUSHED ROCK BASE MATERIAL SHALL COMPLY WITH APWA/ODOT SEC. 00641 AND SEC. 02630 AND SHALL BE PLACED IN MAXIMUM LIFTS OF (6) INCHES AND SHALL BE COMPACTED TO 100% OF MAXIMUM RELATIVE DENSITY AT OPTIMUM MOISTURE IN ACCORDANCE WITH AASHTO T-99 METHOD A WITH COURSE PARTIAL CORRECTION ACCORDING TO ODOT TM-223 PROCEDURE FOR THE DETERMINATION OF 100% RELATIVE MAXIMUM DENSITY OF GRANULAR MATERIALS.
- CLASS "B" TRENCH BACKFILL MATERIAL SHALL COMPLY WITH APWA/ODOT SEC. 00405.14 AND SHALL BE 3/4" CRUSHED ROCK UNDER PAVEMENT OR IN RIGHT-OF-WAY. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM LIFTS OF 6" AND SHALL BE COMPACTED BY MECHANICAL MEANS TO 95% OF MAXIMUM RELATIVE DENSITY AT OPTIMUM MOISTURE IN ACCORDANCE WITH AASHTO T-99 METHOD D PROCEDURE FOR THE DETERMINATION OF 95% RELATIVE MAXIMUM DENSITY OF GRANULAR MATERIALS.
- UNLESS NOTED OTHERWISE, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PORT OF BROOKINGS HARBOR AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE PORT OF BROOKINGS HARBOR AND COORDINATED BY THE CONTRACTOR.
- CLASS "A" TRENCH BACKFILL MATERIAL SHALL BE APPROVED NATIVE MATERIAL PER ODOT/APWA SPECS. SEC. 00405.14 FOR ALL AREAS OUTSIDE OF TRAFFIC AREAS AND THE RIGHT-OF-WAY. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM LIFTS OF SIX (6) INCHES AND SHALL BE COMPACTED BY MECHANICAL MEANS TO 75% OF MAXIMUM RELATIVE DENSITY AND OPTIMUM MOISTURE IN ACCORDANCE WITH AASHTO T-99 METHOD D PROCEDURE FOR THE DETERMINATION OF 95% RELATIVE MAXIMUM DENSITY OF GRANULAR MATERIALS.
- ASPHALTIC CONCRETE PAVEMENT SHALL BE LEVEL 2, 1/2" DENSE GRADE MIX. MATERIALS AND WORKMANSHIP SHALL BE AS SPECIFIED IN SECTION 00744 OF THE ODOT/APWA SPECS. INSTALLATION SHALL BE IN ACCORDANCE WITH PORT OF BROOKINGS HARBOR STANDARD SPECIFICATIONS, AND TO THE CROSS-SECTION(S), GRADE AND LOCATIONS SHOWN ON THE APPROVED PLANS.
- CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR'S SURVEYOR, FOR EACH PHASE OF CONSTRUCTION. STAKES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE CONTINUOUSLY MAINTAINED BY THE CONTRACTOR UNTIL EACH PHASE OF CONSTRUCTION HAS BEEN COMPLETED AND INSPECTED. THE CONTRACTOR'S SURVEYOR SHALL PERFORM THE CONTRACTOR RESPONSIBILITIES DESCRIBED IN THE CONSTRUCTION SURVEYING MANUAL FOR CONTRACTORS, CHAPTER 1.6 (SEC. 00305).
- A COPY OF THE APPROVED PLANS, SPECIFICATIONS AND STANDARD DRAWINGS SHALL BE ON THE JOBSITE AT ALL TIMES WHILE THE WORK IS IN PROGRESS.
- MONOLITHIC CURB & GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH PORT OF BROOKINGS HARBOR STANDARD SPECIFICATIONS AND TO THE CROSS-SECTION, GRADE AND LOCATIONS AS SHOWN ON THE APPROVED PLANS.
- STREET NAMES, SIGNS, STOP BARS AND STOP SIGNS SHALL BE INSTALLED BY PORT OF BROOKINGS HARBOR. SIGN SLEEVES TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
- ALL MATERIAL REMAINING AFTER BACKFILLING OPERATIONS HAVE BEEN COMPLETED SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED OF BY THE PORT OF BROOKINGS HARBOR.
- PRIOR TO FINAL ACCEPTANCE, THE PORT OF BROOKINGS HARBOR SHALL CERTIFY THAT ALL IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- IF THE CONTRACTOR WISHES TO USE WATER FROM THE PORT OF BROOKINGS WATER DISTRIBUTION SYSTEM, CONTRACTOR SHALL MAKE USE OF A BULK WATER STATION IF AVAILABLE. AS AN OPTION, THE CONTRACTOR MAY APPLY FOR A HYDRANT METER PERMIT THROUGH THE PORT OF BROOKINGS HARBOR.
- CONTRACTOR SHALL NOT USE THE PUBLIC RIGHT-OF-WAY FOR LONG TERM STAGING OR MATERIAL STORAGE WITHOUT PRIOR APPROVAL. DURING THE WORK DAY, THE CONTRACTOR MAY USE THE 23' WORK AREA FOR STORAGE OF PROJECT MATERIALS AND EQUIPMENT THAT WILL BE USED DURING THAT DAY; HOWEVER, AT THE END OF THE DAY, THE WORK SITE SHALL BE CLEANED UP TO THE SATISFACTION OF THE ENGINEER. DISPOSAL OF MATERIALS IS NOT PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DISPOSAL SITES OUTSIDE OF THE RIGHT-OF-WAY. SHALL PAY ANY AND ALL COSTS INVOLVED, AND SHALL FURNISH THE PORT OF BROOKINGS HARBOR WITH ALL REQUIRED PERMITS AND DISPOSAL SITE AGREEMENTS.
- THE CONTRACTOR SHALL DESIGNATE AN EMERGENCY CONTACT PERSON THAT WILL HANDLE AFTER-HOURS ISSUES RELATED TO THE PROJECT, AND SHALL PROVIDE EMERGENCY CONTACT TELEPHONE NUMBERS TO THE PORT OF BROOKINGS HARBOR.
- ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SHOWN ON THE PLANS OR LISTED IN THE CONTRACT SPECIFICATIONS.
- ALL GRADES SHOWN ON THE PLANS SHALL BE SUBJECT TO ADJUSTMENT IN THE FIELD BY THE ENGINEER (IN ACCORDANCE WITH THE PROJECT SURVEYOR).
- THE CONTRACTOR SHALL CONTACT THE PORT OF BROOKINGS HARBOR 24 HOURS IN ADVANCE OF ANY EXCAVATION NEAR THE CITY OR PORT FACILITIES. CONTACT THE PORT OF BROOKINGS HARBOR IF ANY UNALLOCATED FACILITIES ARE DISCOVERED DURING CONSTRUCTION.

STORM DRAIN NOTES

- ALL STORM SEWER PIPE SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
- ALL PIPE SHALL BE PLACED ON STABLE EARTH, OR IF IN THE OPINION OF THE PROJECT ENGINEER, THE EXISTING FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH A GRAVEL MATERIAL TO SUPPORT THE PIPE.
- THE BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6", MAXIMUM DEPTH 8"-9" THOROUGHLY TAMPING EACH LAYER. THESE COMPACTED LAYERS MUST EXTEND FOR ONE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE OTHER SIDE OF THE TRENCH. MATERIALS TO COMPLETE THE FILL OVER THE PIPE SHALL BE THE SAME AS DESCRIBED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE PRIOR TO PAVING.
- UNLESS OTHERWISE NOTED, ALL STORM SEWER PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE. THE MATERIAL SUPPLIED UNDER THIS SPECIFICATION SHALL BE HIGH DENSITY CORRUGATED POLYETHYLENE SMOOTH INTERIOR PIPE AND SHALL BE MANUFACTURED IN CONFORMITY WITH THE LATEST AASHTO SPECIFICATIONS. COUPLERS SHALL COVER NOT LESS THAN ONE FULL CORRUGATION ON EACH ANNUAL SECTION OF PIPE.
- CULVERT ENDS AT OUTFALLS SHALL BE BEVELED TO MATCH SIDE SLOPES. FIELD CUT OF CULVERT ENDS IS PERMITTED WHEN APPROVED BY THE CITY/PORT ENGINEER OR HIS DESIGNATED REPRESENTATIVE. CULVERT OUTFALLS SHALL BE RIPRAPPED WITH A PAD MINIMUM OF 12" THICK, EXTENDING MINIMUM OF 6' FROM DISCHARGE POINT.
- ALL STEEL PIPES, CULVERTS, TANKS AND OTHER STEEL PARTS OF ANY STORM DRAINAGE SYSTEM SHALL BE GALVANIZED OR HAVE A TREATMENT 1 ASPHALT COATING OR BETTER AS SPECIFIED IN THE ODOT STANDARD SPECIFICATIONS. ALUMINUM AND CONCRETE PIPES AND STRUCTURES DO NOT REQUIRE A TREATMENT 1 COATING.
- STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED PRIOR TO ENGINEER/JURISDICTIONAL ACCEPTANCE.
- ALL PIPES SHALL MINIMUM OF 12" COVER AT THE TOP OF THE BELL, OR PIPES SHALL HAVE MINIMUM COVER PER THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS GREATER.
- CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO CENTER OF GRATE.
- 100-FT MAX LINEAR RUN BETWEEN CLEANOUTS. 135' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

INSPECTION TESTING & FREQUENCY TABLE

SEE NOTE 1

MATERIAL	FREQUENCY	MIN. NUMBER OF TESTS	NOTES
STREETS, PARKING LOTS, FILLS, TRENCHES, ETC.			
SUB-GRADE	1 TEST PER 4,000 SF PER LIFT	4	2, 3, & 5
ENGINEERED FILL	1 TEST PER 4,000 SF PER LIFT	4	2 & 4
BASEROCK	1 TEST PER 4,000 SF PER LIFT	4	2, 3, & 5
ASPHALT	1 TEST PER 6,000 SF PER LIFT	4	2 & 5
TRENCH BACKFILL	1 TEST PER 200 LIN. FT. PER LIFT	4	2
TRENCH ASPHALT PATCHING	1 TEST PER 300 LIN. FT. PER LIFT	4	2
CONCRETE			
SLUMP, AIR AND CYLINDERS FOR ALL SITE CONCRETE AND PCC PAVEMENT, UNLESS OTHERWISE SPECIFIED. ONE SET OF CYLINDERS PER 100 CUBIC YARDS OR PORTION THEREOF OF CONCRETE POURED PER DAY. SLUMP AND AIR TESTS ARE REQUIRED ON SAME LOAD AS CYLINDERS.			
BUILDING PERMIT INSPECTION AND SPECIAL INSPECTIONS FOR STRUCTURAL CONCRETE, MASONRY, EPOXY ANCHORS, ETC., AS REQUIRED BY PROJECT STRUCTURAL ENGINEER AND CURRENT BUILDING CODES.			
ENGINEER TO INSPECT FORMS PRIOR TO PLACEMENT OF CONCRETE.			
UNDERGROUND VAULTS, MANHOLES & STORMWATER DETENTION SYSTEMS			
PROVIDE ENGINEER WITH AS-BUILT SURVEY PRIOR TO BACKFILL. INSPECTIONS BY ENGINEER REQUIRED PRIOR TO BACKFILL.			

INSPECTION AND TESTING NOTES

- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ALL TESTING, INSPECTIONS, AND SPECIAL INSPECTIONS AS REQUIRED BY PROJECT ENGINEER, CURRENT BUILDING CODES, OR JURISDICTIONS HAVING AUTHORITY. ALL TESTING MUST BE COMPLETED AND APPROVED PRIOR TO SUBSEQUENT WORK. ADDITIONAL OR FREQUENT TESTS MAY BE REQUIRED BY AGENCY, BUILDING OFFICIAL OR ENGINEER.
- TESTING MUST BE PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY RETAINED BY THE CONTRACTOR.
- IN ADDITION TO IN-PLACE DENSITY TESTING, THE SUB-GRADE AND BASE ROCK SHALL BE PROOF-ROLLED WITH A LOADED DUMP TRUCK OR HEAVY NON-VIBRATORY ROLLER. SOILS SHALL BE REMOVED AND RE-COMPACTED OR REPLACED WITH APPROVED IMPORTED STRUCTURAL FILL IF THEY DO NOT DEMONSTRATE A FIRM, UNYIELDING CONDITION. BASE ROCK PROOF-ROLL SHALL TAKE PLACE LESS THAN 24 HOURS PRIOR TO PAVING AND SHALL BE WITNESSED BY THE ENGINEER OR GOVERNING AGENCY.
- THE APPROVED INDEPENDENT LABORATORY SHALL PROVIDE CLARIFICATION STAMPED BY AN ENGINEER LICENSED IN THE STATE OF OREGON THAT THE SUB-GRADE IS PREPARED AND ALL ENGINEERED FILLS ARE PLACED IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND DOCUMENTS.
- PROVIDE ENGINEER WITH SPOT ELEVATION VERIFICATION FOR SUB-GRADE AND TOP OF AGGREGATE PRIOR TO PLACING CONCRETE, ASPHALT, AND/OR OTHER STRUCTURES (WHEN INCLUDED IN THE PROJECT).

CONCRETE STANDARDS

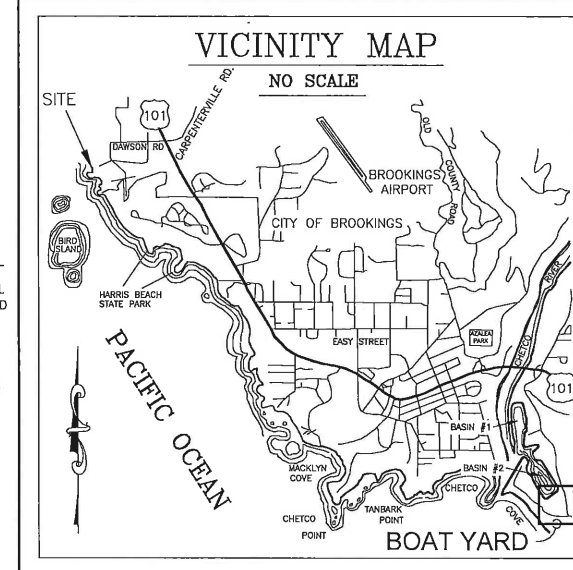
- EXCEPT AS OTHERWISE NOTED OR DEFINED BY CITY AND/OR PROJECT ENGINEER APPROVAL, ALL CONCRETE SHALL CONFORM TO SECTIONS 00440 AND 00759 OF THE CURRENT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION MANUAL.
- CONCRETE SHALL NOT BE PLACED UNTIL FORMS HAVE BEEN INSPECTED.
- INSPECTION REQUESTS MUST BE MADE 24 HOURS PRIOR TO DATE OF INSPECTION. TO SCHEDULE AN INSPECTION, CALL PORT OF BROOKINGS HARBOR, PHONE: 541-469-2218.
- CONCRETE SHALL BE COMMERCIAL GRADE RETAINING THE FOLLOWING CHARACTERISTICS:
 - ENTRAINED AIR - 4.0% TO 7.0%
 - SLUMP - 5 INCHES OR LESS
 - COMPRESSIVE STRENGTH - MINIMUM 3,000 PSI AT 28 DAYS
 - TEMPERATURE - MINIMUM 50° F TO MAXIMUM 90° F.
- ALL CONCRETE SHALL BE FORMED ON A MINIMUM 95% RD COMPACTED BASE OF 1/2"-0" CRUSHED AGGREGATE. DEPTH OF BASE VARIES WITH STRUCTURE. MINIMUM 4" COMPACTED BASE FOR SIDEWALKS, RAMPS, AND APPROACHES. MINIMUM 6" BASE FOR CURB, GUTTER, VALLEY GUTTERS AND INLETS.
- SAFETY YELLOW TRUNCATED DOME DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL SIDEWALK RAMPS AND ACCESSIBLE ROUTE ISLANDS.
- CONCRETE EXTRUDING MACHINES SHALL OPERATE UNDER SUFFICIENT RESTRAINT TO FORWARD MOTION TO PRODUCE A WELL-CONSOLIDATED MASS OF CONCRETE.
- ALL CONCRETE STRUCTURES REINFORCED WITH REINFORCING BARS SHALL BE VIBRATED TO REMOVE VOIDS AS APPLICABLE.
- SURFACE SHALL HAVE A FINISHED TEXTURE THAT WILL NOT BE SLICK WHEN WET (MEDIUM BROOM FINISH). CURING COMPOUND MAY BE APPLIED IMMEDIATELY AFTER CONCRETE IS FINISHED. WHITE PIGMENT RECOMMENDED, CLEAR ACCEPTABLE.
- AN EDGING TOOL SHALL BE USED ON ALL EDGES AND JOINTS.
- PROVIDE CONTRACTION JOINTS AT 15' INTERVALS AND "FALSE" TOoled JOINTS AT 6' INTERVALS ON CURBS, SIDEWALKS AND APPROACHES. CONTRACTION JOINT GROOVES SHALL BE AT MINIMUM, 1-1/2" DEEP OR ONE-THIRD THE THICKNESS OF CONCRETE.
- PROVIDE EXPANSION JOINTS OPPOSITE ABUTTING EXPANSION JOINTS IN ABUTTING CONCRETE, AT EACH POINT OF TANGENCY IN THE STRUCTURE ALIGNMENT, BETWEEN DRIVEWAYS AND CONCRETE PAVEMENT, AROUND POLES, POSTS, BOXES, AND OTHER FIXTURES WHICH PROTRUDE THROUGH OR AGAINST THE STRUCTURES, AT ALL BCR'S AND ECR'S, AT MAXIMUM OF 100' INTERVALS. EXPANSION JOINT MATERIAL SHALL BE OF THE BITUMINOUS, PREFORMED FILLER TYPE NOT LESS THAN 1/2" WIDE, PLACED FLUSH OR NO MORE THAN 1/8" BELOW THE CONCRETE SURFACE..
- STRAIGHT LINE EDGES SHALL NOT VARY MORE THAN 1/4" UNDER A 12 FT. STRAIGHT EDGE.
- CURE AND PROTECT CONCRETE AFTER PLACING AND FINISHING. KEEP STRUCTURES FREE FROM CONTACT, STRAIN AND PUBLIC TRAFFIC FOR AT LEAST SEVEN DAYS OR LONGER AS DIRECTED, MIXES TO EXPEDITE CURING MAY BE USED WITH APPROVAL OF CITY ENGINEER.

ABBREVIATIONS & SYMBOLS

A.C.	ASPHALTIC CONCRETE	MB	MAILBOX
ARV	AIR RELEASE VALVE	MR	MINIUM
B.C.	BACK OF CURB	M.H.	MANHOLE
B.F.V.	BUTTERFLY VALVE	MJ	MECHANICAL JOINT
BF	BLIND FACE	OG	ORIGINAL GRADE
BO	BLOW OFF	PL	PROPERTY LINE
CB	CATCH BASIN	PP	POWER POLE
CL	CLASS	PUE	PUBLIC UTILITY EASEMENT
C.I.	CURB INLET	RT.	RIGHT
C	CENTER LINE	R/W	RIGHT-OF-WAY
CONC	CONCRETE	SS	SANITARY SEWER
DW	DRIVEWAY	SSL	SANITARY SEWER LATERAL
D.I.	DUCTILE IRON	STA	STATION
EL	ELEVATION	SW	SIDEWALK
EP	EDGE OF PAVEMENT	STD	STANDARD
EX	EXISTING	SD	STORM DRAIN
FG	FINISH GRADE	TEL	TELEPHONE
FH	FIRE HYDRANT	TC	TOP OF CURB
G.V.	GATE VALVE	TP	TELEPHONE POLE
INV	INVERT	TYP	TYPICAL
L/S	LANDSCAPING	UNO	UNLESS NOTED OTHERWISE
LT.	LEFT	WM	WATER WATER
MAX	MAXIMUM	WV	WATER VALVE
		W	WATER

AGENCY	APPROVED BY	DATE
POWER	PACIFIC POWER	
DOMESTIC WATER	CITY OF BROOKINGS	
SANITARY SEWER	HARBOR SANITARY	
STORM DRAINAGE	CURRY COUNTY	
STREETS	CITY OF BROOKINGS	
ENGINEERING	PORT OF BROOKINGS HARBOR	
BY	TITLE	DATE

CONSTRUCTION AUTHORIZED TO PROCEED IN ACCORDANCE WITH APPROVED PLANS WHEN ALL PERMITS HAVE BEEN ISSUED AND PRE-CONSTRUCTION MEETING HAS CONCLUDED.



LEGEND

	EXISTING	PROPOSED
WATER LINE	— W — W — W —	— W — W — W —
SANITARY SEWER LINE	— SS — SS — SS —	— SS — SS — SS —
STORM SEWER LINE	— SD — SD — SD —	— SD — SD — SD —
GAS LINE	— GAS — GAS — GAS —	— GAS — GAS — GAS —
OVERHEAD UTILITIES	— OHU — OHU — OHU —	— OHU — OHU — OHU —
POWER LINE	— E — E — E —	— E — E — E —
COMMUNICATION LINE	— T — T — T —	— T — T — T —
FENCE	— X — X — X —	— X — X — X —
CENTERLINE	—	—
PROPERTY LINE	—	—
EASEMENT BOUNDARY	— - - - -	— - - - -
SWALE / WATERWAY FLOW	— F — F — F —	— F — F — F —
SEDIMENT FENCE	— C — C — C —	— C — C — C —
TOP & TOE OF SLOPES (CUT OR FILL)	— F — F — F —	— F — F — F —

SURVEYOR
ROBERTS & ASSOCIATES LAND SURVEYING, INC.
611 SPRUCE STREET
BROOKINGS, OR 97515
(541) 469-0162
CONTACT: RICH ROBERTS

PROJECT ENGINEER
EMC ENGINEERS/SCIENTISTS
450 CONESTOGA DRIVE
JACKSONVILLE, OR 97530
(541) 261-9829
CONTACT: JACK AKIN, P.E.

HORIZONTAL DATUM

OREGON COORDINATE REFERENCE SYSTEM (OREGON COAST ZONE) AS DEFINED IN OREGON ADMINISTRATIVE RULES 734-005-0005 THRU 734-005-0015. COORDINATES WERE CONstrained TO THE OREGON REAL-TIME (GPS) REFERENCE NETWORK (ORGN) REFERENCED TO NAD 83(2011) EPOCH 2010, INTERNATIONAL FEET, WITH A RELATIVE ACCURACY OF $-2m$.

VERTICAL DATUM

MEAN LOWER LOW WATER EPOCH 1983-2001. BENCH MARK UTILIZED FOR THIS SURVEY US ARMY CORPS OF ENGINEERS BENCH MARK - "FUEL 2" ELEVATION - 21.65 FEET

GEOTECHNICAL NOTE

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.



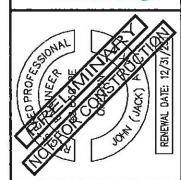
DATE	SET	DESCRIPTION
01/21/2022	X	STORMWATER PLAN & 25% CD
02/16/2022	X	PRELIMINARY - REVIEW 50% SUBMITTAL
03/08/2022	X	PRELIMINARY - REVIEW 90% SUBMITTAL
		FINAL PLAN SET - APPROVED FOR CONSTRUCTION
		RECORD DRAWINGS

SHEET INDEX

C1.0 COVER SHEET - GENERAL NOTES	C4.1 STORMDRAIN PROFILES
C2.0 EXISTING CONDITIONS	C4.2 STORMDRAIN RECYCLING
C2.01 DEMOLITION PLAN	C 6.1 PROJECT DETAILS
C2.1 GRADING PLAN	ECP 1.0 EROSION CONTROL NOTES
C2.1.1 ALT. GRADING PLAN (NO SPOILS PILE)	ECP 2.0 EROSION CONTROL PLAN
C2.2 FINISHED A/C GRADE	ECP 3.0 EROSION CONTROL DETAILS
C3.0 PAVEMENT AREA	
C4.0 STORMWATER CONVEYANCE	
C4.01 CALCULATIONS	
C4.02 DCP DATA	

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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
C1.0
 COVER SHEET

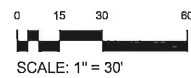
EXISTING CONDITIONS NOTES

- 1 BOAT LAUNCHING RAMP
- 2 BOAT STORAGE AREA (NOT A PART)
- 3 EXCESS SPOILS STORAGE PILE
- 4 BOAT LIFT DOCK
- 5 AC PAVING AREA
- 6 EXISTING AREA DRAIN
- 7 CONCRETE RETAINING WALL (HEIGHT VARIES)
- 8 CONCRETE PAD
- 9 CHAIN LINK FENCE
- 10 CHAIN LINK GATE
- 11 STORAGE CONTAINERS
- 12 ELECTRICAL TRANSFORMER
- 13 DOCK GANGWAY
- 14 MANHOLE
- 15 HOG WIRE FENCE
- 16 7' DIA. CULVERT
- 17 EXISTING STORM DRAIN
- 18 PROPERTY LINE PER ASSESSOR MAP
- 19 ROAD R/W
- 20 TRENCH DRAIN
- 21 30" STORM DRAIN EASEMENT
- 22 2" WATER LINE
- 23 UG POWER & OTHER UTILITIES
- 24 COMPACTED GRAVEL
- 25 SLUDGE SUMP

NOTE:
ALL EXISTING UG UTILITIES TO BE PROTECTED DURING CONSTRUCTION



VERTICAL DATUM
MEAN LOWER LOW WATER EPOCH 1983-2001.
BENCH MARK UTILIZED FOR THIS SURVEY
US ARMY CORPS OF ENGINEERS
BENCH MARK - "FUEL 2"
ELEVATION - 21.65 FEET



1 EXISTING CONDITIONS
SCALE: 1" = 30' (24x36)

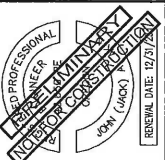


NOTE:
EVERY EFFORT HAS BEEN MADE TO VERIFY ALL EXISTING SITE ELEMENTS AND CONDITIONS PER THE EXISTING SITE SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS, ELEVATIONS AND MEASUREMENTS. IF A DISCREPANCY IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY FOR RESOLUTION.



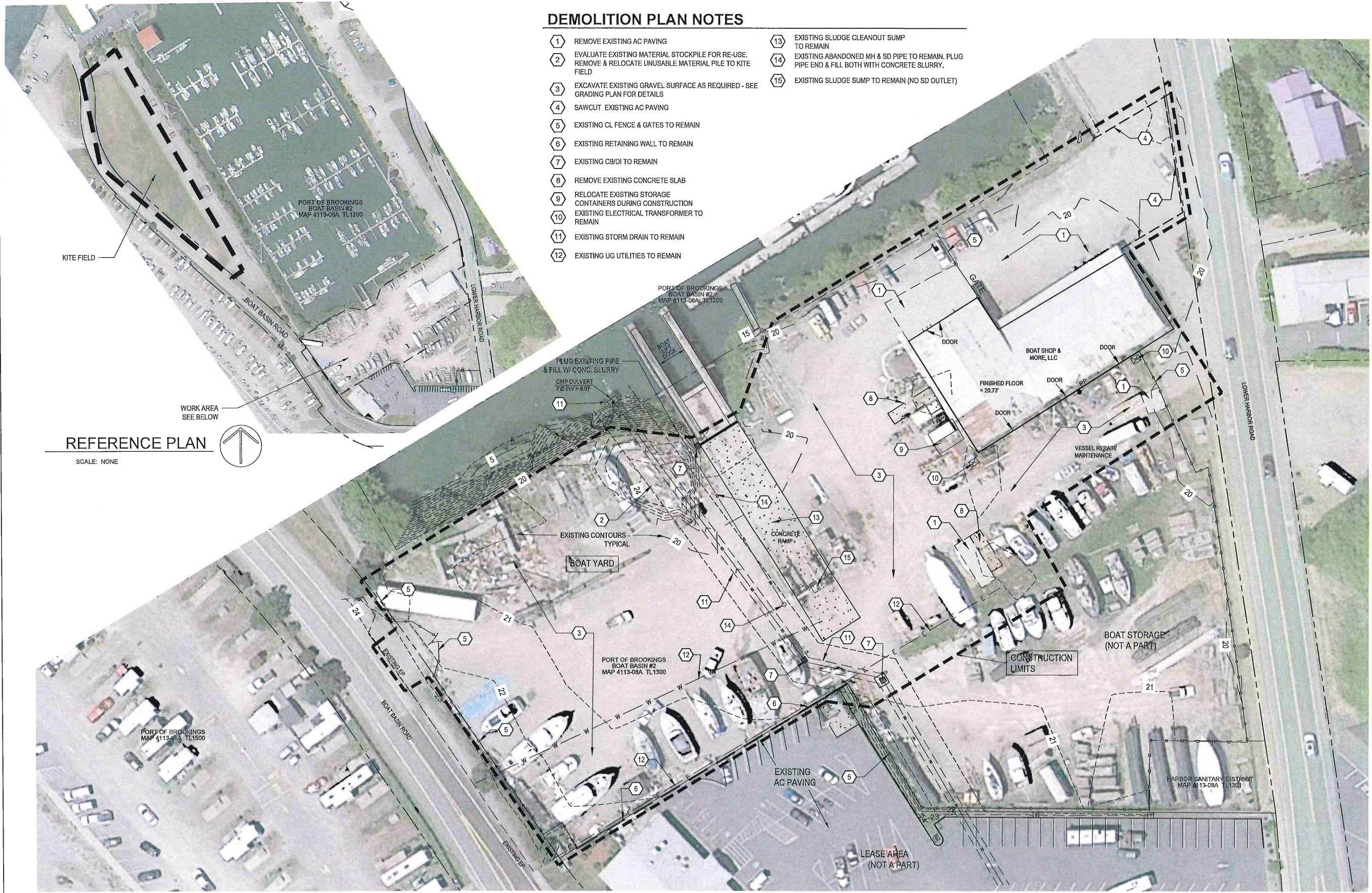
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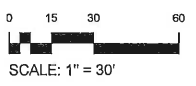
DRAWN BY: JW
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 JOB No: 22-202201
 SHEET No:
C2.0
 EXISTING CONDITIONS



DEMOLITION PLAN NOTES

- ① REMOVE EXISTING AC PAVING
- ② EVALUATE EXISTING MATERIAL STOCKPILE FOR RE-USE. REMOVE & RELOCATE UNUSABLE MATERIAL PILE TO KITE FIELD
- ③ EXCAVATE EXISTING GRAVEL SURFACE AS REQUIRED - SEE GRADING PLAN FOR DETAILS
- ④ SAWCUT EXISTING AC PAVING
- ⑤ EXISTING CL FENCE & GATES TO REMAIN
- ⑥ EXISTING RETAINING WALL TO REMAIN
- ⑦ EXISTING CB/DI TO REMAIN
- ⑧ REMOVE EXISTING CONCRETE SLAB
- ⑨ RELOCATE EXISTING STORAGE CONTAINERS DURING CONSTRUCTION
- ⑩ EXISTING ELECTRICAL TRANSFORMER TO REMAIN
- ⑪ EXISTING STORM DRAIN TO REMAIN
- ⑫ EXISTING UG UTILITIES TO REMAIN
- ⑬ EXISTING SLUDGE CLEANOUT SUMP TO REMAIN
- ⑭ EXISTING ABANDONED MH & SD PIPE TO REMAIN, PLUG PIPE END & FILL BOTH WITH CONCRETE SLURRY.
- ⑮ EXISTING SLUDGE SUMP TO REMAIN (NO SD OUTLET)

VERTICAL DATUM
 MEAN LOWER LOW WATER EPOCH 1983-2001.
 BENCH MARK UTILIZED FOR THIS SURVEY
 US ARMY CORPS OF ENGINEERS
 BENCH MARK - "FUEL 2"
 ELEVATION - 21.65 FEET



1 DEMOLITION PLAN
 SCALE: 1" = 30' (24x36)



NOTE:
 ALL EXISTING UG UTILITIES TO BE PROTECTED DURING CONSTRUCTION



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C2.01
 DEMOLITION PLAN

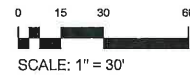
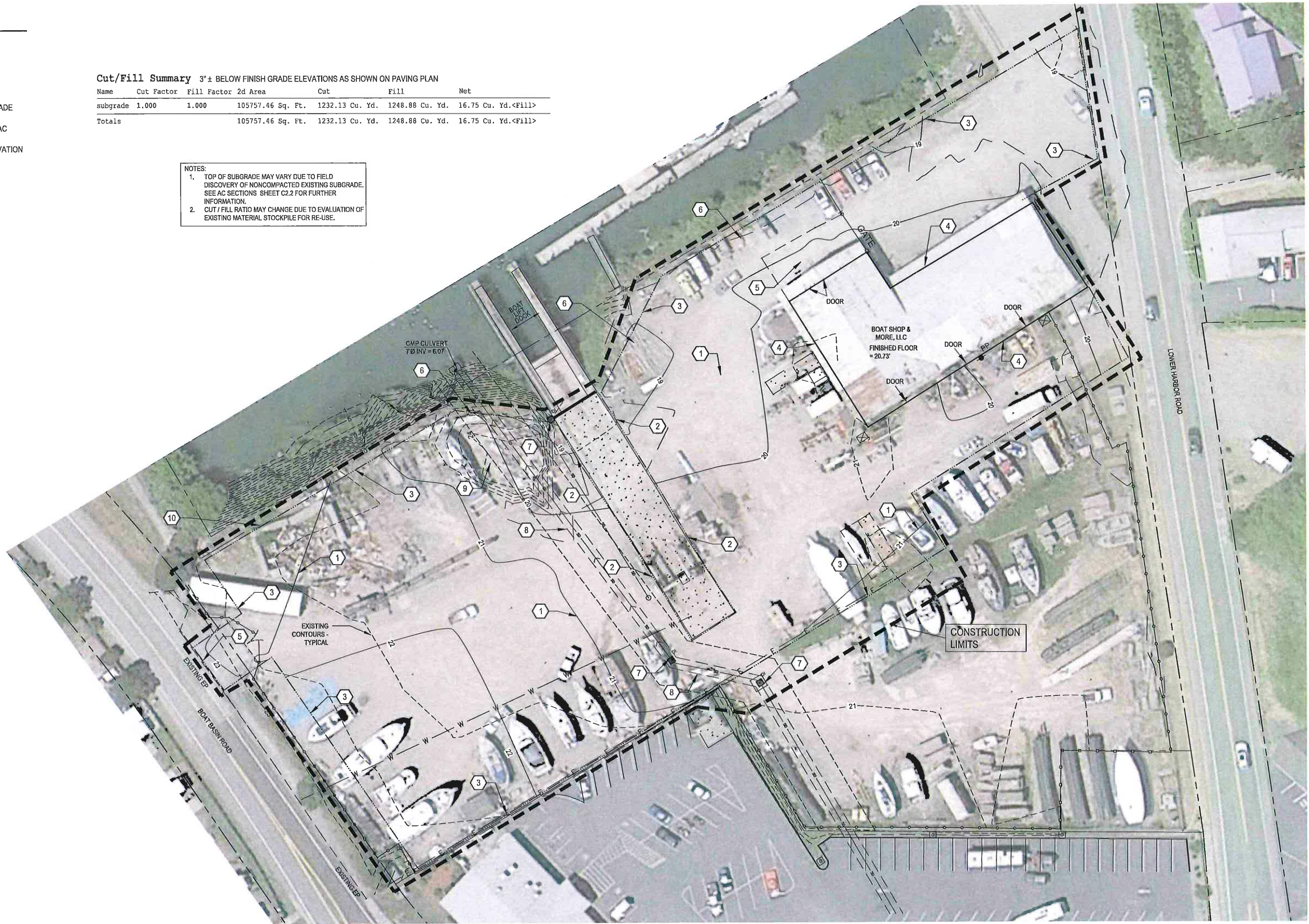
GRADING PLAN NOTES

- ① SUBGRADE CONTOURS ±
- ② EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF CONC.
- ③ APPROX. PAVING LIMITS (ENGINEER FIELD VERIFY)
- ④ BEGIN SUBGRADE EXCAVATION AT EXISTING BUILDING GRADE
- ⑤ EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF EXISTING AC
- ⑥ EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF BANK ELEVATION
- ⑦ EXISTING DI OR CB
- ⑧ EXISTING 84" CULVERT
- ⑨ EVALUATE EXISTING MATERIAL STOCKPILE FOR RE-USE. REMOVE & RELOCATE UNUSABLE MATERIAL PILE TO KITE FIELD
- ⑩ FILL APPROX. 12" ALONG BANK TO PROPOSED FG

Cut/Fill Summary 3"± BELOW FINISH GRADE ELEVATIONS AS SHOWN ON PAVING PLAN

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
subgrade	1.000	1.000	105757.46 Sq. Ft.	1232.13 Cu. Yd.	1248.88 Cu. Yd.	16.75 Cu. Yd.<Fill>
Totals			105757.46 Sq. Ft.	1232.13 Cu. Yd.	1248.88 Cu. Yd.	16.75 Cu. Yd.<Fill>

NOTES:
 1. TOP OF SUBGRADE MAY VARY DUE TO FIELD DISCOVERY OF NONCOMPACTED EXISTING SUBGRADE. SEE AC SECTIONS SHEET C2.2 FOR FURTHER INFORMATION.
 2. CUT / FILL RATIO MAY CHANGE DUE TO EVALUATION OF EXISTING MATERIAL STOCKPILE FOR RE-USE.



①

SUB-GRADE GRADING PLAN

SCALE: 1" = 30' (24x36)

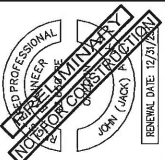
SEE PAVING PLAN FOR AC DESIGN SECTIONS



NOTE:
 SUBGRADE EXCAVATION VOLUME MAY VARY DUE TO FIELD DISCOVERY OF NONCOMPACTED EXISTING SUBGRADE. SEE AC SECTIONS THIS SHEET FOR FURTHER INFORMATION.

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BOAT YARD PAVING

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 DATE: 8 MAR 2022
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C2.1
 GRADING PLAN



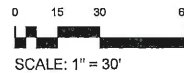
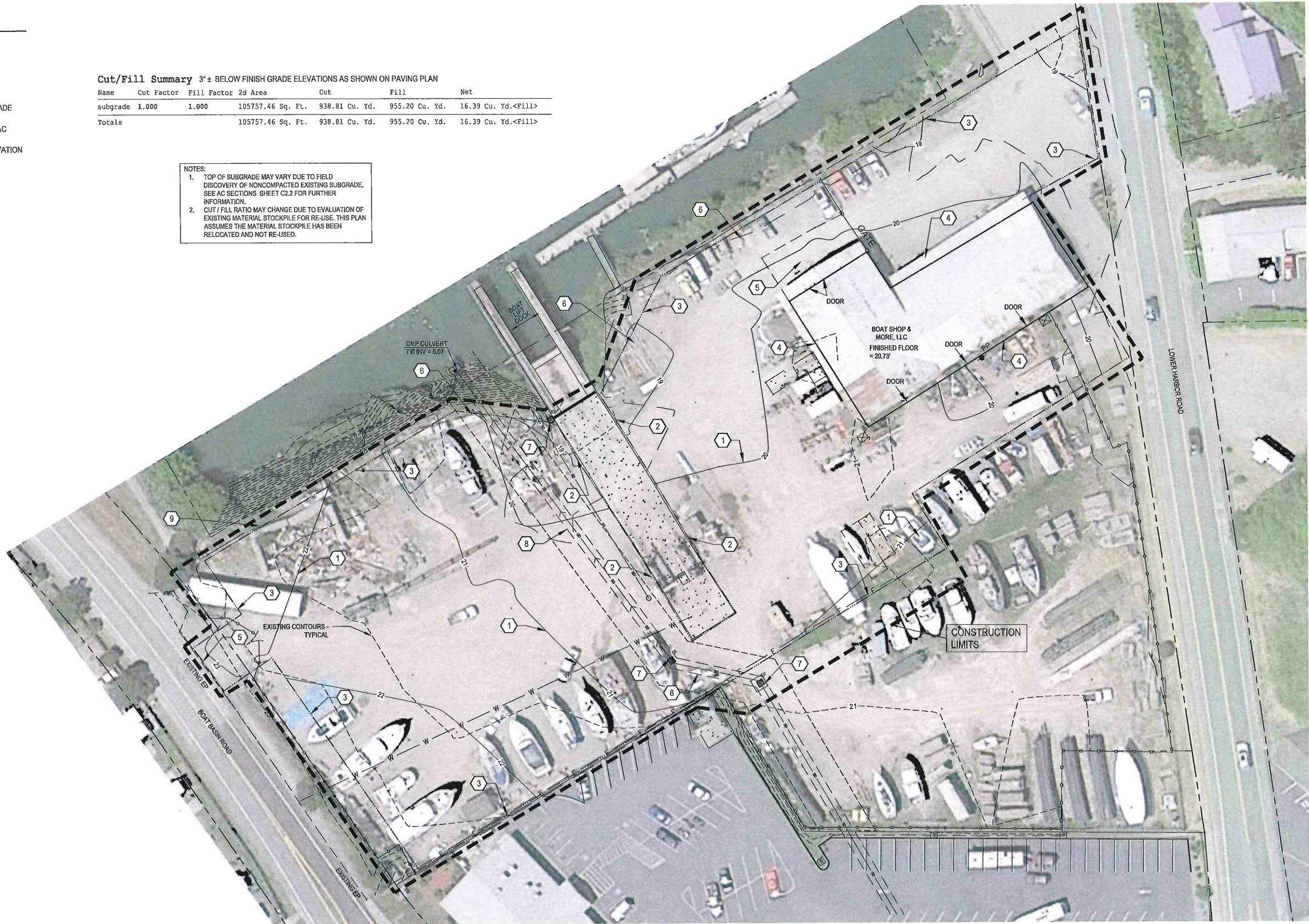
GRADING PLAN NOTES

- 1 SUBGRADE CONTOURS = APPROX. -0.5' BELOW FG
- 2 EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF CONC.
- 3 APPROX. PAVING LIMITS (ENGINEER FIELD VERIFY)
- 4 BEGIN SUBGRADE EXCAVATION AT EXISTING BUILDING GRADE
- 5 EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF EXISTING AC
- 6 EXCAVATE SUBGRADE TO ±0.25' BELOW TOP OF BANK ELEVATION
- 7 EXISTING DI OR CB
- 8 EXISTING 84" CULVERT
- 9 FILL APPROX. 12" ALONG BANK TO PROPOSED FG

Cut/Fill Summary 3" ± BELOW FINISH GRADE ELEVATIONS AS SHOWN ON PAVING PLAN

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
subgrade	1.000	1.000	105757.46 Sq. Ft.	938.81 Cu. Yd.	955.20 Cu. Yd.	16.39 Cu. Yd.<Fill>
Totals			105757.46 Sq. Ft.	938.81 Cu. Yd.	955.20 Cu. Yd.	16.39 Cu. Yd.<Fill>

NOTES:
 1. TOP OF SUBGRADE MAY VARY DUE TO FIELD DISCOVERY OF NONCOMPACTED EXISTING SUBGRADE. SEE AC SECTIONS SHEET C2.2 FOR FURTHER INFORMATION.
 2. CUT / FILL RATIO MAY CHANGE DUE TO EVALUATION OF EXISTING MATERIAL STOCKPILE FOR RE-USE. THIS PLAN ASSUMES THE MATERIAL STOCKPILE HAS BEEN RELOCATED AND NOT RE-USED.



1

SUB-GRADE GRADING PLAN

SCALE: 1" = 30' (24x36)

SEE PAVING PLAN FOR AC DESIGN SECTIONS



NOTE:
 SUBGRADE EXCAVATION VOLUME MAY VARY DUE TO FIELD DISCOVERY OF NONCOMPACTED EXISTING SUBGRADE. SEE AC SECTIONS THIS SHEET FOR FURTHER INFORMATION.



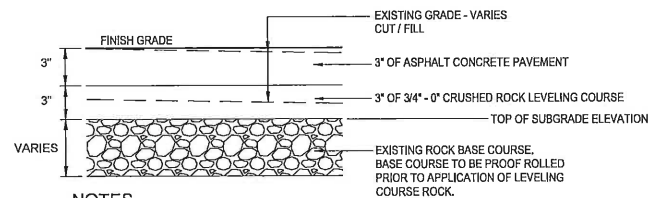
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C2.1.1
 ALT. GRADING PLAN

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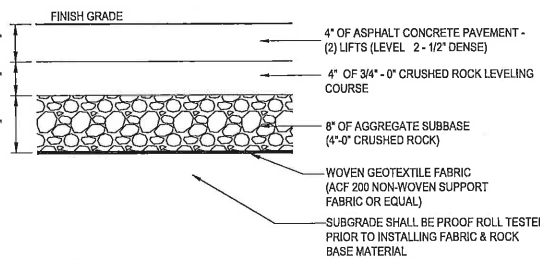
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NOTES

1. PROOF ROLL EXISTING SOILS TO BE USED AS SUBGRADE.
2. NOTIFY ENGINEER IMMEDIATELY OF ANY FAILED AREAS AND REPAIR AS DIRECTED.

2 PAVING SECTION - ATOP WELL COMPACTED SUBGRADE
SCALE: N.T.S.



NOTES

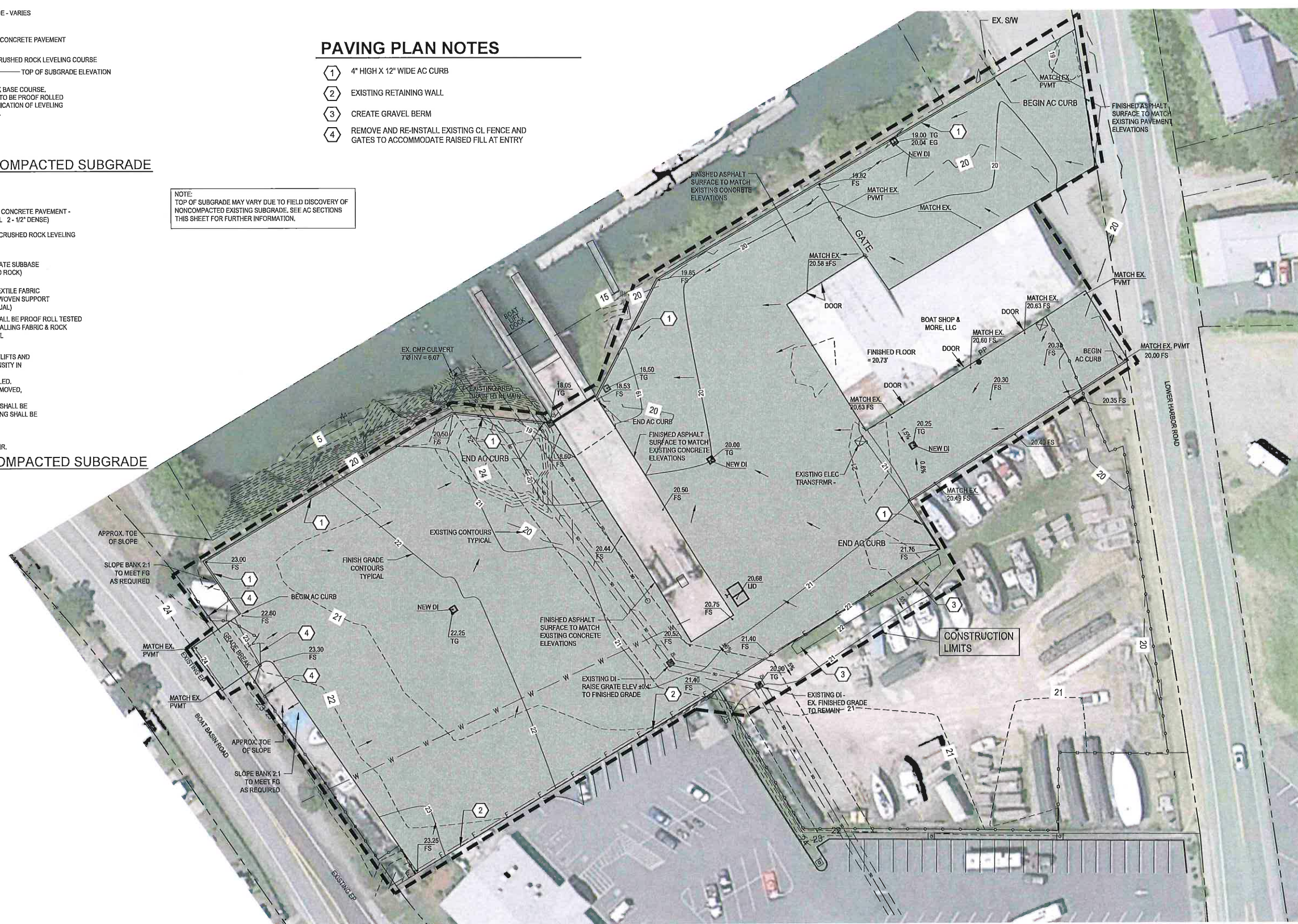
1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO A MINIMUM 98% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO 1-99 METHOD.
2. JUST PRIOR TO PAVING, THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, RECOMPACTED AND TESTED AGAIN.
3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK, THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
5. PAVEMENT SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

3 PAVING SECTION - ATOP NON-COMPACTED SUBGRADE
SCALE: N.T.S.

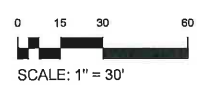
PAVING PLAN NOTES

- 1 4" HIGH X 12" WIDE AC CURB
- 2 EXISTING RETAINING WALL
- 3 CREATE GRAVEL BERM
- 4 REMOVE AND RE-INSTALL EXISTING CL FENCE AND GATES TO ACCOMMODATE RAISED FILL AT ENTRY

NOTE:
TOP OF SUBGRADE MAY VARY DUE TO FIELD DISCOVERY OF NONCOMPACTED EXISTING SUBGRADE. SEE AC SECTIONS THIS SHEET FOR FURTHER INFORMATION.

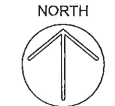


LEGEND



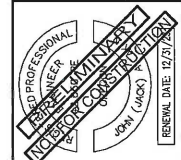
1 FINISHED PAVING PLAN
SCALE: 1" = 30' (24x36)

NOTE:
TOP OF AC MAY VARY DUE TO FIELD DISCOVERY OF UNFORSEEABLE EXISTING CONDITIONS. CONTACT ENGINEER TO EVALUATE AND MAKE RECOMMENDATIONS REGARDING SUCH CONDITIONS OR SITUATIONS. SEE AC SECTIONS THIS SHEET FOR FURTHER INFORMATION.



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 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:

C2.2
 FINISHED PAVING PLAN



PAVEMENT AREA PLAN NOTES

- 1 BEGIN SUBGRADE EXCAVATION AT ±21 ELEVATION CONTOUR
- 2 EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC
- 3 APPROX. PAVING LIMITS (ENGINEER FIELD VERIFY)
- 4 BEGIN SUBGRADE EXCAVATION AT EXISTING BUILDING GRADE
- 5 EXCAVATE SUBGRADE TO ±0.5' BELOW TOP OF EXISTING AC
- 6 EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF BANK ELEVATION
- 7 EXISTING DI OR CB
- 8 EXISTING 84" CULVERT

TOTAL AREA OF NEW PAVING = ±107,317 SF



BROWN MAP 4113-08AA TL4100
 NIED MAP 4113-08AA TL4000
 GRIFFITH MAP 4113-08AA TL4200
 DRIFTWOOD, LLC MAP 4113-08AD TL4000

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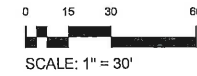


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C3.0
 PAVEMENT AREA

LEGEND
 DIRECTION OF DRAINAGE FLOW



1 **PAVEMENT AREA PLAN**
 SCALE: 1" = 30' (24x36)

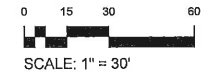


STORMWATER NOTES

1. ALL STORM SEWER PIPE SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
2. ALL PIPE SHALL BE PLACED ON STABLE EARTH, OR IF IN THE OPINION OF THE PROJECT ENGINEER, THE EXISTING FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH A GRAVEL MATERIAL TO SUPPORT THE PIPE.
3. THE BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6", MAXIMUM DEPTH 8" THOROUGHLY TAMPING EACH LAYER. THESE COMPACTED LAYERS MUST EXTEND FOR ONE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE OTHER SIDE OF THE TRENCH. MATERIALS TO COMPLETE THE FILL OVER THE PIPE SHALL BE THE SAME AS DESCRIBED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE PRIOR TO PAVING.
5. UNLESS OTHERWISE NOTED, ALL STORM SEWER PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE. THE MATERIAL SUPPLIED UNDER THIS SPECIFICATION SHALL BE HIGH DENSITY CORRUGATED POLYETHYLENE SMOOTH INTERIOR PIPE AND SHALL BE MANUFACTURED IN CONFORMITY WITH THE LATEST AASHTO SPECIFICATIONS. COUPLERS SHALL COVER NOT LESS THAN ONE FULL CORRUGATION ON EACH ANNUAL SECTION OF PIPE.
6. CULVERT ENDS AT OUTFALLS SHALL BE BEVELED TO MATCH SIDE SLOPES. FIELD CUT OF CULVERT ENDS IS PERMITTED WHEN APPROVED BY THE CITY/PORT ENGINEER OR HIS DESIGNATED REPRESENTATIVE. CULVERT OUTFALLS SHALL BE RIP-RAPPED WITH A PAD MINIMUM OF 12" THICK, EXTENDING MINIMUM OF 8' FROM DISCHARGE POINT.
7. ALL STEEL PIPES, CULVERTS, TANKS AND OTHER STEEL PARTS OF ANY STORM DRAINAGE SYSTEM SHALL BE GALVANIZED OR HAVE A TREATMENT 1 ASPHALT COATING OR BETTER AS SPECIFIED IN THE CDDT STANDARD SPECIFICATIONS. ALUMINUM AND CONCRETE PIPES AND STRUCTURES DO NOT REQUIRE A TREATMENT 1 COATING.
8. STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED PRIOR TO ENGINEER/JURISDICTIONAL ACCEPTANCE.
9. ALL PIPES SHALL MINIMUM OF 12" COVER AT THE TOP OF THE BELL, OR PIPES SHALL HAVE MINIMUM COVER PER THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS GREATER.
10. CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO CENTER OF GRATE.
11. 100-FT. MAX. LINEAR RUN BETWEEN CLEANOUTS. 135' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.



LEGEND
 → APPROX. DIRECTION OF DRAINAGE FLOW



1 STORMWATER CONVEYANCE

SCALE: 1" = 30' (24x36)



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PROFESSIONAL ENGINEER
 JEFFREY A. LAMKIN
 No. 12220
 State of Oregon
 EXPIRES 12/31/2024

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 BOAT YARD PAVING

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C4.0
 STORMWATER CONVEYANCE

Flow Pipe Size Locations

Catch Basin	L, ft, WC' Pathway	Est. Δ Elevation	Est. Slope	Assumed Tc Sheet, Minutes	Assumed RI ₁₀₀ Zone I	Surface R ₁₀₀ in/hr	Calculated Tc Sheet, Minutes	Calculated RI ₁₀₀ Sheet, in/hr
CB1	138	0.5	0.004	5	4.0	0.013	4.1	4.0
CB2	142	1	0.007	3	5.0	0.013	3.1	5.0
CB3	185	1.2	0.006	5	4.0	0.013	4.1	4.0
CB4	150	1.7	0.011	3	5.0	0.013	2.8	5.0
CB5	208	2	0.010	4	4.2	0.013	3.8	4.2
CB6	248	5	0.020	3	5.0	0.013	3.2	5.0
CB7	115	2.5	0.022	2	6.0	0.013	1.8	6.0
TRENCH	160	2	0.013	4	4.2	0.02	3.9	4.2

	Area, ft ²	Area, AC	Invert Elevation, ft.	Surface Coefficient, i	Flow, CFS'
CB1	18926.0	0.43	17.29	0.9	1.56
CB2	12830.0	0.29	17.6	0.9	1.33
CB3	18459.0	0.42	16.15	0.9	1.53
CB4	15925.0	0.37	16.95	0.9	1.65
CB5	10632.0	0.24	15.6	0.9	0.92
CB6	35531.0	0.82	15.91	0.9	3.67
CB7	5803.0	0.13	17.4	0.9	0.72
TRENCH	4874.0	0.11	17.09	0.9	0.42

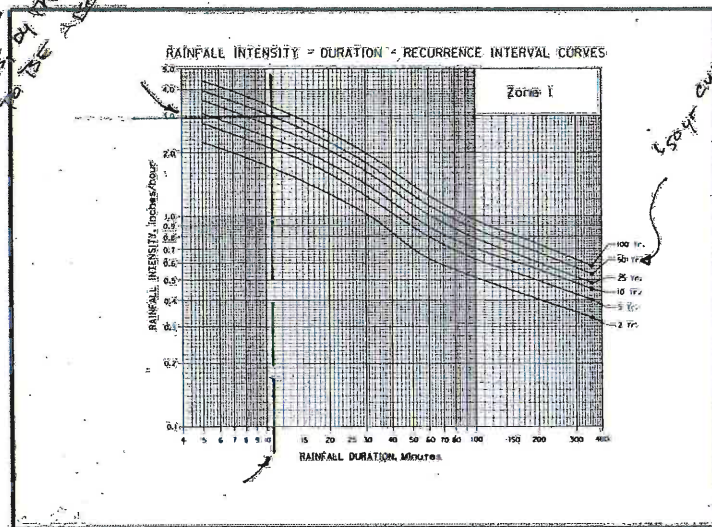
1-WC is Watercourse Pathway from the furthest distance within a zone to its respective catch basin.
 2-Tc calculated via adjusting assumed value and iterative adjustment until assumed matches calculated, via $Tc = 0.93 (L^{0.48} i^{0.76}) / (R^{0.48})$.
 3- $Q_{CFS} = \sum C I_{100} A_{Area}$
 4-Pipes Sized via Manning

Pipe Flow	Δ Elevation, ft.	Pipe Length, ft.	Slope	Pipe R _{Manning}	Flow, CFS, 80%	Pipe Dia. Inches	Nominal ID, Bell & Spigot	Notes
CB1-CB3	1.2	235	0.005	0.012	1.6	10	10	80% full
CB3-CB6	0.2	35	0.006	0.012	3.1	14	15	80% full
CB2-CB4	0.65	123	0.005	0.012	1.3	10	10	80% full
CB4-TEE	0.35	72	0.005	0.012	3.0	14	15	80% full
CB7-TEE	0.8	118	0.007	0.012	0.7	8	8	80% full
TEE-CB6	0.35	68	0.005	0.012	3.7	14	15	80% full
CB6-OUT			0.005	0.012	6.8	18	18	80% full
TRENCH					0.42	6.0	8	8" ok

Ref: ODOT Hydrology Manual, Appendix F-Rational Method

SW Calculations
 EMC-Engineers/Scientists, LLC

if the stormwater is to be 11 minutes, the L₁₀₀ is 94. The L₁₀₀ is 94. The L₁₀₀ is 94. The L₁₀₀ is 94.



Dual-Wall (Type S) Bell and Spigot Style Specification Chart

Nominal Inside Diameter (Inches)	Outside Diameter (Inches)	Minimum Wall Thickness (Inches)	Lengths (Feet)	Weight (lbs./ft.)	Solid, Perforated or Both	Perforation Class 1,2 or Both*
4	4.7	0.002	20	0.5	Both	Class 2 Slotted
6	6.9	0.002	20	1.0	Both	Class 2 Slotted
8	9.4	0.025	20	1.5	Both	Class 2 Slotted
10	11.8	0.025	20	2.5	Both	Class 2 Slotted
12	14.8	0.035	20	3.5	Both	Both
15	17.5	0.040	20	4.9	Both	Both
18	21.5	0.050	20	6.5	Both	Both
24	27.9	0.060	20	11.4	Both	Both
30	35.7	0.060	20	15.0	Both	Both
36	42.1	0.070	20	19.6	Both	Both
42	48.2	0.070	20	26.2	Both	Both
48	54.3	0.070	20	34.5	Both	Both
60	Call	Call	20	Call	Both	Both

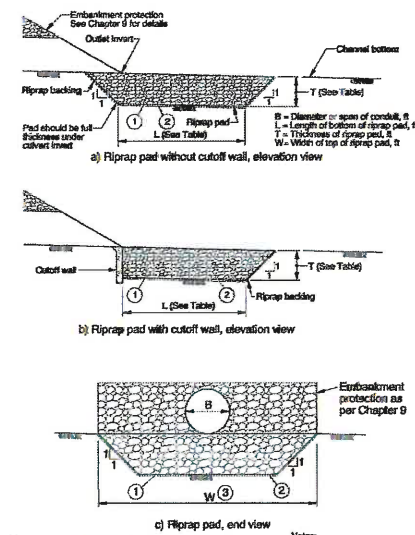
- AASHTO M 252 - Standard Specification for Corrugated Polyethylene Drainage Pipe 3'-10" (75mm to 250mm)
- AASHTO M 294 - Standard Specification for Corrugated Polyethylene Pipe, 12"-60" (300mm to 1500mm)
- ASTM F 405 - Standard Specification for Corrugated Polyethylene (PE) Pipe and Fittings, 3'-8"
- ASTM F 687 - Standard Specification for 3 through 24 inch Corrugated Polyethylene Pipe and Fittings
- ASTM F 2208 - Standard Specification for 12 to 60 inch (300mm to 1500mm) Annular Corrugated Polyethylene Polyethylene Pipe and Fittings for Gravity Flow Storm and Sanitary Sewerage Applications
- ASTM F 2648 - Standard Specification for 2 to 60 inch (50 to 1500mm) Annular Corrugated Polyethylene (PE) Pipe and Fittings for Land Drainage Applications (Virgin and recycled resin)
- ASTM D 2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Storm and Other Gravity Flow Applications
- ASTM D 3390 - Standard Specification for Polyethylene Fiberglass Pipe and Fittings Materials
- ASTM F 477 - Standard Specification for Elastomeric Seals (O-Rings) for Joining Plastic Pipe
- ASTM D 3212 - Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

11-42

Energy Dissipators

Energy Dissipators

11-43



Riprap Class	L*	T
30	48 or 1.8	2.3
100	48 or 1.8	3.3
200	48 or 2.0	4.3
700	48 or 3.3	6.6

*L is the greater of 48 or the listed dimension.

Figure 11-16 Dimensions of Riprap Pads

Class 30 Riprap Pad
 Class 50 Riprap Pad
 Class 700 Riprap Pad
 Class 700 Large Riprap Pad

Example 1 - Equivalent Brink Depth = 1.5 ft
 Riprap pad depth = 1.5 ft
 Example 2 - Brink Depth = 1.5 ft
 Riprap pad depth = 1.0 ft
 Example 3 - Equivalent Brink Depth = 1.0 ft
 Riprap pad depth = 1.0 ft

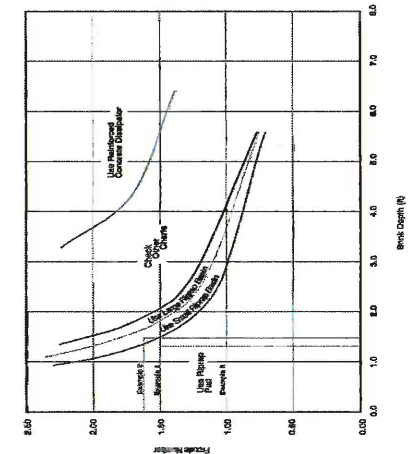


Figure 11-17 ODOT Class 50 Riprap Energy Dissipator Selection Chart

ODOT Hydraulics Manual

ODOT Hydraulics Manual

OUTFALL-ENERGY DISSIPATION, RIPRAP PAD

Design Routine

- H = V²/2G & Yc = (a/2)0.5, where V = outfall velocity from CB#6 in ft/s, G = 32.2 ft/s², Yc = Equivalent Brink (Pad Depth), ft, and Qcfs = Va; given 6.8 cfs from 1.5ft. diam. Pipe, with a = (1.52)/(3.14)4 = 1.77 ft.2 and Yc = (1.77/2)0.5 = 0.94ft. V = Q/a = 6.8 cfs/1.77 = 3.84 ft/s
- Froude # = V/(32.2Yc)0.5 = 0.698
- Froude # < 1 indicates subcritical flow (can be considered tranquil)
- Utilizing Figure 11-17, with ODOT Class 50 Riprap, ODOT Hydraulics Manual, Riprap Pad use is acceptable.
- Utilizing Figure 11-16, ODOT Hydraulics Manual, Length of Pad should be at least 4D, and width at least 5D, where D = pipe/culvert diameter, or 6 ft. long by 7.5 ft. wide. Depth of Pad should replace Brink calculation, and specified to be 2.5 ft.
- The Riprap Pad is not provided with a cutoff wall. Use ODOT Class 700 for Pad backing, as shown in Figure 11-16.
- Pad must be placed on a gentle slope (less than or equal to 15%)

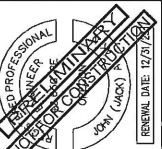
1

OUTFALL DETAIL

SCALE: N.T.S.

REVISIONS	BY:

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 16330 Lower Harbor Road, Brookings, OR 97415
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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
C4.01
 STORMWATER CALCULATIONS

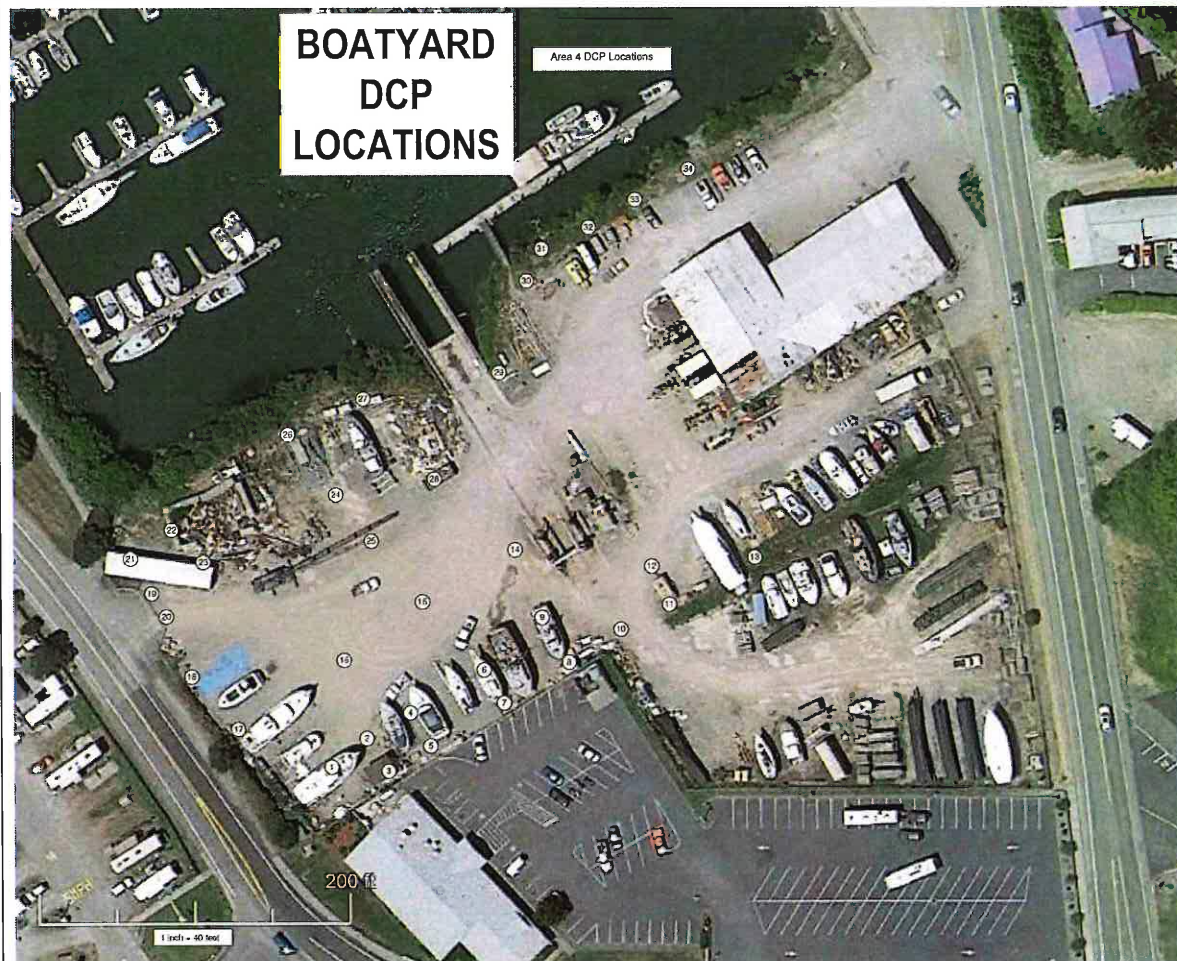


Table 3 - Tabulated Correlation of Blows per 2" penetration versus CBR and PSF

Hammer 17.6 lbs Blows/2"	Hammer 10.1 lbs Blows/2"	CBR			PSF		
		Other	CL	CH	Other	CL	CH
1	1	2	0	3	760	260	1240
1	2	4	1	7	1270	660	1960
3	3	5	3	10	1720	1130	2560
2	4	8	5	14	2130	1660	3100
3	5	10	8	17	2520	2230	3600
3	6	12	12	21	2880	2840	4060
4	7	15	15	24	3240	3240	4500
4	8	17	17	27	3570	3570	4920
5	9	19	19	31	3900	3900	5320
5	10	22	22	34	4220	4220	5700
6	11	24	24	38	4530	4530	6070
6	12	27	27	41	4830	4830	6430
7	13	29	29	45	5130	5130	6790
7	14	32	32	48	5420	5420	7130
8	15	34	34	51	5700	5700	7460
8	16	37	37	55	5980	5980	7790
9	17	39	39	58	6260	6260	8110
9	18	42	42	62	6530	6530	8420
10	19	45	45	65	6800	6800	8720
10	20	47	47	69	7060	7060	9030
11	21	50	50	72	7320	7320	9330
11	22	53	53	75	7580	7580	9620
12	23	55	55	79	7840	7840	9910
12	24	58	58	82	8090	8090	10200
13	25	61	61	86	8340	8340	10480
13	26	63	63	89	8580	8580	10750
14	27	66	66	92	8830	8830	11020
14	28	69	69	96	9070	9070	11290
15	29	72	72	99	9310	9310	11560
15	30	74	74	100	9550	9550	11820
16	31	77	77		9790	9790	
16	32	80	80		10020	10020	
17	33	83	83		10250	10250	
17	34	86	86		10480	10480	
18	35	89	89		10710	10710	
18	36	91	91		10930	10930	
19	37	94	94		11160	11160	
19	38	97	97		11380	11380	
20	39	100	100		11600	11600	
20	40	100	100		11820	11820	

Table 4 - Tabulated Correlation of Blows per 4" penetration versus CBR and PSF

Hammer 17.6 lbs Blows/4"	Hammer 10.1 lbs Blows/4"	CBR			PSF		
		Other	CL	CH	Other	CL	CH
1	1	0	2	460	110	780	
1	2	2	0	3	760	260	1240
3	3	3	1	5	1030	450	1620
2	4	4	1	7	1280	660	1960
3	5	5	2	9	1510	890	2270
3	6	6	3	10	1730	1140	2570
4	7	7	4	12	1940	1390	2840
4	8	8	5	14	2140	1660	3110
5	9	9	7	15	2330	1950	3360
5	10	10	8	17	2520	2240	3600
6	11	11	11	19	2710	2710	3840
6	12	12	12	21	2890	2890	4070
7	13	13	13	22	3070	3070	4290
7	14	15	15	24	3240	3240	4500
8	15	16	16	26	3410	3410	4720
8	16	17	17	27	3580	3580	4920
9	17	18	18	29	3740	3740	5120
9	18	19	19	31	3910	3910	5320
10	19	21	21	33	4070	4070	5520
10	20	22	22	34	4220	4220	5710
11	21	23	23	36	4380	4380	5900
11	22	24	24	38	4530	4530	6080
12	23	25	25	39	4690	4690	6260
12	24	27	27	41	4840	4840	6440
13	25	28	28	43	4990	4990	6620
13	26	29	29	45	5130	5130	6790
14	27	30	30	46	5280	5280	6970
14	28	32	32	48	5420	5420	7140
15	29	33	33	50	5570	5570	7310
15	30	34	34	51	5710	5710	7470
16	31	36	36	53	5850	5850	7640
16	32	37	37	55	5990	5990	7800
17	33	38	38	57	6130	6130	7960
17	34	39	39	58	6270	6270	8120
18	35	41	41	60	6400	6400	8280
18	36	42	42	62	6540	6540	8430
19	37	43	43	63	6670	6670	8590
19	38	45	45	65	6810	6810	8740
20	39	46	46	67	6940	6940	8890
20	40	47	47	69	7070	7070	9040

Table 5 - Tabulated Correlation of Blows per 6" penetration versus CBR and PSF

Hammer 17.6 lbs Blows/6"	Hammer 10.1 lbs Blows/6"	CBR			PSF		
		Other	CL	CH	Other	CL	CH
1	1	0	0	1	340	60	680
1	2	1	0	2	560	150	950
2	3	2	0	3	780	260	1240
2	4	2	1	5	940	390	1500
3	5	3	1	6	1110	520	1740
3	6	4	1	7	1280	660	1960
4	7	4	2	8	1430	810	2170
4	8	5	2	9	1580	970	2370
5	9	6	3	10	1730	1140	2570
5	10	6	4	11	1870	1310	2750
6	11	7	4	12	2000	1480	2930
6	12	8	5	14	2140	1660	3110
7	13	9	6	15	2270	1850	3280
7	14	9	7	16	2400	2040	3440
8	15	10	8	17	2520	2240	3600
8	16	11	11	18	2650	2450	3760
9	17	12	12	19	2770	2770	3920
9	18	12	13	21	2890	2990	4070
10	19	13	21	22	3010	3010	4220
10	20	14	22	23	3120	3120	4360
11	21	15	23	24	3240	3240	4500
11	22	15	24	25	3350	3350	4630
12	23	16	25	26	3470	3470	4790
12	24	17	27	27	3580	3580	4920
13	25	18	28	29	3690	3690	5060
13	26	19	29	30	3800	3800	5190
14	27	19	30	31	3910	3910	5320
14	28	20	32	32	4010	4010	5450
15	29	21	33	33	4120	4120	5580
15	30	22	34	34	4220	4220	5710
16	31	23	36	35	4330	4330	5830
16	32	23	37	37	4430	4430	5960
17	33	24	38	38	4530	4530	6080
17	34	25	39	39	4640	4640	6200
18	35	26	41	40	4740	4740	6320
18	36	27	42	41	4840	4840	6440
19	37	28	43	42	4940	4940	6560
19	38	28	45	43	5040	5040	6680
20	39	29	46	45	5130	5130	6790
20	40	30	47	46	5230	5230	6910

DCP DATA SHEET

Project Port of Brookings: Boat Yard
 Material Class GW-CL
 Pavement None
 Moisture 10.50%
 Date/Time 1/19/2022 0830
 Personnel RG
 Hammer Wt. 10 lbs
 Weather Clear, Dry

Project Port of Brookings: Kite Field
 Material Class CL
 Pavement None
 Moisture 13%
 Date/Time 1/19/2022 1145
 Personnel RG
 Hammer Wt. 10 lbs
 Weather Clear, Dry

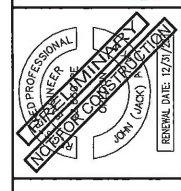
Site ID	Station	Depth	Blows	PSF
Area 4	1	2	12	4830
Area 4	2	2	10	4220
Area 4	3	4	12	2890
Area 4	4	2	9	3900
Area 4	5	4	14	3240
Area 4	6	2	10	4220
Area 4	7	2	10	4220
Area 4	8	6	12	2140
Area 4	9	2	15	5700
Area 4	10	2	10	4220
Area 4	11	4	11	2710
Area 4	12	2	11	4530
Area 4	13	4	11	2710
Area 4	14	2	>12	>5420
Area 4	15	2	>15	>5700
Area 4	16	2	>15	>5700
Area 4	17	4	15	3410
Area 4	18	6	10	1870
Area 4	19	4	10	2520
Area 4	20	2	>15	>5700
Area 4	21	2	10	4220
Area 4	22	4	14	3240
Area 4	23	6	12	2140
Area 4	24	4	12	2890
Area 4	25	2	15	5700
Area 4	26	6	9	1730
Area 4	27	6	5	1110
Area 4	28	2	10	4220
Area 4	29	2	10	4220
Area 4	30	4	14	3240
Area 4	31	6	9	1730
Area 4	32	4	9	2330
Area 4	33	4	12	2890
Area 4	34	2	10	4220

Site ID	Station	Depth	Blows	PSF
Area 5	1	6	5	520
Area 5	2	6	6	660
Area 5	3	4	13	3070
Area 5	4	4	9	1950
Area 5	5	6	10	1310
Area 5	6	4	15	3410
Area 5	7	2	10	4220
Area 5	8	6	7	810
Area 5	9	6	5	520
Area 5	10	6	5	520
Area 5	11	6	4	390
Area 5	12	6	4	390
Area 5	13	6	10	1310
Area 5	14	6	6	660
Area 5	15	6	4	390
Area 5	16	6	4	390
Area 5	17	6	3	280
Area 5	18	4	9	1950
Area 5	19	6	5	520

PFS: Pounds per square Foot
 PFS Values from Table 3, Table 4, and Table 5 of KSE DCP Owners Manual

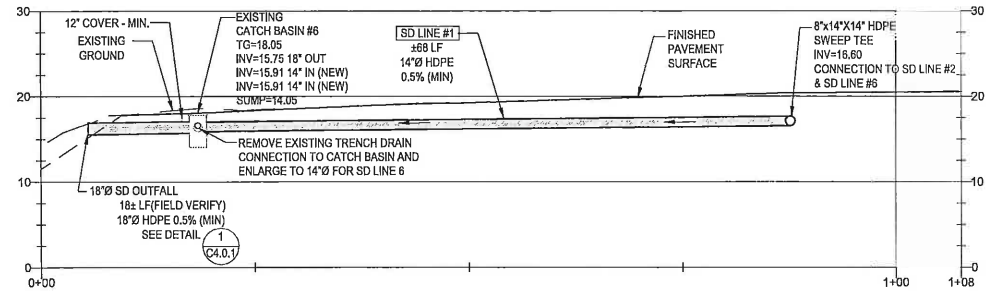
REVISIONS

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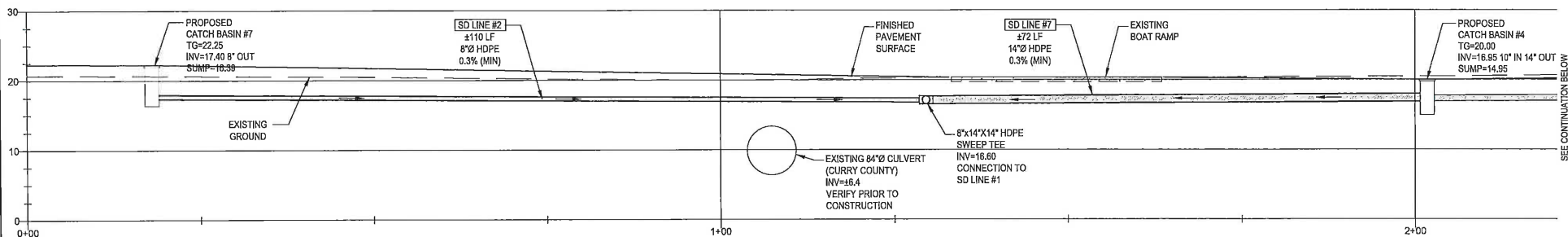


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

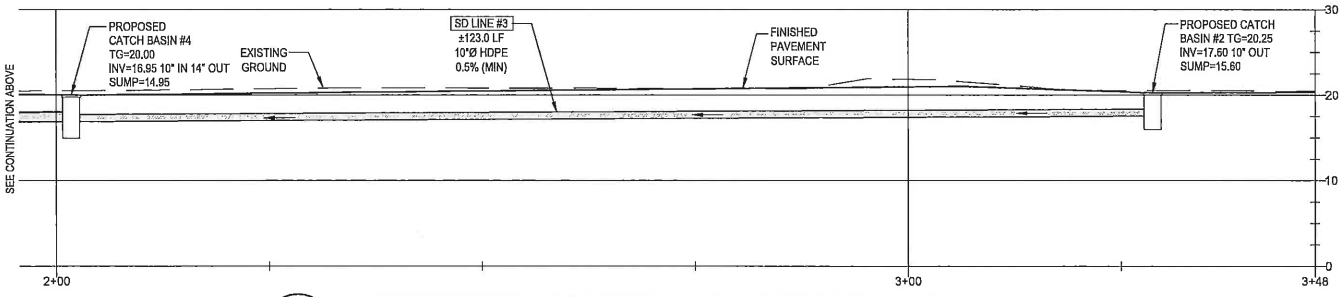
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 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
C4.02
 DCP DATA



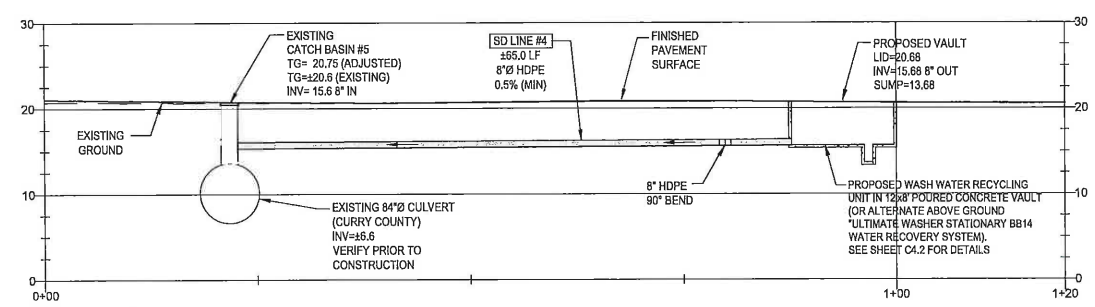
A-A
STORMDRAIN LINE 1 - PROFILE "A - A"
SCALE: 1" = 10' (H & V)



B-B
STORMDRAIN LINE 2 - PROFILE "B - B"
SCALE: 1" = 10' (H & V)

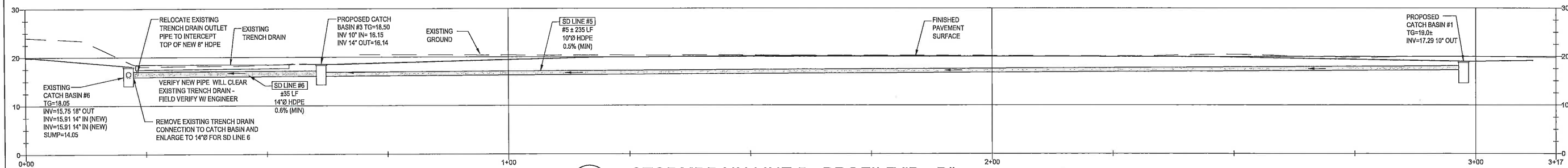


B-B
STORMDRAIN LINE 3 - PROFILE "B - B"
SCALE: 1" = 10' (H & V)



C-C
STORMDRAIN LINE 4 - PROFILE "C - C"
SCALE: 1" = 10' (H & V)

NOTE:
PROVIDE 12" MIN. COVER FOR ALL SD PIPES, TYPICAL
VERIFY AND CORRECT IF REQUIRED.

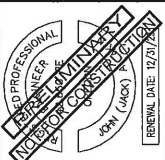


D-D
STORMDRAIN LINE 5 - PROFILE "D - D"
SCALE: 1" = 10' (H & V)

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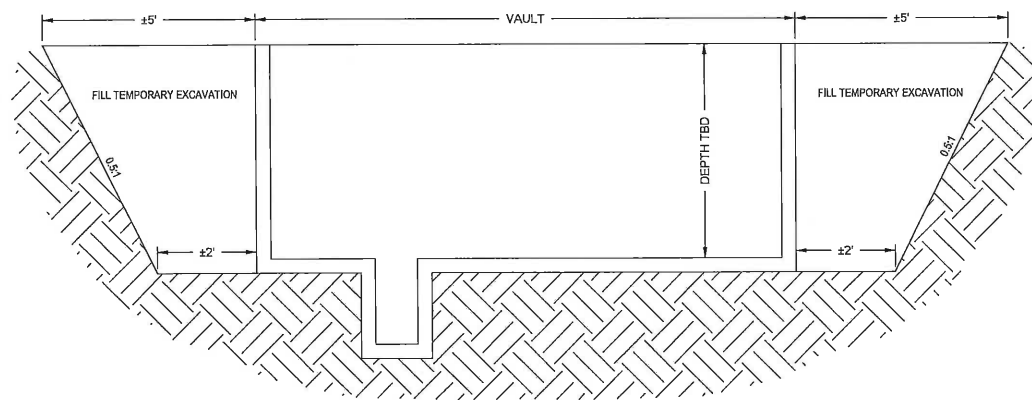
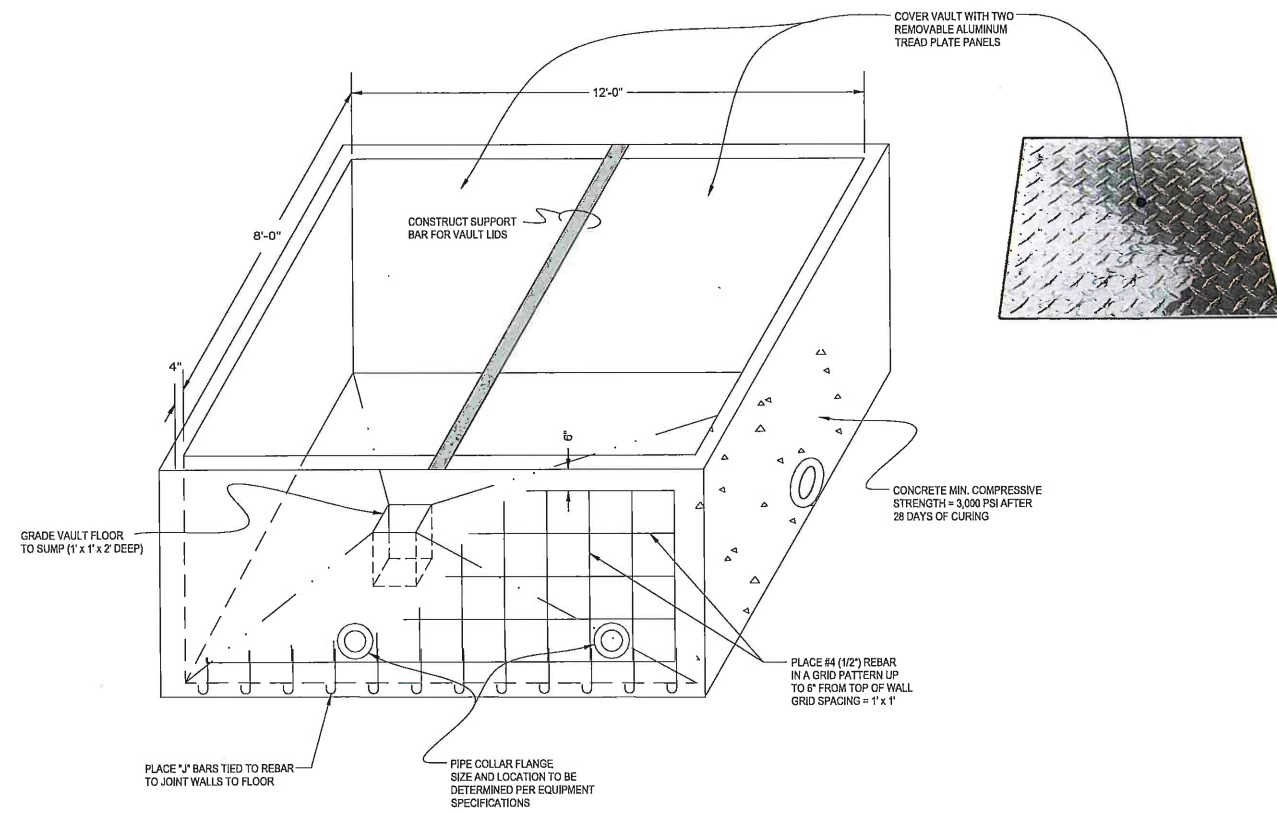
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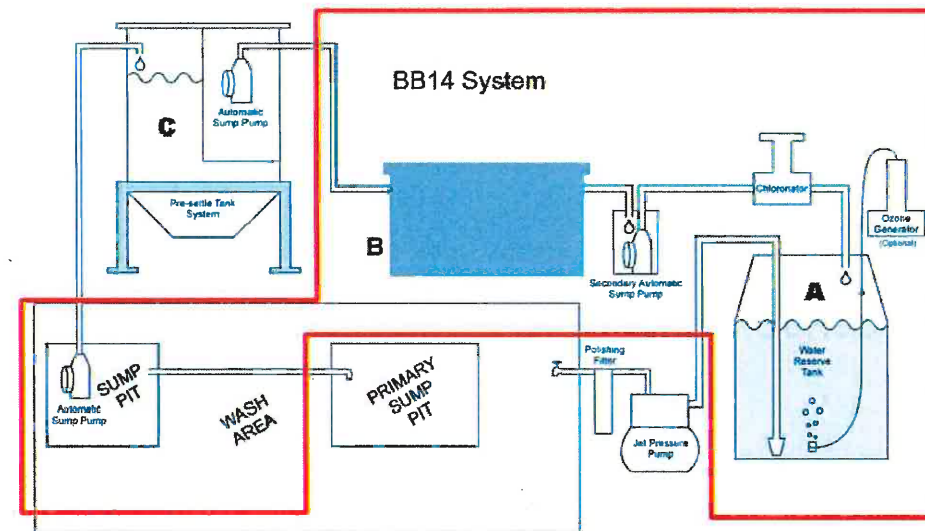


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
C4.1
 STORMDRAIN
 PROFILES



1 PRELIMINARY WASHWATER RECYCLING VAULT
SCALE: N.T.S.



ULTIMATE WASHER STATIONARY BB14 WATER RECOVERY SYSTEM

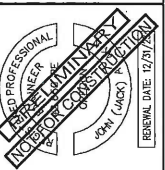
- SPECIFICATIONS**
- FILTERS ARE REACHABLE FROM OUTSIDE
 - 3/4 HP ELECTRIC MOTOR, 110V, 9 AMP
 - TWO 20" POLISHING FILTERS
 - OLEOPHILIC (OIL ATTRACTING) COALESCING PLATES
 - REUSABLE OIL FILTERING FOAM MEDIA
 - OIL ABSORPTION SKIMMER MEDIA
 - WASHABLE OIL PLATES
 - POLYETHYLENE HOUSING
 - AUTO PUMP OUT SYSTEM
 - 1 YEAR WARRANTY
 - 25 AND 5 MICRON FILTERS
 - WEIGHT: 300 LBS
 - 220 GALLON RESERVE WATER TANK WITH 6" MANWAY ACCESS AND STAND
 - IN-LINE CHLORINATOR
 - AUTOMATIC OPERATION
 - SUPPLY PUMP WICHECK VALVE (110V/BA)
 - SAFETY INSTRUCTION AND MAINTENANCE SCHEDULE



2 ALTERNATE ABOVE-GROUND WASHWATER RECYCLING UNIT
SCALE: N.T.S.

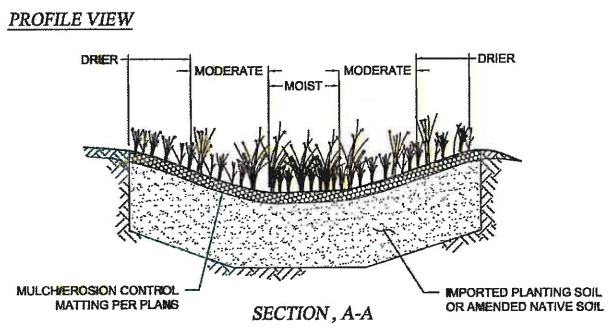
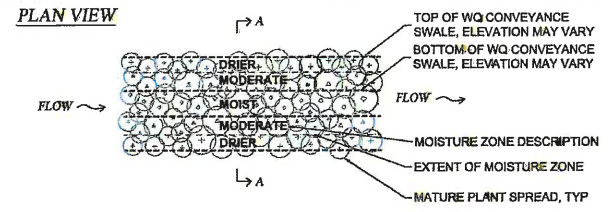
BY:	
REVISIONS	

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 emc@emcengineers.com



PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
C4.2
 WASHWATER RECYCLING DETAILS



LEGEND:
 - - - - INDICATES GRADE BREAK
 - - - MOISTURE ZONE
 PLANT SPECIES APPROPRIATE FOR MOISTURE ZONE:
 ○ DRIER
 ○ MODERATE
 ○ MOIST

NOTES:
 1. THIS DETAIL IS PROVIDED AS A SCHEMATIC EXAMPLE OF THE RANDOM PLANT PLACEMENT AND 90% COVERAGE AFTER ESTABLISHMENT PERIOD DESIRED TO REDUCE EROSION AND WEEDS.
 2. INSTALL PLANTS PER PLANS, ACCORDING TO LANDSCAPE DESIGN PLANT TABLE, WHICH SHOULD INCLUDE PLANT SPECIES, SPACING, AND QUANTITIES IN EACH MOISTURE ZONE.
 3. MOISTURE ZONES VARY FROM THOSE SHOWN DEPENDING ON GRADING PLAN, LOCATION OF INLET(S) AND OUTLET(S) AND FACILITY SHAPE.

Rogue Valley Stormwater Design Manual | Water Quality Conveyance Swale Planting Schematic | BMP 8.03 1 of 1 Scale: NTS

General Notes for Vegetated BMPs

- Excluding construction of the facility itself, exposed treatment area subgrade shall be fenced to prohibit impacts from construction (including materials and equipment storage).
- Build and vegetative swales as early as possible to establish plantings before directing stormwater runoff to it or divert stormwater around facility. Practically, vegetation will be given a minimum of 3 months to become established, or per landscape architect/designer guidelines.
- Call the reviewing agency 48 hours in advance of constructing this facility so construction observation may be performed to identify variations in the field that may affect design and verify proper construction.
- Over-excavate within the swale to allow for placement of amended or imported soil up to final grade.
- Placement of amended native or imported soil mix shall occur as follows:
 - Place soil in 6 inch maximum lifts (i.e. depth).
 - Do not place if soil is saturated.
 - Lightly compact each lift, (e.g. a water filled landscape roller) to achieve 85% compaction. Do not compact with heavy machinery or vibratory compaction.
- Install existing dispassion below all outlets per approved plans.
- If unexpected soil has been exposed to rainfall, scarify the surface to a depth of 4 inches to restore filtration capacity.
- Install ODOT Type E erosion control matting, if specified in approved plans.
- Landscaping plan must adhere to one of the scenarios in Tables 1 and 2 of section 4.5.2. Plant per Landscaping plan and standard detail 4.5.2C. Contact approving jurisdiction 48 hours in advance of planting so that jurisdiction can review plant placement prior to plant installation.
- Install mulch, if specified in approved plans. Use either shredded wood chips or coarse compost. Mulch must be dry, pesticide and weed free. Spread in a minimum two inch layer over bare soil or in a ring around plants to increase water retention. Ensure that mulch does not touch plant stems.
- Slope slopes outside of flow area must be permanently stabilized with mulch and vegetation.

AMENDED PLANTING SOIL MIX SPECIFICATIONS

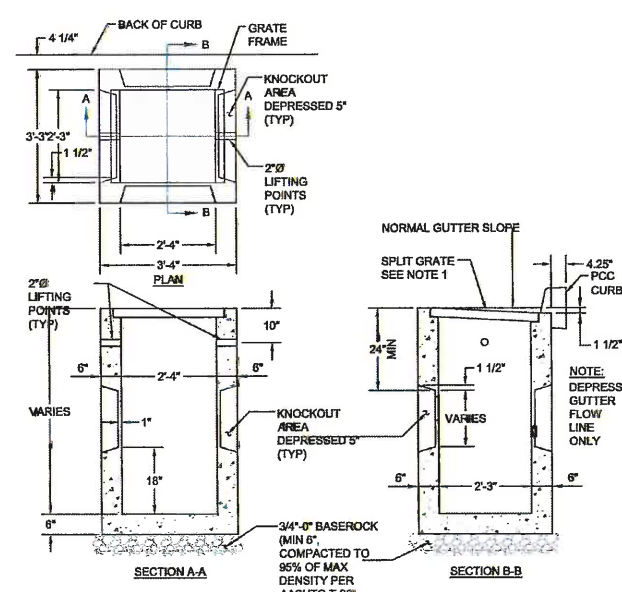
- Planting soil may be either amended native or imported soil mix with the following characteristics:
 - Infiltrate between 0.5 and 12 inches/hour.
 - Be free of weed seeds, contaminants, and hazardous materials.
 - Organic content matter from 8-10% by weight.
 - Cation exchange capacity (CEC) greater than or equal to 5 milliequivalents/100 grams of dry soil
 - 2-5% clayey fines content
 - pH between 5.5 and 8.0
 - Conform to the following gradation for the mix:

US Standard Sieve Size	Percent Passing
3/8"	100
#4	95-100
#10	75-90
#40	25-50
#100	5-10
#200	2-5

- Imported soil shall be roughly 1/3 plant derived compost, 1/3 topsoil and 1/3 gravelly sand.
- Amended native planting soil mix shall be created by blending compost into the native soil at a rate of 1 part compost to two parts soil. Soil mix must still meet the specifications in Note 1 above.
- Amended native or topsoil soil mix shall be uniformly mixed.

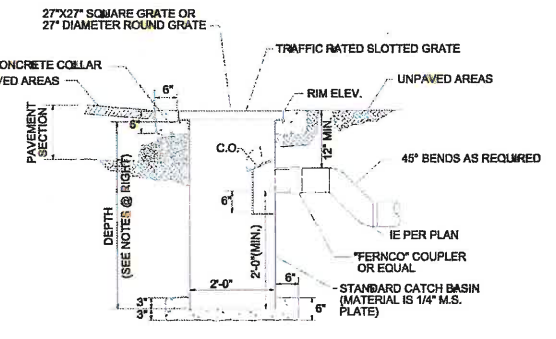
Compost specifications
 Must be derived from plant material and fully composted. Must be certified weed seed free. A Technical Data Sheet from the US Composting Council Seal of Testing Assurance must be provided to the approving jurisdiction. The Data Sheet must show that the compost meets the following criteria:

- Organic matter content between 40 and 50 percent.
- pH between 5.5 and 8.0. If the pH isn't quite right, it may be lowered by adding iron sulfate and sulfur or raised by adding lime. If lime is used, incorporate first into the compost, wet the compost down, and then fold mixture into the soil.
- Soluble soil content shall be less than 0.00005/cm.
- 90% should pass a 1/2-inch screen.
- Stability Test Result shall Be Stable or Very Stable.
- Maturity indicator for emergence and vigor shall be ≥ 80%.
- Trace Metals Test Result shall Be Pass.
- Carbon nitrogen ratio between 30:1 and 35:1.



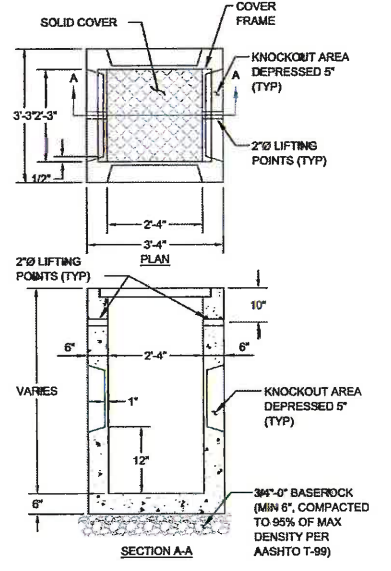
NOTES:
 1. GRATE AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION. GRATE AND FRAME TO BE ODOT G-2 TYPE 2 (BICYCLE SAFE).
 2. FOR PRECAST BOX, CURB MUST BE HAND FORMED 10" EACH SIDE OF CATCH BASIN.
 3. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH. CATCH BASIN AND GRATE SHALL MEET HS20 LOADING.
 4. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
 5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

2 CATCH BASIN
 SCALE: NTS



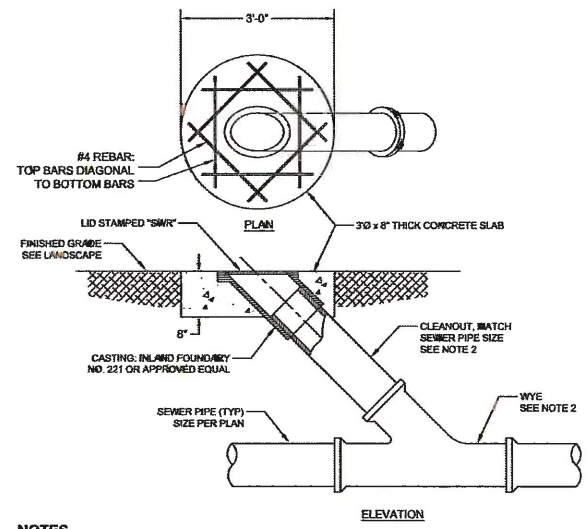
GENERAL NOTES:
 1. ASPHALT COAT ALL SURFACES OF CATCH BASIN AND CLEANOUT AFTER WELDING OR HOT DIP GALVANIZE (AT MANUFACTURER'S DISCRETION)
 2. BREAK SHARP CORNERS AFTER WELDING.
 3. ALL WELDED STEEL CONSTRUCTION
 4. 10 GAUGE STEEL MINIMUM THICKNESS
 5. OPENING ON BOTTOM OF WATERSEAL TO BE GREATER, OR EQUAL TO AREA IN OUTLET PIPE.
 6. STANDARD DEPTH: 48"

3 LYNCH STYLE CATCH BASIN
 SCALE: NTS



CONSTRUCTION NOTES:
 1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
 2. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
 3. JUNCTION BASIN AND GRATE SHALL MEET HS20 LOADING.
 4. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
 5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

6 JUNCTION BASIN
 SCALE: NTS

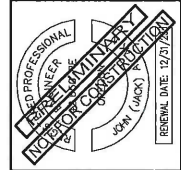


NOTES:
 1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2015 ODOT STANDARD SPECIFICATIONS SECTION 404.0. MINIMUM 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
 2. FITTINGS AND PIPE TO BE GASKETED PVC SDR 26.

5 TYPICAL CLEANOUT
 SCALE: NTS

REVISIONS	BY:			

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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:

C6.1
 PROJECT DETAILS

EROSION & SEDIMENT CONTROL PLANS

BOAT YARD PAVING PROJECT

PORT OF BROOKINGS - HARBOR

NARRATIVE DESCRIPTIONS	
PROPERTY LOCATION/DESCRIPTION	41S 13W 08A, TAX LOT 1300 WILLAMETTE MERIDIAN, CURRY COUNTY, OREGON
LATITUDE/LONGITUDE	42.043516N, 124.284357W
EXISTING SITE CONDITIONS	GRAVEL STORAGE AND MAINTENANCE FOR BOATS / EQUIPMENT
DEVELOPED CONDITIONS	PAVED STORAGE AND MAINTENANCE FOR BOATS / EQUIPMENT
DISTURBED AREA	2.46± Acres
SITE SOIL DESCRIPTION	AGED COMPACTED 3/4-0 GRAVEL - 2% +/- PERCENT SLOPES
ON-SITE SOILS HAVE A SLIGHT TO MINIMUM EROSION POTENTIAL. EXCESS SOILS GENERATED FROM EXCAVATION, GRADING AND TRENCHING ACTIVITIES FOR EACH PHASE MAY BE TEMPORARILY STORED ON THE SITE WITHIN UNDEVELOPED AREAS. EXCESS SOILS AT THE TIME OF THE FINAL PHASE OR AT ANY TIME PRIOR MAY BE REMOVED AND PLACED OFFSITE.	
RECEIVING WATER BODY	PORT OF BROOKINGS - HARBOR

SITE INSPECTION INFORMATION	
PERMITEE'S SITE INSPECTOR	_____
COMPANY/AGENCY	_____
PHONE	_____
FAX	_____
E-MAIL	_____
DESCRIPTION OF EXPERIENCE	_____
_____	_____
_____	_____
_____	_____
INSPECTION SCHEDULE	_____

SITE CONDITION	MINIMUM FREQUENCY
ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOW MELT, IS OCCURRING.
PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE BEFORE LEAVING THE SITE.
INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS	ONCE EVERY TWO (2) WEEKS.
PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.

HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC INSPECTOR. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.

INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.

CHANGES TO THE APPROVED ESC PLAN MUST BE SUBMITTED TO RVS IN THE FORM OF AN ACTION PLAN.

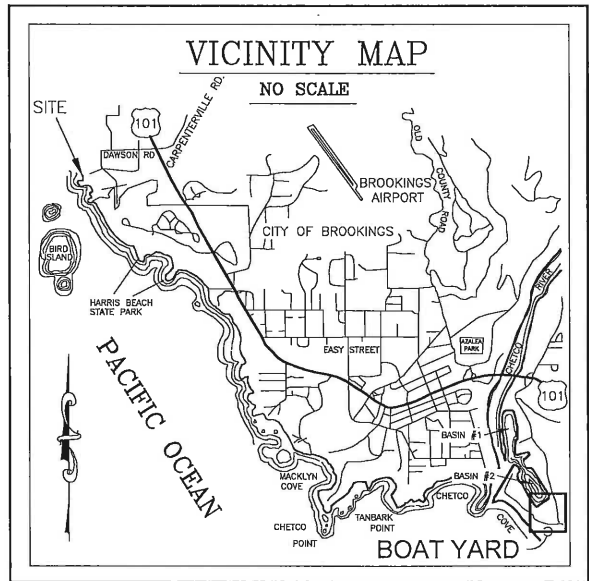
RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS. AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

GENERAL NOTES

- Hold a pre-construction meeting of project construction personnel that includes the inspector to discuss erosion and sediment control measures and construction limits. (Schedule A.5.b.i.(3))
- The ESCP must be kept onsite and all erosion and sediment control measures shown on the plan must be installed in such a manner to ensure that sediment or sediment laden water that enters or is likely to enter surface waters or conveyance systems leading to surface water, roadway, or other properties does not occur. (Schedule A.3.a.) and (Schedule B.3.b.)
- The implementation of the ESCP and construction, maintenance, replacement, and upgrading of the erosion and sediment control measures is the responsibility of the permit registrant until all construction is completed and approved by the local development agency and vegetation/landscaping is established. The permit registrant shall be responsible for maintenance after the lots are approved, until the lots are sold and the 1200-C permit is terminated. (Schedule A.4.a.) and (Schedule D.3.)
- The permit registrant must be responsible for proper installation and maintenance of all erosion and sediment control measures, in accordance with local, state, or federal regulations. (Schedule A.5.a.) and (Schedule A.6.a.)
- Erosion and sediment control measures including perimeter sediment control must be in place before vegetation is disturbed and must remain in place and be maintained, repaired, and promptly implemented following procedures established for the duration of construction, including protection for active storm drain inlets and catch basins and appropriate nonstormwater pollution controls. (Schedule A.5.b.i.(2)), (Schedule A.5.b.i.(7)), (Schedule A.7.d.i.(2)) & (Schedule A.7.f.)
- Begin land clearing, excavation, trenching, cutting or grading and earthwork-surface roughing after installing applicable sediment, erosion prevention and runoff control measures not in the direct path of work. (Schedule A.5.b.ii.(5)(a)), (Schedule A.7.c.i.(1)) and (Schedule A.7.c.ii.(1))
- Apply temporary and/or permanent soil stabilization measures immediately on all disturbed areas as grading progresses and for all roadways including gravel roadways. (Schedule A.5.b.ii.(5)(b), Schedule A.5.b.ii.(5)(c) & Schedule A.5.b.ii.(6))
- Wet Weather BMPs: Construction activities must avoid or minimize excavation and creation of bare ground on slopes greater than five (5) percent from October 1 through May 31 each year. (Schedule A.7.a.i.)
- Wet Weather BMPs: Temporary stabilization of the site must be installed at the end of the shift before a holiday or weekend or at the end of each workday if rainfall is forecast in the next 24 hours and each weekend and holiday. (Schedule A.7.a.ii.)
- Identify, mark, and protect (by fencing off or other means) critical riparian areas and vegetation including important trees and associated rooting zones and vegetation areas to be preserved. Identify vegetative buffer zones between the site and sensitive areas (e.g., wetlands), and other areas to be preserved, especially in perimeter areas. Preserve existing vegetation and revegetate open areas when practicable before and after grading or construction. (Schedule A.5.b.i.(1) & (2)) and (Schedule A.7.c.iii.(1))
- Provide permanent erosion prevention measures on all exposed areas to prevent from becoming a source of erosion and remove all temporary control measures, unless local ordinances require otherwise, as areas are stabilized. (Schedule A.5.b.i.(8)) and (Schedule A.7.c.ii.(2))
- All temporary sediment controls must remain in place until permanent vegetation or other permanent covering of exposed soil is established. Identify the type of vegetative seed mix used. (Schedule A.7.c.iii.(3)) & (Schedule A.7.c.iii.(4))
- Sediment controls must be installed and maintained along the site perimeter on all down gradient sides of the construction site and at all active and operational internal storm drain inlets at all times during construction. (Schedule A.7.d.i.(1) - (2))
- Prior to any land disturbing activities each site must have graveled, paved, or constructed entrances, exits and parking areas with exit tire wash to reduce the tracking of sediment onto public or private roads. (Schedule A.7.d.iii.(1))
- When trucking saturated soils from the site, either watertight trucks must be used or loads must be drained on-site until dripping has been reduced to minimize spillage on road. (Schedule A.7.d.iii.(3))
- Temporary stabilization or covering of soil stockpiles and protection of stockpile located away from construction activity must occur at the end of each workday or other BMPs, such as diversion of uncontaminated flows and installation of sediment fences around stockpiles, must be implemented to prevent turbid discharges to surface waters. (Schedule A.7.e.i.(1)) & (Schedule A.7.e.ii.(1) - (3)).
- BMPs that will be used to prevent or minimize stormwater from being exposed to pollutants from spills, no discharge of concrete truck wash water, vehicle and equipment cleaning, vehicle and equipment fueling, maintenance, and storage, other cleaning and maintenance activities, and waste handling activities. These pollutants include fuel, hydraulic fluid, and other oils from vehicles and machinery, as well as debris, leftover paints, solvents, and glues from construction operations. (Schedule A.7.e.i.(2))
- Any use of toxic or other hazardous materials must include proper storage, application, and disposal. (Schedule A.7.e.iii.(2))
- Solid Waste and Hazardous Materials Management: Follow project written spill prevention and response procedures, employee training on spill prevention and proper disposal procedures; regular maintenance schedule for vehicles and machinery; and material delivery and storage controls, training and signage, material use, covered storage areas for waste and supplies. (Schedule A.7.e.iii.(3))
- The permittee must properly manage hazardous wastes, used oils, contaminated soils, concrete waste, sanitary waste, liquid waste, or other toxic substances discovered or generated during construction and meet all state and federal regulations and approvals. (Schedule A.7.e.iii.(4))
- The ESCP measures shown on this plan are minimum requirements for anticipated site conditions. During the construction period, these measures must be upgraded as needed to comply with all applicable local, state, and federal erosion and sediment control regulations. Changes to the ESCP must also be submitted in the form of an Action Plan to DEQ or its Agent for approval. (Schedule A.7.f.)
- Significant amounts of sediment, which leaves the site, must be cleaned up within 24 hours and placed back on the site and stabilized or properly disposed. The cause of the sediment release must be found and prevented from causing a recurrence of the discharge within the same 24 hours. Any in-stream clean up of sediment shall be performed according to the Oregon Division of State Lands required time frame. (Schedule A.7.f.i.(1))
- Vacuuming or dry sweeping must be used to clean-up released sediment and must not be intentionally washed into storm sewers, drainage ways, or water bodies. (Schedule A.7.f.i.(2))
- The application rate of fertilizers used to reestablish vegetation must follow manufacturer's recommendations to minimize nutrient releases to surface waters. Time-release fertilizers should be used with care within any waterway riparian zone. (Schedule A.7.f.i.(3))
- Sediment must be removed from behind a Sediment Fence when it has reached a height of 1/3 the height of the fence aboveground and before fence removal. (Schedule A.7.f.ii.(1))
- Sediment must be removed from behind Bio Bags and other barriers it has reached a height of two (2) inches and before BMP removal. (Schedule A.7.f.ii.(2))
- Removal of trapped sediment in a Sediment Basin or Sediment Trap or Catch Basins must occur when the sediment retention capacity has been reduced by fifty (50)% and at completion of project. (Schedule A.7.f.ii.(3) & (4))
- DEQ must approve of any treatment system and operational plan that may be necessary to treat contaminated construction dewatering or sediment and turbidity in stormwater runoff. (Schedule A.7.f.iii.)
- Should oil construction activities cease for thirty days or more, the entire site must be temporarily stabilized using vegetation or a heavy mulch layer, temporary seeding, or other method. (Schedule A.8.a.)
- Should construction activities cease for fifteen (15) days or more on any significant portion of a construction site temporary stabilization is required for that portion of the site with straw, compost, or other tackified covering that prevent soil or wind erosion until work resumes on that portion of the site. (Schedule A.8.b.)
- Daily inspections when rainfall and runoff occurs of the BMPs and discharge outfalls must be the project ESCP inspector. These inspections and observations must be recorded in a log that is available on site. (Schedule A.6.b.i.) & (Schedule B.1.b.(1))
- BMPs must be inspected before, during, and after significant storm events. (Schedule A.7.f.)
- All ESCP controls and practices must be inspected visually once to ensure that BMPs are in working order prior to the site becoming inactive or in anticipation of site inaccessibility and must be inspected visually once every two (2) weeks during inactive periods greater than seven (7) consecutive calendar days. (Schedule B.1.b.(2)-(3))
- If practical, inspections must occur daily at a relevant and accessible discharge point or downstream location during periods which the site is inaccessible due to inclement weather. (Schedule B.1.b.(4)).

CONTACTS	
SURVEYOR ROBERTS & ASSOCIATES LAND SURVEYING, INC. 611 SPRUCE STREET BROOKINGS, OR 97415 (541) 469-0162 CONTACT: RICH ROBERTS	OWNER PORT OF BROOKINGS - HARBOR 16330 LOWER HARBOR ROAD BROOKINGS, OR 97415 (541) 469-2218 CONTACT: _____
PROJECT ENGINEER EMC ENGINEERS / SCIENTISTS 450 CONESTOGA DRIVE JACKSONVILLE, OR 97530 (541) 261-9929 CONTACT: JACK AKIN, P.E.	GEOTECHNICAL ENGINEER EMC ENGINEERS / SCIENTISTS 450 CONESTOGA DRIVE JACKSONVILLE, OR 97530 (541) 261-9929 CONTACT: JACK AKIN, P.E.
SHEET INDEX	
ECP1	COVER SHEET / NOTES - EROSION AND SEDIMENT CONTROL PLAN
ECP2	SITE PLAN - EROSION & SEDIMENT CONTROL PLAN
ECP3	DETAILS - EROSION & SEDIMENT CONTROL PLAN



BMP MATRIX FOR CONSTRUCTION PHASES

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

*X INDICATES THE APPROPRIATENESS OF A BMP TO BE PRESENT DURING THE CORRESPONDING CONSTRUCTION PHASE

	CLEARING	MASS GRADING	N/A	PAVEMENT CONSTRUCTION	FINAL STABILIZATION
TEMPORARY "WET WEATHER" EROSION PREVENTION*					
PRESERVE EXISTING VEGETATION	** X	X		X	X
PLASTIC SHEETING	X	X		X	X
MATTING		X		X	X
TEMPORARY SEEDING		X			X
PERMANENT EROSION PREVENTION*					
GROUND COVER					X
MATTING					X
PERMANENT SEEDING		X			X
DUST CONTROL	X	X		X	X
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	** X	X		X	X
STRAW WATTLES				X	X
INLET PROTECTION	** X	X		X	X
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	** X	X		X	X
SURFACE ROUGHENING					X
CHECK DAMS					X
POLLUTION PREVENTION					
PROPER SIGNAGE	X	X		X	X
HAZ WASTE MGMT	X	X		X	X
SPILL KIT ON-SITE	X	X		X	X
CONCRETE WASHOUT AREA	X	X		X	X

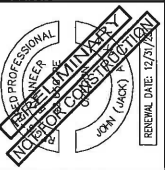
* ALL BMP'S TO BE REMOVED DURING FINAL STABILIZATION EXCEPT FOR PERMANENT EROSION PREVENTION MEASURES

** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

REVISIONS	BY:

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Engineers/Scientists, LLC



PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

DRAWN BY:	JW
DATE:	8 MAR 2022
JOB No:	22-202201
SHEET No:	ECP1
EROSION CONTROL PLAN	

NOTE:
ALL EXISTING UG UTILITIES TO BE PROTECTED DURING CONSTRUCTION



GENERAL EROSION CONTROL NOTES

- Seed used for temporary or permanent erosion control seeding may be any seed mix that is generally used by local landscape professionals or may consist of the following:
 - Dwarf grass mix (min. 100 lb./ac.)
 - Dwarf perennial ryegrass (80% by weight)
 - Creeping red fescue (20% by weight)
 - Standard height grass mix (min. 100lb./ac.)
 - Annual ryegrass (40% by weight)
 - Turf-type fescue (60% by weight)
 Permanent seeding that is part of site landscaping shall conform to the specifications of the project landscape architect.
- Slope to receive temporary or permanent seeding shall have the surface roughened by means of track-walking or the use of other approved implements. Surface roughening improves seed bedding and reduces run-off velocity.
- Long term slope stabilization measures shall include the establishment of permanent vegetative cover via seeding with approved mix and application rate.
- Temporary slope stabilization measures shall include: covering exposed soil with plastic sheeting, erosion matting, straw ground cover, wood chips, mulch, or other approved measures. Seeding or matting shall be weighted or staked down to prevent movement due to wind or water. Straw or other materials (as applicable) applied to slopes greater than 3:1 shall be track-walked or held in place by a tackifier.
- Stockpiled soil or strippings shall be placed in a stable location and configuration. During "wet weather" periods, stockpiles shall be covered with plastic sheeting or straw mulch. Sediment fence is required around the perimeter of the stockpile unless the stockpile is located in a flat (< 2% slope) or depressed area with about 20 feet of grassy or vegetated buffer zone on all sides.
- Exposed cut or fill areas shall be stabilized through the use of temporary seeding and mulching, erosion control blankets or mats, mid-slope sediment fences or wattles, or other appropriate measures. Slopes exceeding 25% may require additional erosion control measures.

- Areas subject to wind erosion shall use appropriate dust control measures including the application of a fine spray of water, plastic sheeting, straw mulching, or other approved measures.
- Construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures including, but not limited to, tire washes, street sweeping, and vacuuming may be required to insure that all paved areas are kept clean for the duration of the project.
- Active inlets to storm water systems shall be protected through the use of approved inlet protection measures. All inlet protection measures are to be regularly inspected and maintained as needed.
- Saturated materials that are hauled off-site must be transported in water-tight trucks to eliminate spillage of sediment and sediment-laden water.
- An area shall be provided for the washing out of concrete trucks in a location that does not provide run-off that can enter the storm water system. If the concrete wash-out area can not be constructed greater than 50' from any discharge point, secondary measures such as berms or temporary settling pits may be required. The wash-out shall be located within six feet of truck access and be cleaned when it reaches 50% of the capacity.
- Sweepings from exposed aggregate concrete shall not be transferred to the storm water system. Sweepings shall be picked up and disposed in the trash.
- Avoid paving in wet weather when paving chemicals can run-off into the storm water system.
- Use bmps such as check-dams, berms, and inlet protection to prevent run-off from reaching discharge points.
- Catch basins, manholes, and other discharge points when applying seal coat, tack coat, etc. To prevent introducing these materials to the storm water system.

CONSTRUCTION NOTES

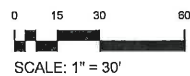
- ROCK ENTRANCE FOR 50' MIN. TO PREVENT TRACKING OF SOIL ONTO ROADWAY, 8" MIN. THICKNESS OF SHALE OR 4"-0 ON FILTER FABRIC. LINE AND GRADE SHALL CONFORM TO FUTURE DRIVEWAY ENTRANCE, SEE RD 1000, SHEET ECP3.
- FUTURE AND EXISTING STORM DRAIN INLETS SHALL BE PROTECTED BY BIOFILTER BAGS OR EQUIVALENT, SEE RD 1015, SHEET ECP3.
- CONSTRUCT SEDIMENT FENCE, SEE DETAIL RD 1040, SHEET ECP3. ASSURE CLEARANCE OUTSIDE OF PROPOSED AC EDGE.
- CONSTRUCT CONCRETE TRUCK WASHOUT FACILITY. SEE DETAIL RD 1070, SHEET ECP3. MINIMUM 10' X 10' OR AS DIRECTED BY ENGINEER.

NOTES:

- SEE BMP MATRIX ON SHEET ECP1 FOR TIMING OF EROSION CONTROL MEASURES & ADDITIONAL EROSION CONTROL CONSIDERATIONS
- SEE SHEET C6.1 FOR ADDITIONAL BMP DETAILS



VERTICAL DATUM
MEAN LOWER LOW WATER EPOCH 1983-2001.
BENCH MARK UTILIZED FOR THIS SURVEY
US ARMY CORPS OF ENGINEERS
BENCH MARK - "FUEL 2"
ELEVATION - 21.65 FEET



1 EROSION CONTROL PLAN
SCALE: 1" = 30' (24x36)



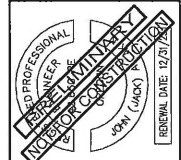
NOTE:
ALL EXISTING UG UTILITIES TO BE PROTECTED DURING CONSTRUCTION



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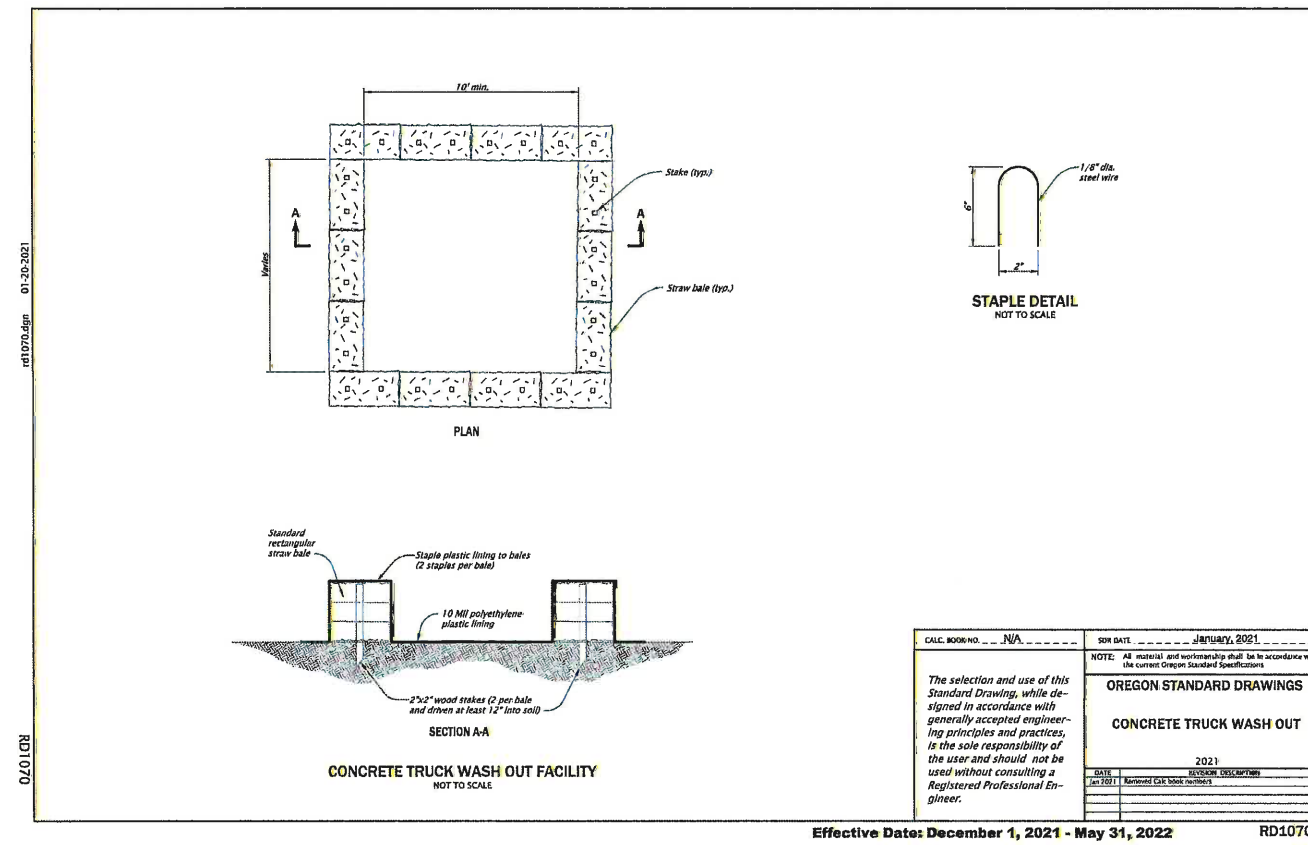
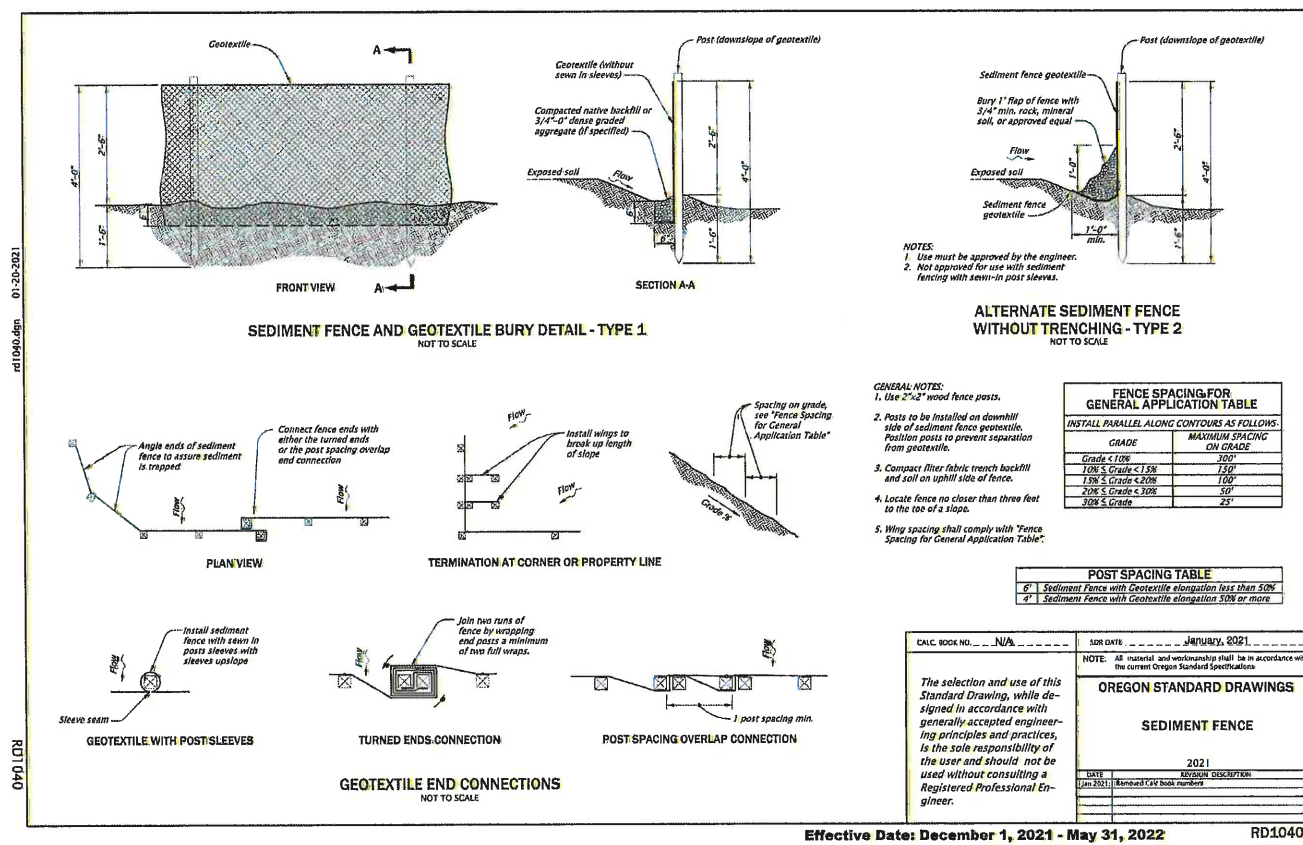
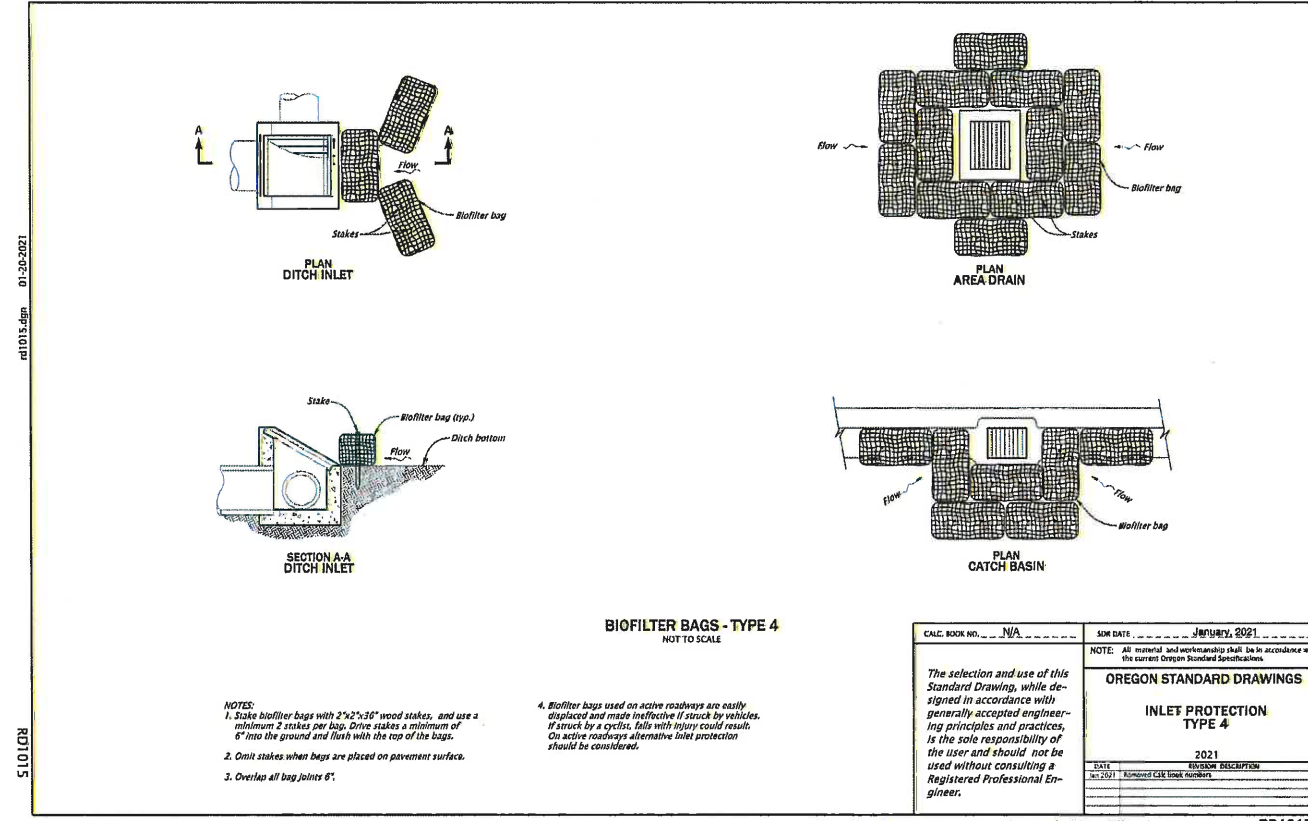
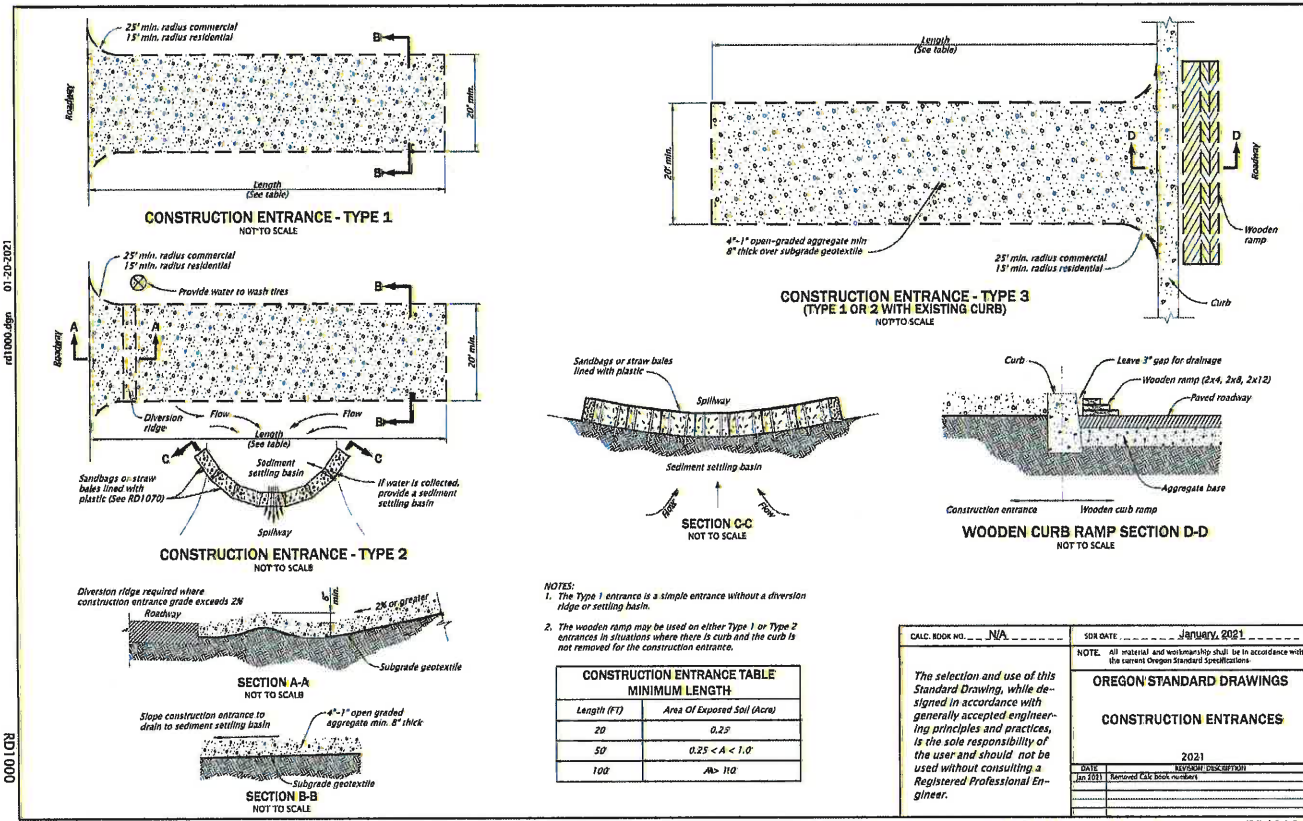
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Engineers/Scientists, LLC



PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

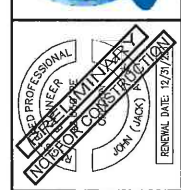
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 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
ECP2
 EROSION CONTROL PLAN



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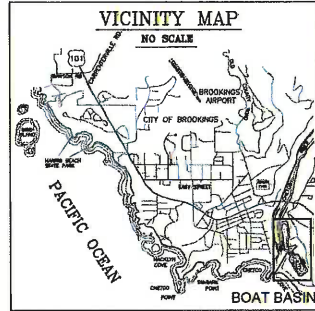


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
BOAT YARD PAVING

DRAWN BY: JW
 DATE: 8 MAR 2022
 JOB No: 22-202201
 SHEET No:
ECP1
 EROSION CONTROL
 DETAILS

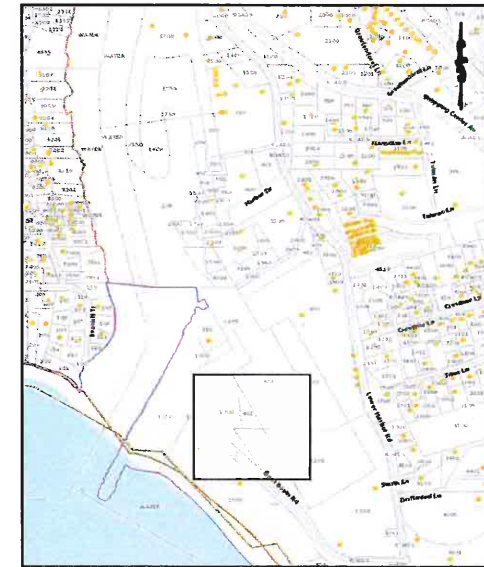
NOTE:
 ALL EXISTING UG
 UTILITIES TO BE
 PROTECTED DURING
 CONSTRUCTION

Oregon 811
 CALL BEFORE YOU DIG!



PORT OF BROOKINGS-HARBOR
2022 CIVIL IMPROVEMENTS

KITE PARK RV RESORT



PORT OF BROOKINGS HARBOR
MAP OF TAX LOTS

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

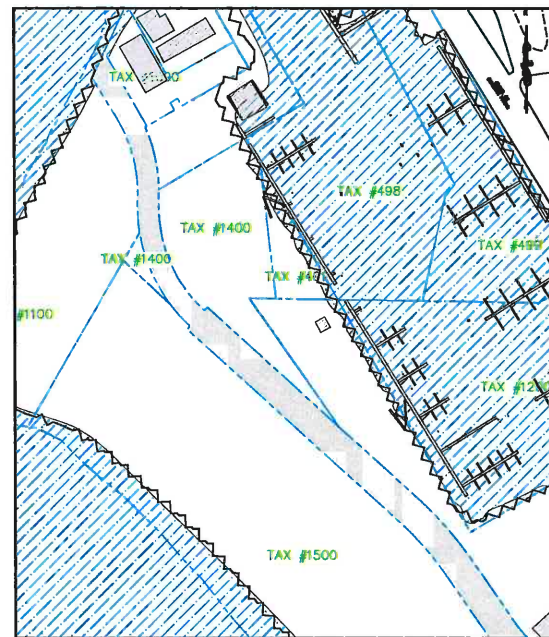
PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PRELIM GRADING NOTES

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.



PROJECT OVERVIEW
SCALE 1" : 200'

LEGEND

	EXIST. FIRE HYDRANT		FIRE HYDRANT
	EXIST. WATER VALVE		WATER VALVE
	EXIST. BLOW OFF		WATER METER
	EXIST. WATER METER		BACKFLOW DEVICE
	EXIST. HOSE BIB		IRRIGATION WATER METER
	EXIST. IRRIGATION VALVE		AIR RELEASE VALVE
	EXIST. AIR RELEASE VALVE		BLOWOFF DEVICE ASSEMBLY
	EXIST. STORM DRAIN MANHOLE		FIRE DEPARTMENT CONNECTION
	EXIST. CLEANOUT		END PLUG
	EXIST. SANITARY SEWER MANHOLE		TEE
	EXIST. MAILBOX		SANITARY SEWER CLEANOUT
	CURB RAMP		SANITARY SEWER MANHOLE
	PARALLEL RAMP		STORM DRAIN CLEANOUT
	HANDICAP PARKING SYMBOL		STORM DRAIN MANHOLE
	PARALLEL PARKING STRIPING		ATRIUM DRAIN / BUBBLER
	BICYCLE LANE SYMBOL		CATCH BASIN INLET
	EXIST. SANITARY SEWER		CURB INLET
	EXIST. STORM DRAIN		STORM DRAIN CONTROL STRUCTURE
	EXIST. WATER		ELECTRIC BOX
	EXIST. GAS		ELECTRIC TRANSFORMER
	EXIST. ELECTRIC		LIGHTS
	EXIST. OVERHEAD POWER		CONTROL POINT
	EXIST. TELEPHONE		MONUMENT
	EXIST. FIBER OPTIC		TRAFFIC SIGNAL LIGHT
	EXIST. CURB AND GUTTER		SIGN (TRAFFIC, INFORMATION)
	EXIST. CENTERLINE		BOLLARD
	EXIST. RIGHT OF WAY		BICYCLE PARKING SPACE
	EXIST. CONTOUR		DECIDUOUS TREE
	PROPOSED CONTOUR		CONIFER TREE
	EXIST. EDGE OF PAVEMENT		NEW CONCRETE
	CHAIN LINK FENCE		NEW GRAVEL PAVING
	BARB WIRE FENCE		NEW HMA PAVING - STANDARD
	SANITARY SEWER		NEW HMA PAVING - HEAVY
	STORM DRAIN		NEW LANDSCAPING
	WATER		NEW RIP RAP
	GAS		
	ELECTRIC		
	CURB AND GUTTER		
	PROPOSED RIGHT OF WAY		
	FLOW LINE		
	PROPERTY LINE		

PROJECT DESCRIPTION

TITLE : KITE PARK RV RESORT

REFERENCE : 116

LOCATION : BOAT BASIN ROAD

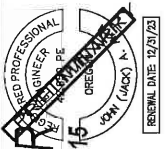
TAX LOT(S) : 1400, 401

DRAWING REGISTER

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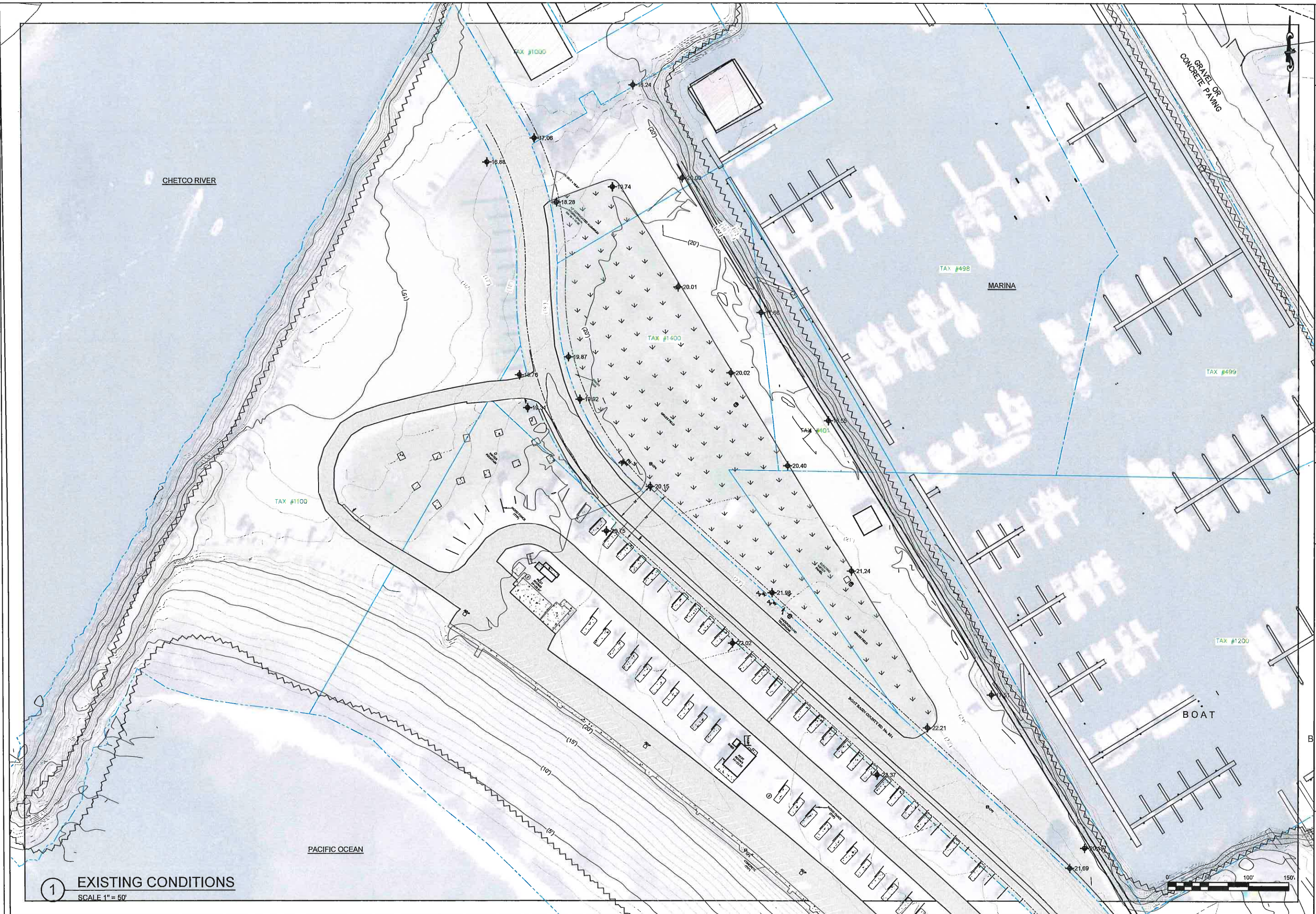
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PORT OF BROOKINGS HARBOR
 16330 LICO WAY, SEASIDE, OR 97138
 503-738-1111
 Kite Park RV Resort

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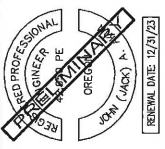




1 EXISTING CONDITIONS
SCALE 1" = 50'

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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
Kite Park RV Resort

DRAWN BY: CD
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 JOB No: 116
 SHEET No:

250

GENERAL NOTES

THESE NOTES ARE INTENDED FOR USE IN INTERPRETING AND IMPLEMENTING THE TASKS SHOWN ON THE FOLLOWING CONSTRUCTION PLANS AND SPECIFICATIONS SHEETS. THESE ARE IN ADDITION TO THE OVERALL PROJECT SPECIFICATION AND BID DOCUMENTS AND CONTRACTUAL ITEMS.

THESE ARE INTENDED FOR THE USE OF THE GENERAL CONTRACTOR AND HIS/HER SUBCONTRACTORS IN THE DEMOLITION AND RECONSTRUCTION OF THE SUBJECT AREA OF THE PORT OF BROOKINGS HARBOR. USE FOR OTHER PURPOSES OR AT OTHER SITES IS NOT RECOMMENDED AND IS ACCOMPLISHED AT THE SOLE RISK OF THE USER.

THESE ITEMS ARE TO BE USED AS A SUPPLEMENT TO THE DETAILS PROVIDED ON THE PLAN SHEETS AND SPECIFICATION PAGES. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, REFERENCED REPORTS, THESE GENERAL NOTES AND OTHER ITEMS LISTED ON THIS SHEET AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.

THE EMBANKMENT REPAIR HAS BEEN DESIGNED TO RESIST ANTICIPATED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE AND SLOPE AREAS PRIOR TO COMPLETION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO JOBSITE SAFETY, CONSTRUCTION MEANS, METHODS, AND SEQUENCES, TEMPORARY SHORING, SLOPE STABILITY, FORMWORK AND BRACING, USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

CONSTRUCTION OBSERVATION BY THE ENGINEER IS FOR CHECKING FOR CONFORMANCE WITH DESIGN ASPECTS ONLY AND IS NOT INTENDED IN ANY WAY TO REVIEW AND/OR APPROVE THE GENERAL CONTRACTOR'S CONSTRUCTION PROCEDURES OR RELIEVE THE CONTRACTOR FROM PROVIDING A COMPLETED PROJECT, CONSISTENT WITH THE PLANS AND SPECIFICATIONS AND GOOD CONSTRUCTION PRACTICES. SPECIAL INSPECTION BY THE ENGINEER DOES NOT PROVIDE A CERTIFICATION OF THE PROJECT OR RELIEVE THE CONTRACTOR OF ALL RESPONSIBILITY FOR A PROPERLY CONSTRUCTED PROJECT.

STANDARDS USED FOR DESIGN

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ODOT STANDARD SPECIFICATIONS, UNLESS ELSEWHERE HEREIN SPECIFIED OTHERWISE. INTERNATIONAL BUILDING CODE (IBC) 2009; 2010 OREGON STRUCTURE SPECIALTY CODE (OSSC); AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

OTHER NOTES

1. JOBSITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL PRODUCTS AND WORKMANSHIP SHALL BE NEW MATERIALS OF GOOD QUALITY, ACCEPTABLE FOR THIS TYPE OF CONSTRUCTION. WORK TO BE ACCOMPLISHED IN A GOOD AND WORKMANLIKE MANNER.
3. ALL MATERIALS TO BE SHIPPED, HANDLED AND STOCKPILED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND GOOD CONSTRUCTION PRACTICES.
4. LOCATIONS MUST BE VERIFIED AT THE SITE WITH THE GEOTECHNICAL ENGINEER AND THE PORT OF BROOKINGS HARBOR REPRESENTATIVE PRIOR TO PLACEMENT.
5. ABIDE BY LOCAL, STATE AND FEDERAL BUILDING ORDINANCES, INCLUDING ALL SAFETY REQUIREMENTS, IN ALL PHASES OF THE PROJECT.
6. ALL PHASES OF THE PROJECT ARE TO CONFORM TO THE PLANS AND SPECIFICATIONS ATTACHED HERETO AND SPECIFICATIONS PROVIDED BY THE OWNER AND THE ENGINEER-OF-RECORD.
7. PROPOSED CHANGES TO PROJECT PLANS AND SPECIFICATIONS MUST BE APPROVED BY THE DESIGNER PRIOR TO ACCEPTANCE AND IMPLEMENTATION AT THE SITE.
8. PROPOSED CHANGES MUST BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL/DISAPPROVAL BY THE DESIGNER AND THE OWNER.
9. IN NO CASE SHALL CHANGES, SUBSTITUTIONS OR OMISSIONS BE MADE TO THE DESIGN OR MATERIALS WITHOUT THE WRITTEN AUTHORIZATION OF THE DESIGNER AND THE OWNER.
10. AUTHORIZATION OF A DESIGN CHANGE BY THE ENGINEER DOES NOT CONSTITUTE ACCEPTANCE BY THE PORT OF BROOKINGS HARBOR, NOR DOES IT AUTHORIZE ADDITIONAL FUNDS FOR THE CHANGES. THE PORT'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE DESIGN CHANGE AND APPLICABLE CHANGES IN THE CONTRACT AMOUNT AND/OR CONSTRUCTION TIME PERIOD PRIOR TO IMPLEMENTATION OF SUCH CHANGES.
11. PROJECT SCHEDULE AND GENERAL SEQUENCING OF ALL WORK MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND THE OWNER. SUCH APPROVAL DOES NOT RELIEVE THE CONTRACTOR OR HIS/HER SUBCONTRACTORS OF ALL RESPONSIBILITIES FOR PROPER EXECUTION OF THE SUBJECT PROJECT CONSTRUCTION.
12. SEQUENCING OF TASKS THAT REQUIRES VARYING THE INSTALLED SIZES OF PROJECT MATERIALS MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND OWNER.
13. TRAFFIC CONTROL AND SIGNAGE MUST BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE SO STATED IN THE CONTRACT. ACCESS TO THE US COAST GUARD FACILITIES MUST BE MAINTAINED DURING CONSTRUCTION.
14. CONTRACTOR MUST UNDERSTAND THAT THE PROJECT SITE IS IN A HARBOR AREA SUBJECT TO TIDAL FLUCTUATIONS. THEREFORE, SEQUENCING AND PROJECT WORK MUST TAKE INTO ACCOUNT EFFECTS OF HIGH AND LOW TIDES.
15. REPLACEMENT OF SPECIFIED PRODUCTS BY AN "EQUIVALENT" PRODUCT MUST BE APPROVED BY THE DESIGN ENGINEER AND THE OWNER. REDESIGN REQUIRED FOR USE OF ALTERNATE "EQUIVALENT" MATERIALS IS TO BE BORNE BY THE CONTRACTOR.

GRADING NOTES

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED. THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OF BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE USE OF ALTERNATE MATERIALS. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES

1. PROJECT/PURPOSE - ITH THE PURPOSE OF MAINTAINING, REHABILITATING, REPLACING, AND UPGRADING THE EXISTING WESTERN EMBANKMENT AT THE SOUTH BASIN OF PORT OF BROOKINGS. THE EXISTING EMBANKMENT WILL BE CLEARED DOWN TO SUITABLE SUBGRADE AT A SLOPE BETWEEN 1.5:1 AND 2:1. A 4FT DEEP TRENCH WILL BE EXCAVATED AT THE BASE OF THE EMBANKMENT. A 3FT DEEP LAYER OF AGGREGATE WILL BE PLACED ON TOP OF THE SLOPE AND INTO THE TRENCH
2. CONTRACTOR ACTIVITIES - CONTRACTOR ACTIVITIES ARE DESCRIBED AS EXCAVATION AND CLEARING USING A 25T EXCAVATOR. EXCAVATION AND SPREADING AT THE BASE OF THE SLOPE USING A LONG REACH EXCAVATOR. PLACEMENT OF GEOGRID. PLACEMENT OF CRUSHED AGGREGATE FROM FINE GRAVEL TO 2FT BOULDERS
3. SOIL DISTURBING ACTIVITIES - EXCAVATION WILL BE LIMITED TO EXISTING MARINA EDGES AS SHOWN ON DRAWING C102
4. NON-STORMWATER DISCHARGES - NO DEWATERING, WATER-LINE FLUSHING, PAVEMENT WASH WATERS OR IRRIGATION WATER DISCHARGES ARE PLANNED FOR THIS PROJECT.
5. ESTIMATED START DATE FOR CONSTRUCTION - 02/01/21 - 03/30/21
6. NEAREST SURFACE WATER BODIES - PORT OF BROOKINGS ICE HOUSE INLET IN THE COMMERCIAL BASIN (SOUTH BASIN) AND THE SPORT BASIN, NEAR DOCK A (NORTH BASIN).
7. RECEIVING WATERS - PACIFIC OCEAN
8. SPECIAL ENVIRONMENTAL CONSIDERATIONS - SEE SECTION BELOW DESCRIBING PRECAUTION REGARDING CREOSOTE COATED PILES TO BE EXTRACTED. ESA OPINIONS PROVIDED BY USACE, NMFS AND ODFW.
9. DESIGNATED EPCM - THE DESIGNATED EROSION AND POLLUTION CONTROL MANAGER (EPCM) WHO WILL ASSURE COMPLIANCE WITH ALL ITEMS IN THIS PLAN IS TED FITZGERALD, PORT DIRECTOR, OR HIS DESIGNEE.
10. EROSION, SEDIMENTATION AND POLLUTION CONTROL BMPS - BEST MANAGEMENT PRACTICES (BMP) TO BE USED, WHEN APPLICABLE, TO PREVENT POLLUTION RELATED TO CONTRACTOR ACTIVITIES LISTED IN THIS SECTION ARE AS FOLLOWS: A) OFFSITE VEHICLE TRACKING AND DUST PREVENTION - MEASURES WILL BE TAKEN TO PREVENT OFFSITE TRACKING OF MATERIALS, INCLUDING SWEEPING PAVEMENTS, COVERING LOADS AND WETTING SOIL TO PREVENT DUST. THERE WILL BE NO AGGREGATE CONSTRUCTION. B) MATERIAL MANAGEMENT AND SPILL PREVENTION - ALL ON SITE FUELS WILL BE DELIVERED, HANDLED, STORED, USED, AND APPLIED SO AS NOT TO BE RELEASED INTO THE WATERS OF THE STATE/US. FUELING WILL BE ACCOMPLISHED AWAY FROM THE WORK AREA A SPILL CLEANUP KIT WILL BE AVAILABLE IF DEEMED BY THE EPCM TO BE REQUIRED. C) WASTE MANAGEMENT - HANDLING, STORAGE AND DISPOSAL OF SOLID WASTE AND/OR HAZARDOUS WASTE WILL BE DISPOSED INTO SUITABLE LANDFILL OFFSITE D) INSPECTION AND MAINTENANCE - DAILY INSPECTION AND MAINTENANCE FOR ALL CONTROLS INCLUDED IN THE POLLUTION CONTROL PLAN AND THE ESCP WILL BE PERFORMED BY THE EPCM OR HIS DESIGNEE. E) EMPLOYEE AND SUBCONTRACTOR TRAINING - EMPLOYEE AND SUBCONTRACTOR EDUCATION AT A MINIMUM WILL INCLUDES INFORMING PERSONNEL OF THE POSTED LOCATIONS OF THE POLLUTION CONTROL PLAN/EROSION AND SEDIMENT CONTROL PLAN/MSDS'S AND IMPORTANT EMERGENCY PHONE NUMBERS. EDUCATION WILL ALSO INCLUDE INFORMING PERSONNEL OF REVISED MATERIAL MANAGEMENT PROCEDURES FOLLOWING A SPILL F) (CRITERIA 15) PRECONSTRUCTION ACTIVITY - BEFORE ALTERATION OF THE ACTION AREA, FLAG THE BOUNDARIES OF CLEARING LIMITS ASSOCIATED WITH SITE ACCESS AND CONSTRUCTION TO MINIMIZE SOIL AND VEGETATION DISTURBANCE, AND ENSURE THAT ALL TEMPORARY EROSION CONTROLS ARE IN PLACE AND FUNCTIONAL. G) (CRITERIA 16) SITE PREPARATION - DURING SITE PREPARATION, CONSERVE NATIVE MATERIALS FOR RESTORATION, INCLUDING LARGE WOOD, VEGETATION, TOPSOIL AND CHANNEL MATERIALS (GRAVEL, COBBLE AND BOULDERS) DISPLACED BY CONSTRUCTION. WHENEVER PRACTICAL, LEAVE NATIVE MATERIALS WHERE THEY ARE FOUND AND IN AREAS TO BE CLEARED, CLIP VEGETATION AT GROUND LEVEL TO RETAIN ROOT MASS AND ENCOURAGE REESTABLISHMENT OF NATIVE VEGETATION. BUILDING AND RELATED STRUCTURES MAY NOT BE CONSTRUCTED INSIDE THE RIPARIAN MANAGEMENT AREA H) (CRITERIA 17) HEAVY EQUIPMENT - HEAVY EQUIPMENT WILL BE SELECTED AND OPERATED AS NECESSARY TO MINIMIZE ADVERSE EFFECTS ON THE ENVIRONMENT; AND ALL VEHICLES AND OTHER HEAVY EQUIPMENT WILL BE USED AS FOLLOWS:
 - (A.) STORED, FUELED AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY WATERBODY, OR IN AN ISOLATED HARD ZONE SUCH AS A PAVED PARKING LOT.
 - (B.) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 50 FEET OF ANY WATERBODY.
 - (C.) STEAM-CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION TO REMAIN FREE OF ALL EXTERNAL OIL, GREASE, MUD, SEEDS, ORGANISMS AND OTHER VISIBLE CONTAMINANTS.
 - (D.) GENERATORS, CRANES AND ANY OTHER STATIONARY EQUIPMENT OPERATED WITHIN 150 FEET OF ANY WATERBODY WILL BE MAINTAINED AND PROTECTED AS NECESSARY TO PREVENT LEAKS AND SPILLS FROM ENTERING THE WATER I) (CRITERIA 18)

IN-WATER WORK PERIOD - ALL WORK WITHIN THE ACTIVE CHANNEL WILL BE COMPLETED IN ACCORDANCE WITH THE OREGON GUIDELINES FOR TIMING OF IN-WATER WORK TO PROTECT FISH AND WILDLIFE RESOURCES (ODFW 2000, OR THE MOST RECENT VERSION).

J) (CRITERIA 21) EMBANKMENT INSTALLATION - <TBC>

K) (CRITERIA 24) SUBGRADE PREPARATION - <TBC>

10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
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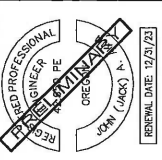
GEOTECHNICAL NOTE

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

1 GENERAL NOTES

REVISIONS	BY:	CD

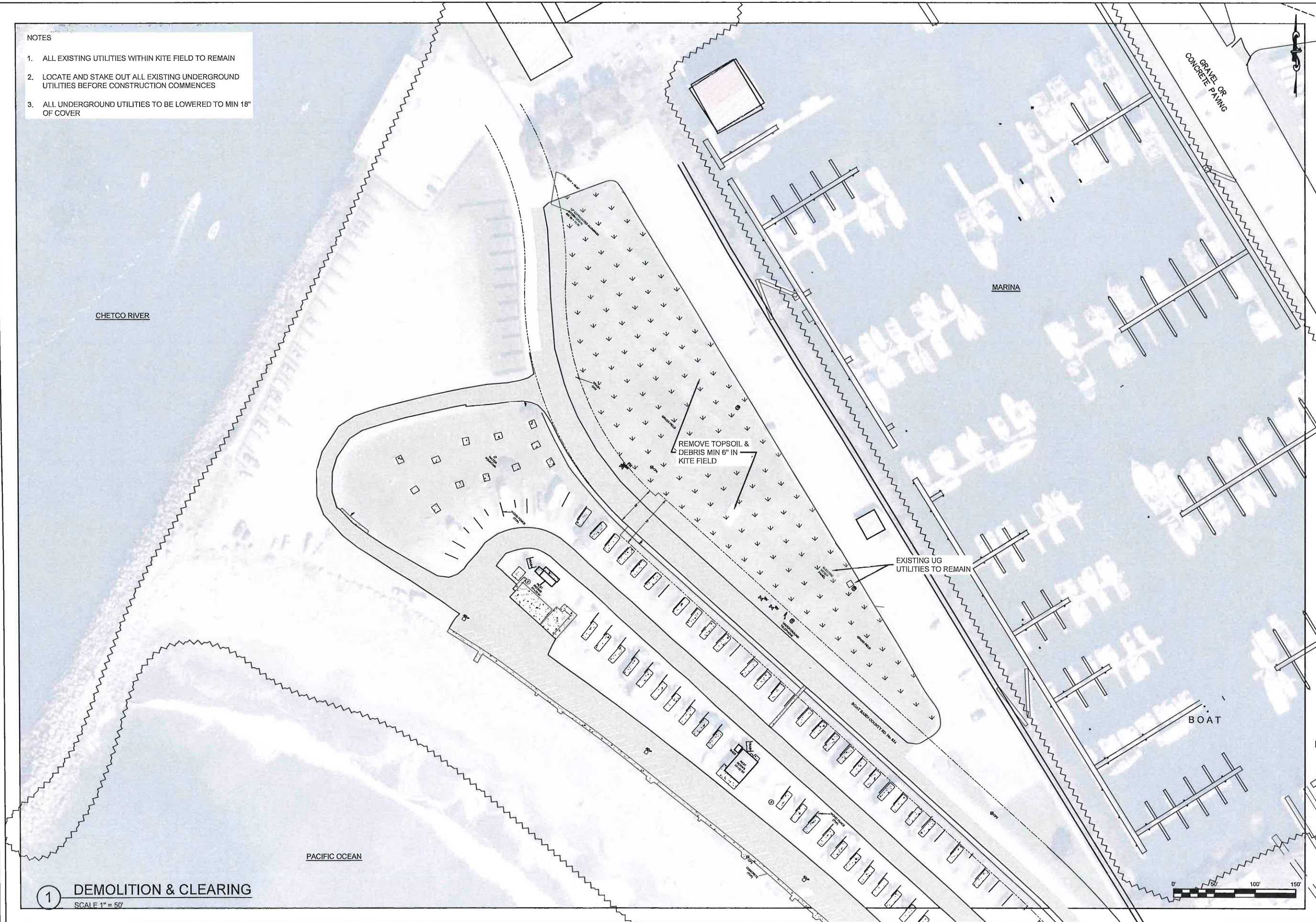
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 Jacksonville Office: 401 Commercial, Jacksonville, OR, 97531
 Medford Office: 1124 1st St., Medford, OR, 97504
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PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 Kite Park RV Resort

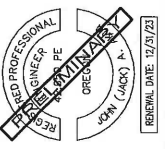
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JOB No:	116
SHEET No:	

- NOTES
1. ALL EXISTING UTILITIES WITHIN KITE FIELD TO REMAIN
 2. LOCATE AND STAKE OUT ALL EXISTING UNDERGROUND UTILITIES BEFORE CONSTRUCTION COMMENCES
 3. ALL UNDERGROUND UTILITIES TO BE LOWERED TO MIN 18" OF COVER



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 emc@emcengineerscientists.com; http://www.emcengineerscientists.com

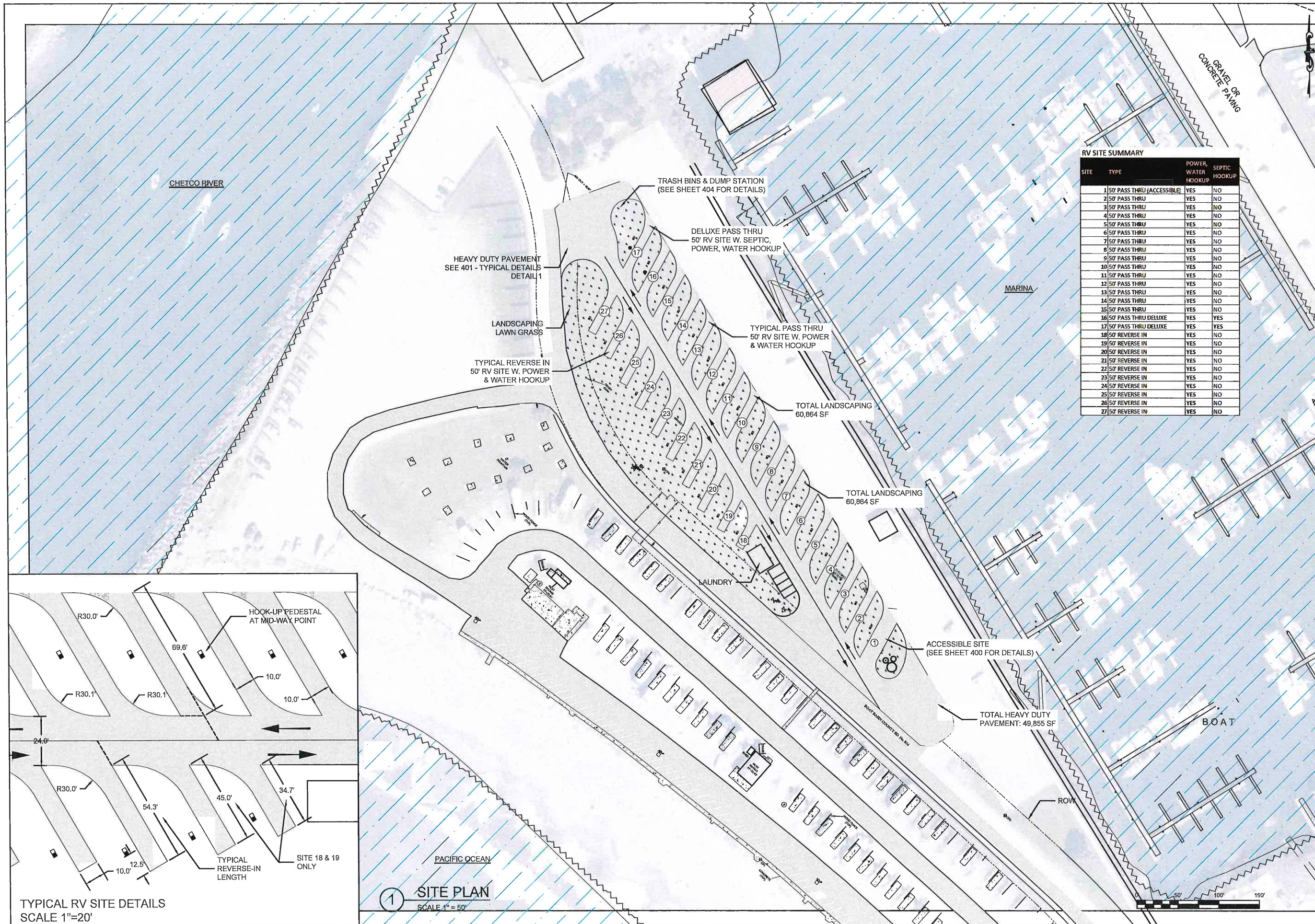


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 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 Kite Park RV Resort

DRAWN BY: CD
 DATE: 22-Mar-2022
 JOB No: 116
 SHEET No:

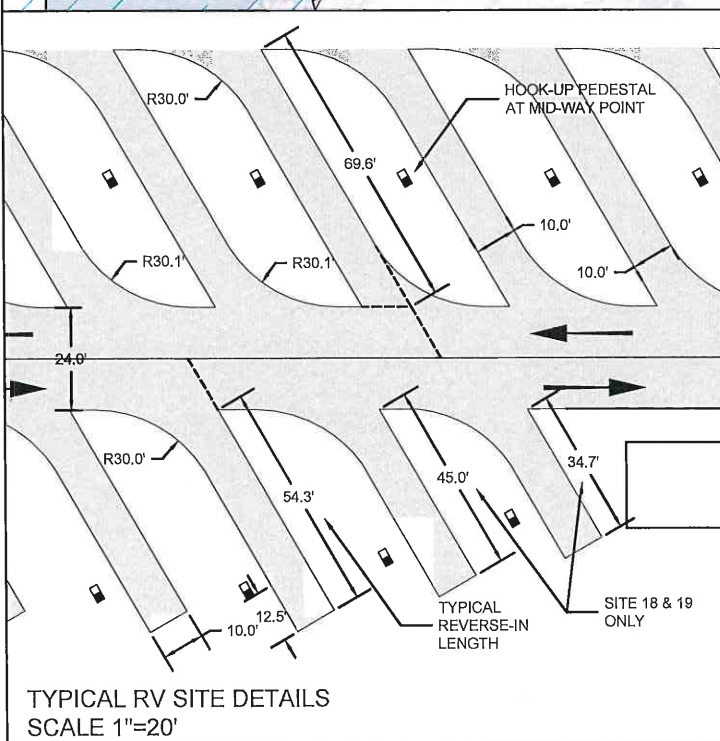
251

1 DEMOLITION & CLEARING
 SCALE 1" = 50'



RV SITE SUMMARY

SITE	TYPE	POWER, WATER HOOKUP	SEPTIC HOOKUP
1	50' PASS THRU (ACCESSIBLE)	YES	NO
2	50' PASS THRU	YES	NO
3	50' PASS THRU	YES	NO
4	50' PASS THRU	YES	NO
5	50' PASS THRU	YES	NO
6	50' PASS THRU	YES	NO
7	50' PASS THRU	YES	NO
8	50' PASS THRU	YES	NO
9	50' PASS THRU	YES	NO
10	50' PASS THRU	YES	NO
11	50' PASS THRU	YES	NO
12	50' PASS THRU	YES	NO
13	50' PASS THRU	YES	NO
14	50' PASS THRU	YES	NO
15	50' PASS THRU	YES	NO
16	50' PASS THRU DELUXE	YES	YES
17	50' PASS THRU DELUXE	YES	YES
18	50' REVERSE IN	YES	NO
19	50' REVERSE IN	YES	NO
20	50' REVERSE IN	YES	NO
21	50' REVERSE IN	YES	NO
22	50' REVERSE IN	YES	NO
23	50' REVERSE IN	YES	NO
24	50' REVERSE IN	YES	NO
25	50' REVERSE IN	YES	NO
26	50' REVERSE IN	YES	NO
27	50' REVERSE IN	YES	NO

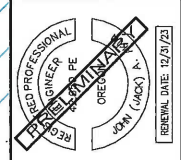
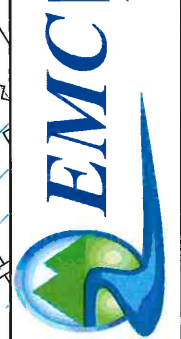


1 SITE PLAN
SCALE 1"=50'

REVISIONS

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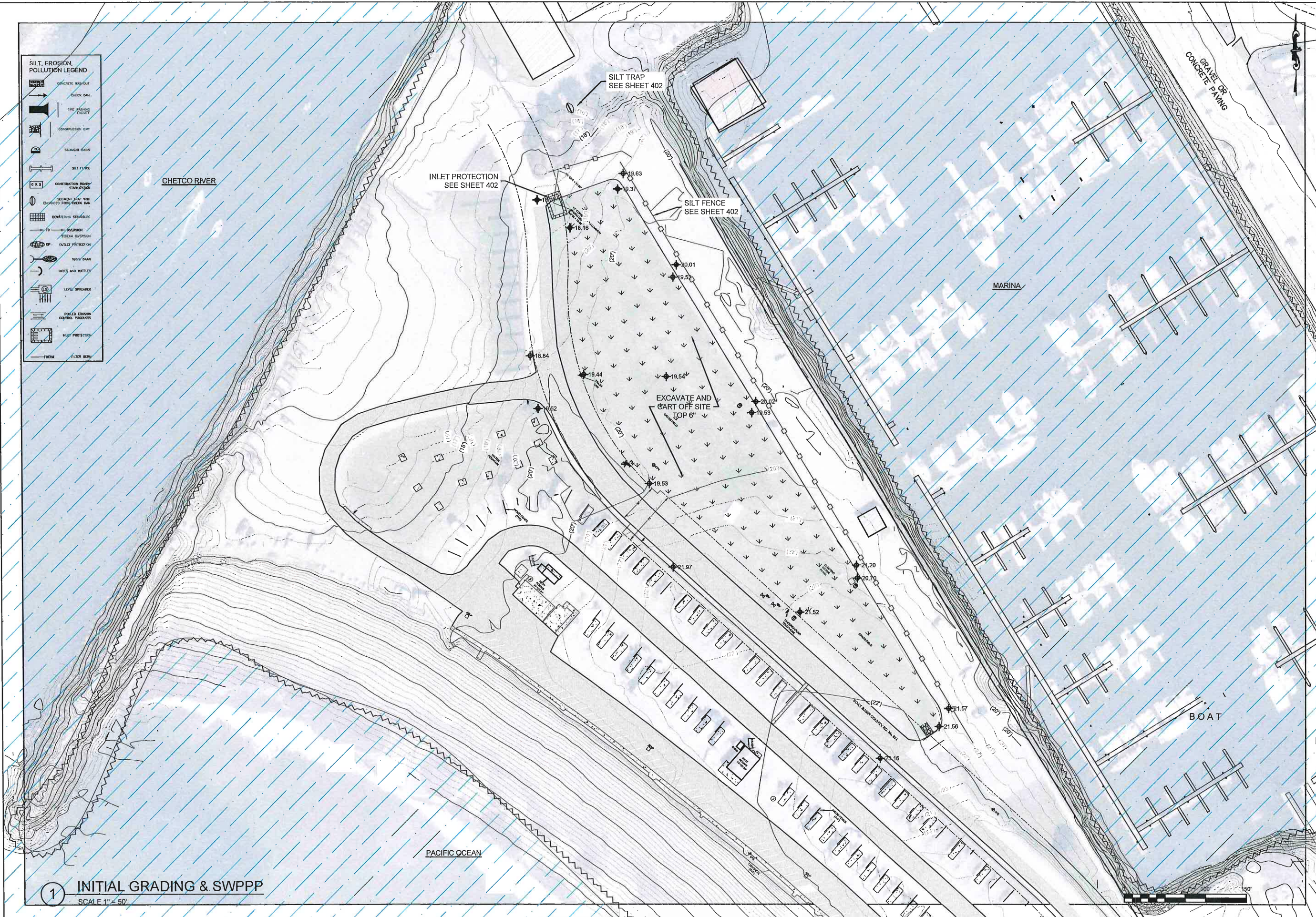
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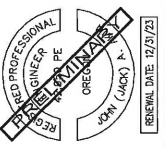
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 JOB No: 116
 SHEET No:

- SILT, EROSION, POLLUTION LEGEND**
- CONCRETE WASHOUT
 - CHECK DAM
 - THE HOOP FACILITY
 - CONSTRUCTION EXIT
 - SEDIMENT BASIN
 - SILT FENCE
 - CONSTRUCTION READY STABILIZATION
 - SEDIMENT TRAP WITH ENHANCED TRENCH-CHECK DAM
 - DETENTION STRUCTURE
 - STREAM DIVERSION
 - OUTLET PROTECTION
 - SLOPE DRAIN
 - TRENCHES AND BATTENS
 - LEVEL SPREADER
 - ROLLED EROSION CONTROL PRODUCTS
 - SILT PROTECTION
 - FILTER BERM



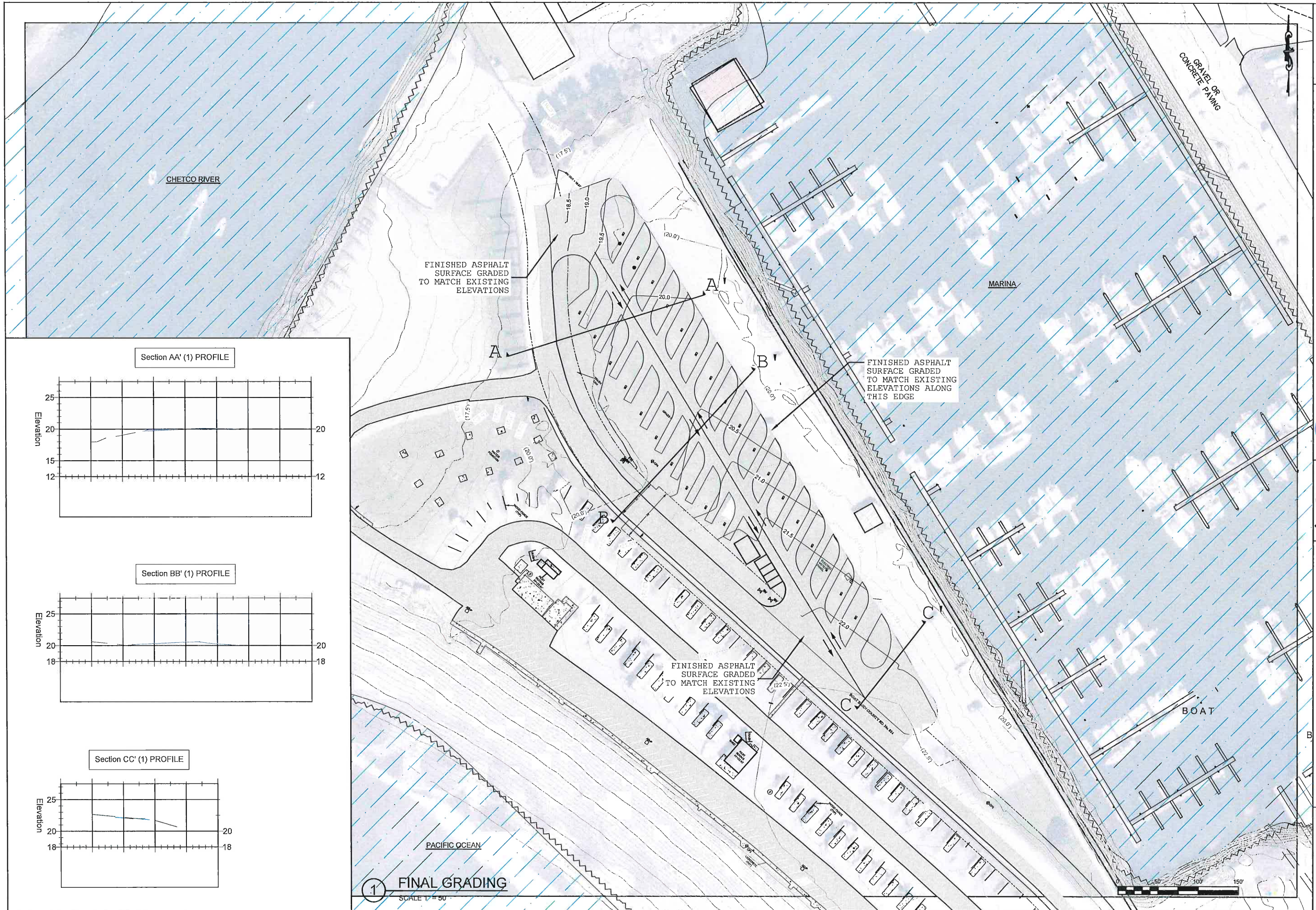
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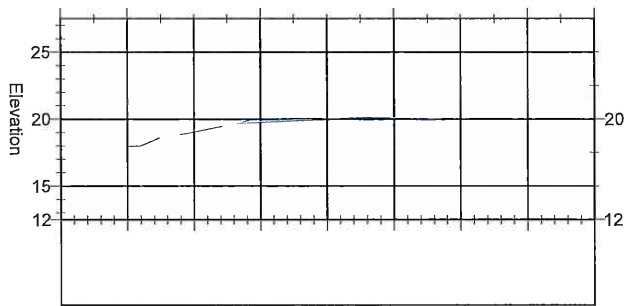


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 Kite Park RV Resort

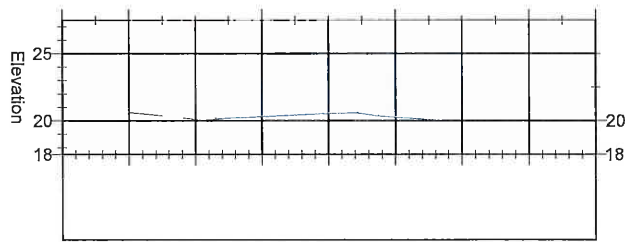
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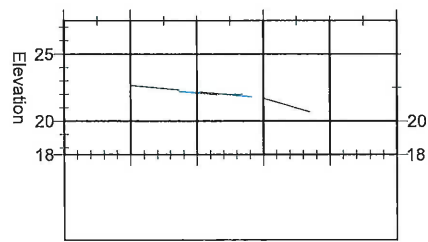
Section AA' (1) PROFILE



Section BB' (1) PROFILE



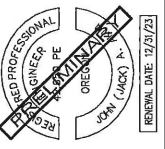
Section CC' (1) PROFILE



1 FINAL GRADING
SCALE 1" = 50'

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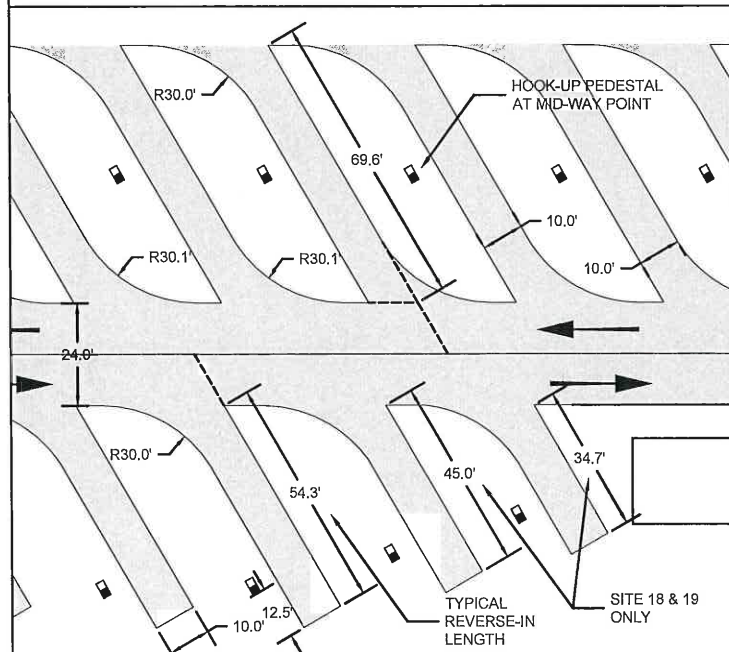


PORT OF BROOKINGS HARBOR
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415
 Kite Park RV Resort

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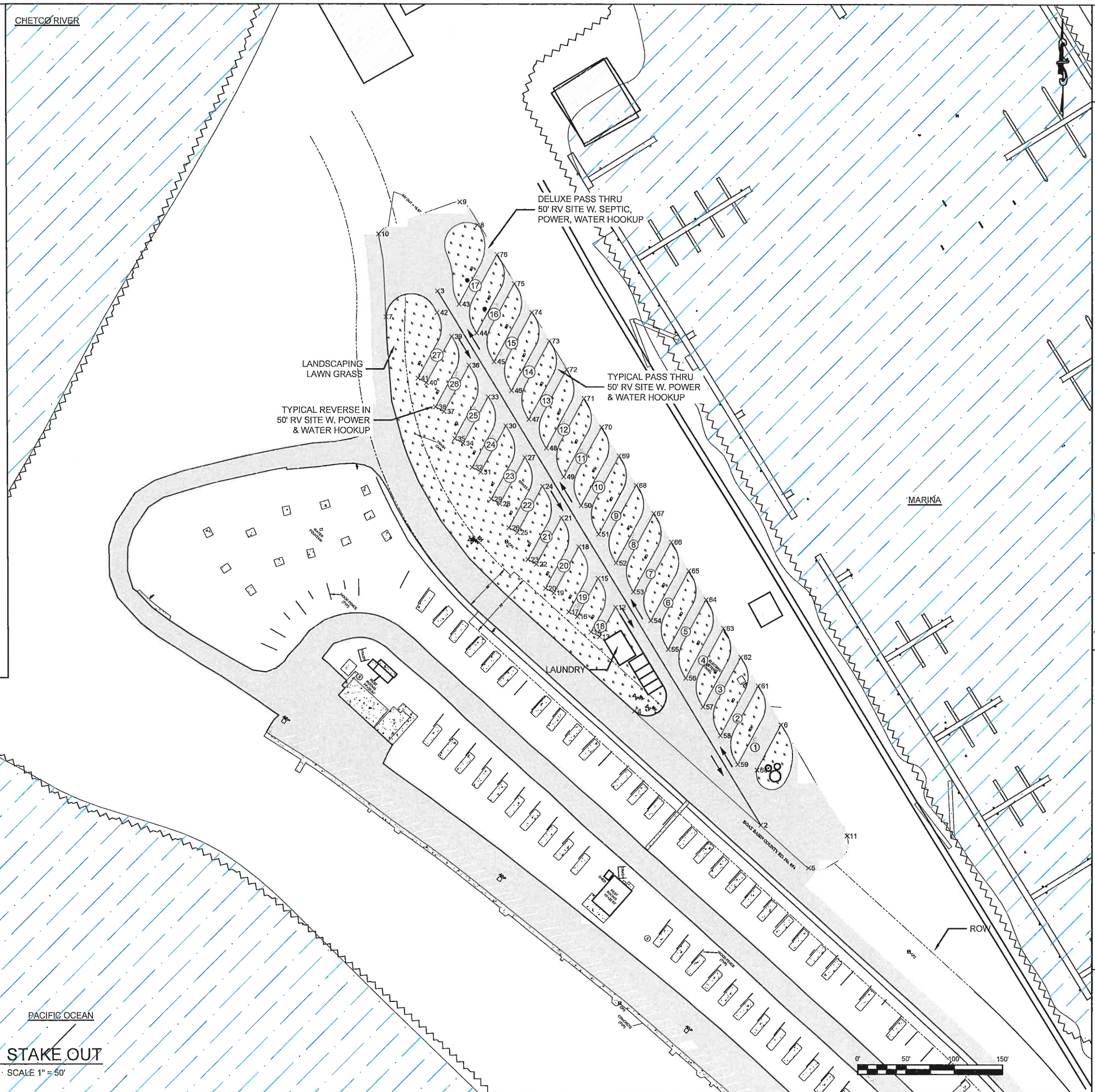
Point #	Elevation	Northing	Easting	Description
2		224906.86	383131.36	STAKE
3		225457.16	382797.11	STAKE
4		225024.01	383000.39	STAKE
5		224862.50	383181.11	STAKE
6		225010.00	383152.49	STAKE
7		225430.39	382743.88	STAKE
8		225525.25	382838.45	STAKE
9		225549.07	382820.37	STAKE
10		225515.88	382736.57	STAKE
11		224895.69	383221.12	STAKE
12		225130.99	382981.12	STAKE
13		225100.60	382964.44	STAKE
14		225105.42	382955.67	STAKE
15		225160.80	382963.02	STAKE
16		225121.33	382941.51	STAKE
17		225126.11	382932.73	STAKE
18		225193.37	382943.24	STAKE
19		225145.69	382917.26	STAKE
20		225150.48	382908.48	STAKE
21		225223.17	382925.15	STAKE
22		225175.34	382899.08	STAKE
23		225180.13	382890.30	STAKE
24		225255.74	382905.37	STAKE
25		225208.07	382879.39	STAKE
26		225212.85	382870.61	STAKE
27		225285.54	382887.28	STAKE
28		225237.71	382861.21	STAKE
29		225242.50	382852.43	STAKE
30		225318.11	382867.50	STAKE
31		225270.44	382841.52	STAKE
32		225275.22	382832.74	STAKE
33		225347.92	382848.40	STAKE
34		225300.09	382823.34	STAKE
35		225304.87	382814.56	STAKE
36		225380.49	382829.63	STAKE
37		225332.81	382803.65	STAKE
38		225337.60	382794.87	STAKE
39		225410.29	382811.53	STAKE
40		225362.46	382785.47	STAKE
41		225367.24	382776.69	STAKE

Point #	Elevation	Northing	Easting	Description
42		225434.91	382796.58	STAKE
43		225443.54	382819.44	STAKE
44		225413.78	382837.50	STAKE
45		225384.13	382855.50	STAKE
46		225354.48	382873.51	STAKE
47		225324.84	382891.51	STAKE
48		225295.19	382909.51	STAKE
49		225265.54	382927.51	STAKE
50		225235.89	382945.51	STAKE
51		225206.24	382963.51	STAKE
52		225176.59	382981.51	STAKE
53		225146.95	382999.51	STAKE
54		225117.30	383017.51	STAKE
55		225087.65	383035.51	STAKE
56		225058.00	383053.51	STAKE
57		225028.35	383071.51	STAKE
58		224998.71	383089.51	STAKE
59		224969.06	383107.51	STAKE
60		224939.38	383125.52	STAKE
61		225050.03	383128.74	STAKE
62		225079.68	383110.74	STAKE
63		225109.32	383092.74	STAKE
64		225138.97	383074.74	STAKE
65		225168.62	383056.74	STAKE
66		225198.27	383038.74	STAKE
67		225227.92	383020.74	STAKE
68		225256.83	383002.34	STAKE
69		225287.21	382984.74	STAKE
70		225316.86	382966.74	STAKE
71		225346.51	382948.74	STAKE
72		225376.16	382930.74	STAKE
73		225405.56	382912.60	STAKE
74		225435.03	382894.51	STAKE
75		225464.66	382876.49	STAKE
76		225494.75	382858.73	STAKE



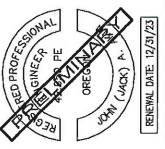
TYPICAL RV SITE DETAILS
SCALE 1"=20'

1 STAKE OUT
SCALE 1"=50'



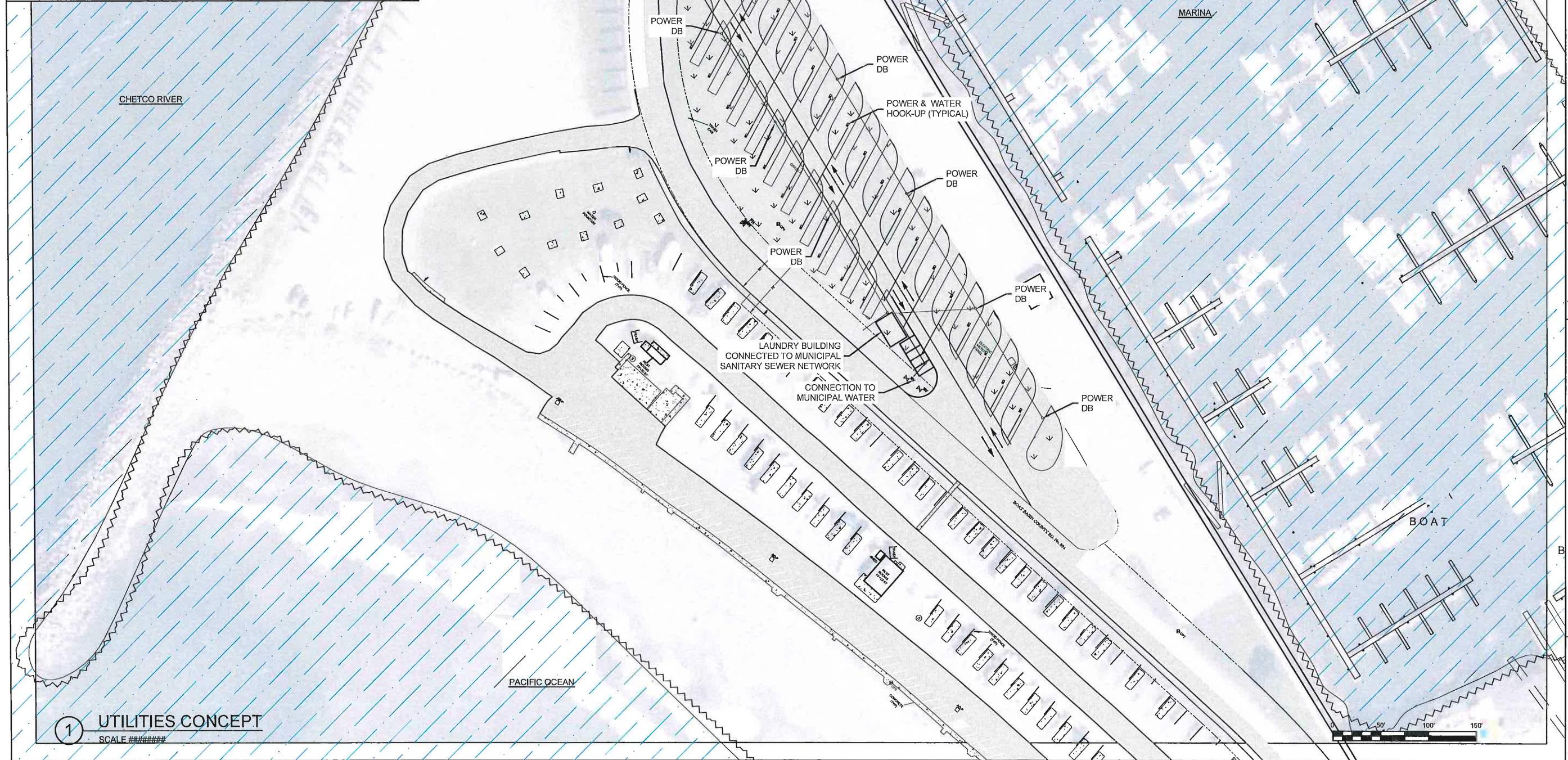
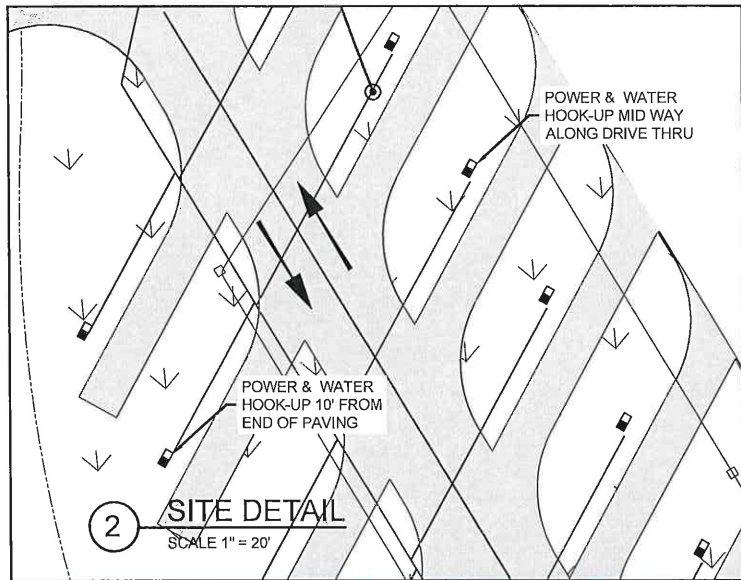
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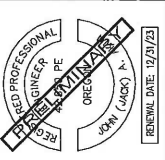
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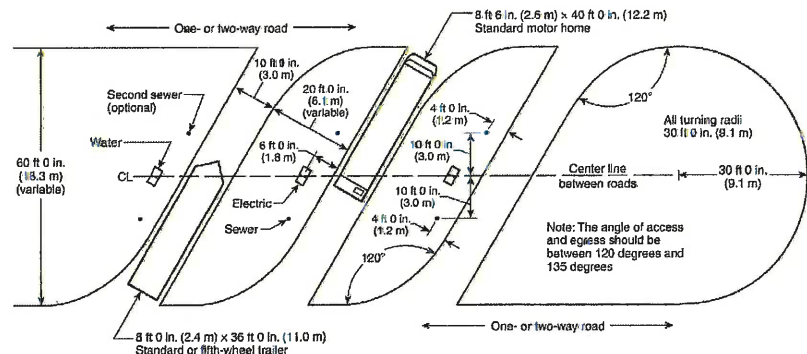


FIGURE B.1(a) Optional Arrangement for a Recreational Vehicle Park or Campground Standard Pull-Through Site Showing Water, Sewer, and Electrical Utility Connection Points.

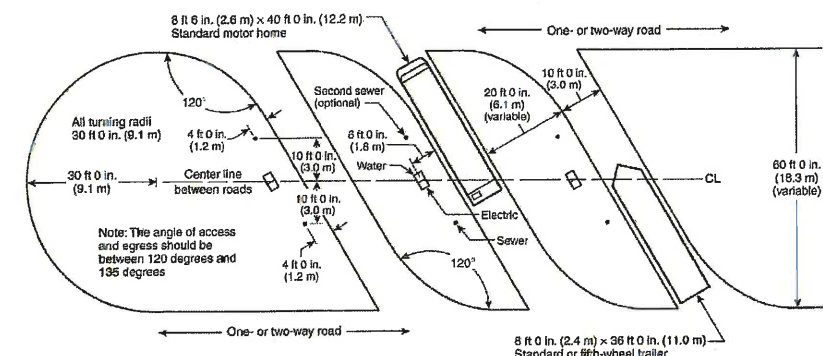


FIGURE B.1(b) Optional Arrangement for a Recreational Vehicle Park or Campground Reverse Pull-Through Site Showing Water, Sewer, and Electrical Utility Connection Points.

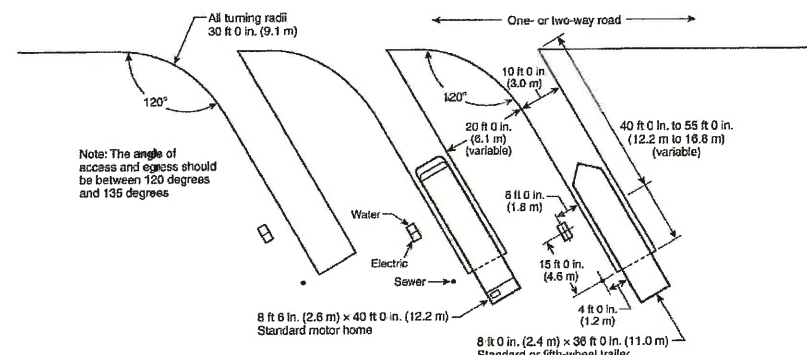
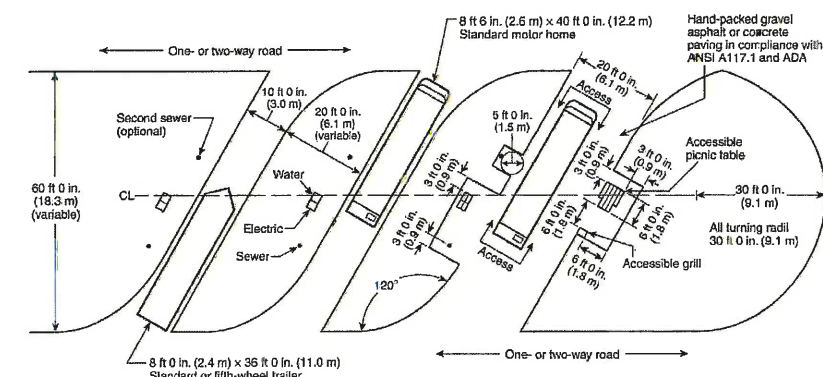
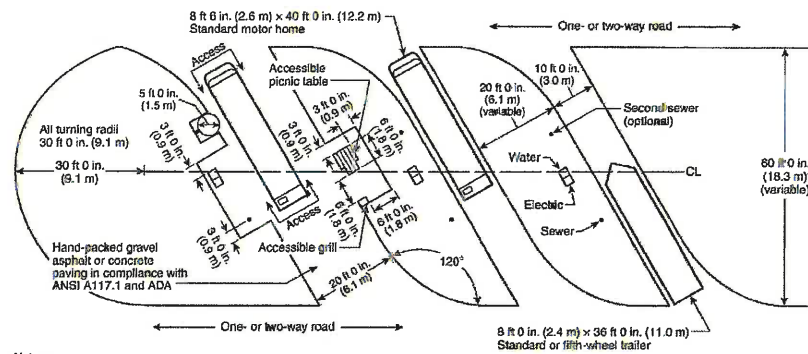


FIGURE B.1(c) Optional Arrangement in a Recreational Vehicle Park or Campground Reverse Pull-Through Site for a Recreational Vehicle or Park Trailer Showing Water, Sewer, and Electrical Utility Connection Points.



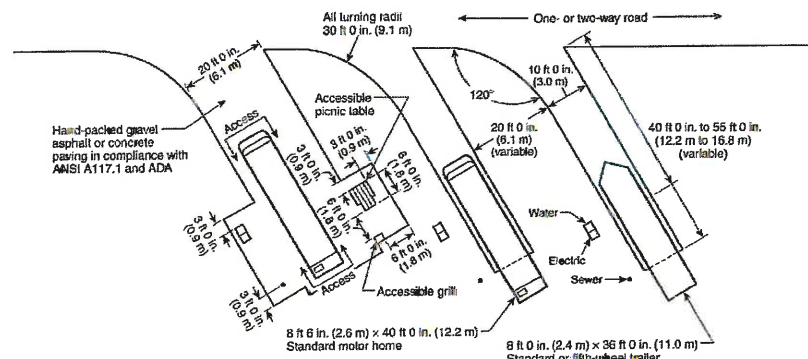
Notes:
1. The utilities are located in the same place as they are in the standard pull-through site.
2. The angle of access and egress should be between 120 degrees and 135 degrees.

FIGURE B.1(d) Optional Arrangement for an Accessible Recreational Vehicle Park or Campground Standard Pull-Through Site.



Notes:
1. The utilities are located in the same place as they are in the reverse pull-through site.
2. The angle of access and egress should be between 120 degrees and 135 degrees.

FIGURE B.1(e) Optional Arrangement for an Accessible Recreational Vehicle Park or Campground Reverse Pull-Through Site.



Notes:
1. The utilities are located in the same place as they are in the reverse pull-through/park trailer site.
2. The angle of access and egress should be between 120 degrees and 135 degrees.

FIGURE B.1(f) Optional Arrangement for an Accessible Recreational Vehicle Park or Campground Reverse Pull-Through Site for a Recreational Vehicle Park Trailer.

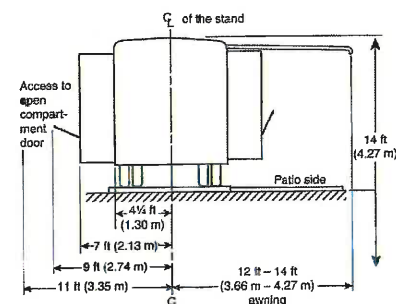


FIGURE B.1(g) End View of Arrangement for Recreational Vehicle Park Trailer.

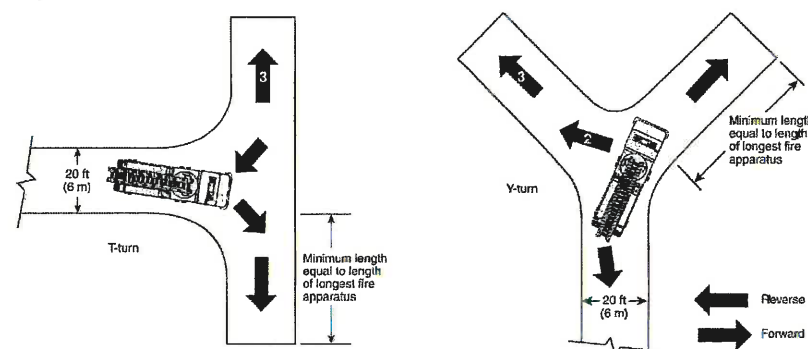
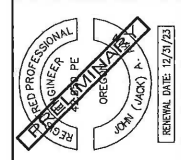


FIGURE A.5.1.2.5 Dead-End Turning Arrangement - T-Turn and Y-Turn.

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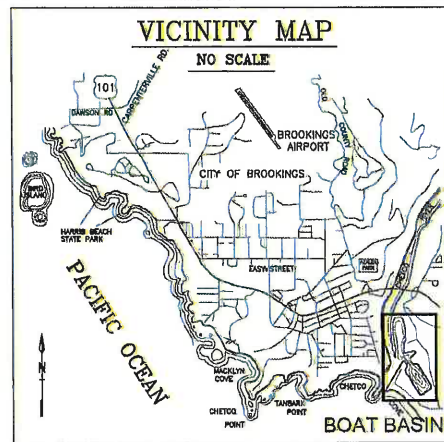
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PORT OF BROOKINGS HARBOR
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 Kite Park RV Resort

DRAWN BY: CD
 DATE: 22-Mar-2022
 JOB No: 116
 SHEET No:

400



PORT OF BROOKINGS-HARBOR
2021 CIVIL IMPROVEMENTS
BASIN DREDGING

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PROJECT DESCRIPTION

TITLE: BASIN DREDGING
REFERENCE: PB115
LOCATION: NORTH AND SOUTH BASIN
TAX LOT(S): 298,299,498,499,500,1100,1200,1700,1799,1798,1800,3400,3100,3300

DRAWING REGISTER

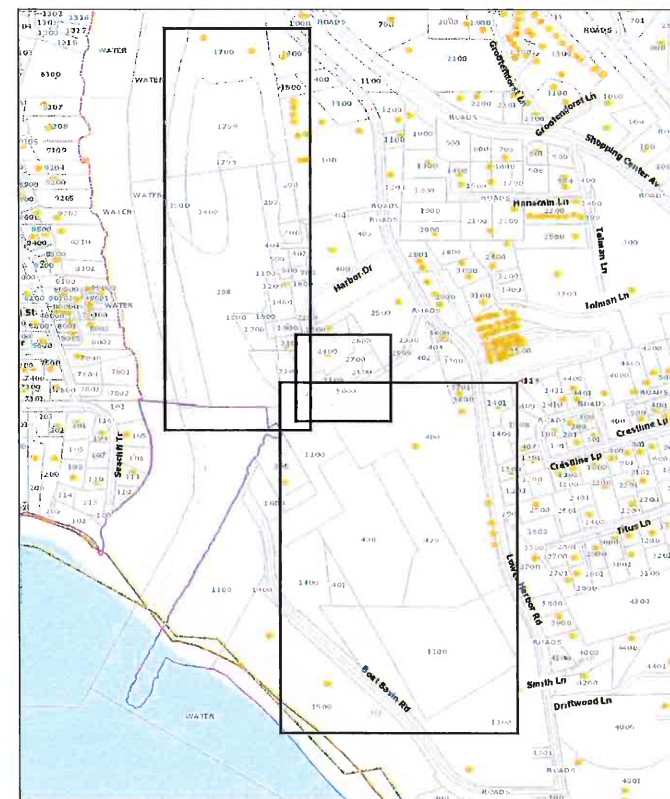
PB115-C100 Cover Sheet
PB115-C101 Existing Condition
PB115-C102 Planned Dredging
PB115-C103 Isopach



PROJECT OVERVIEW
SCALE 1" : 500'

Name	Type	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
DREDGE 4432	full	51826.48	9081.75	887.80	8193.95<Cut>
DREDGE 4452	full	349993.68	69380.03	0.00	69380.03<Cut>
DREDGE ICEHOUSE	full	35086.03	3862.12	2.58	3859.53<Cut>

VOLUME REPORT



PORT OF BROOKINGS HARBOR
MAP OF TAX LOTS

PRELIM GRADING NOTES

- DEQ 1200-C PERMIT IS REQUIRED.
- UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
- PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
- MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
- UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
- ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND

- 5 ELEVATION
- SUBGRADE MINOR CONTOUR
- SUBGRADE MAJOR CONTOUR
- PARCEL
- GEOTEXTILE
- CONCRETE PAD
- GRASS
- JETTY
- SLIP WAY
- PAVED ROAD



ENGINEER:

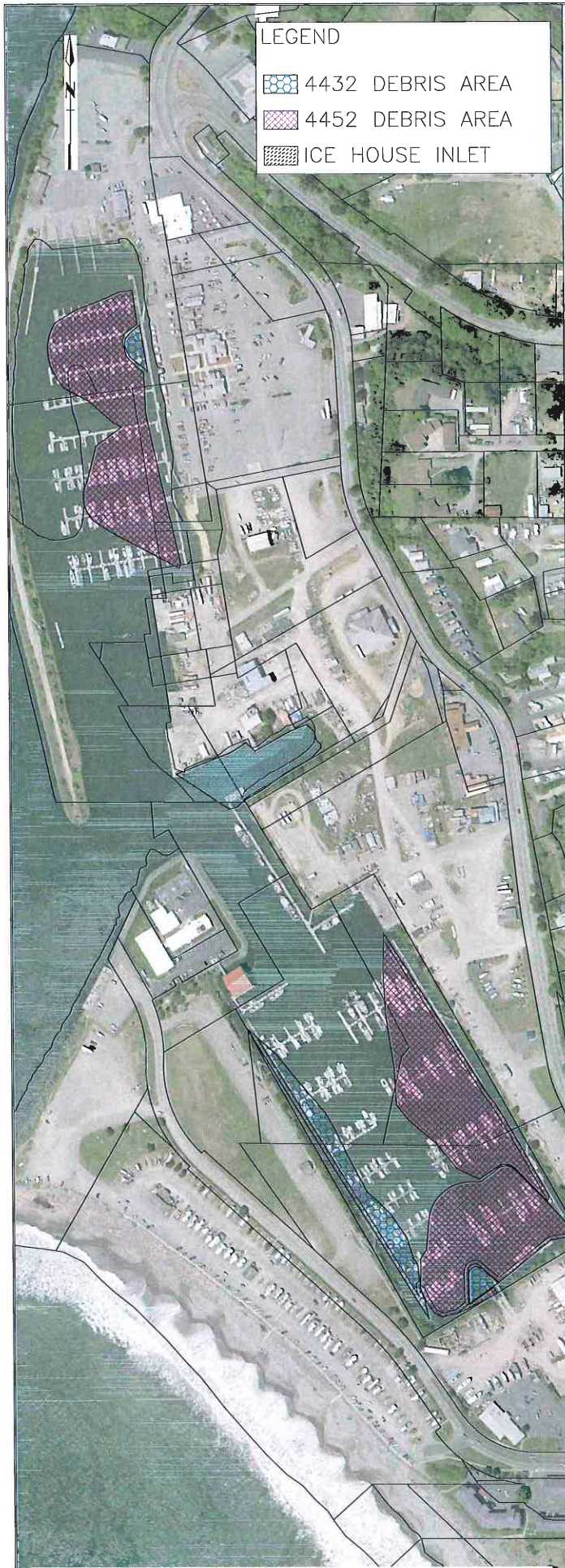


NO.	REVISION	DATE	BY



PREPARED FOR: (LOT 2900, MAP '360522DB')
PORT OF BROOKINGS
16330 Lower Harbor Rd, Brookings, OR 97415

Date: 01/06/2021
Drawn By: INFRA DRAFT
Sheet No.: C-100
File No.: PB115



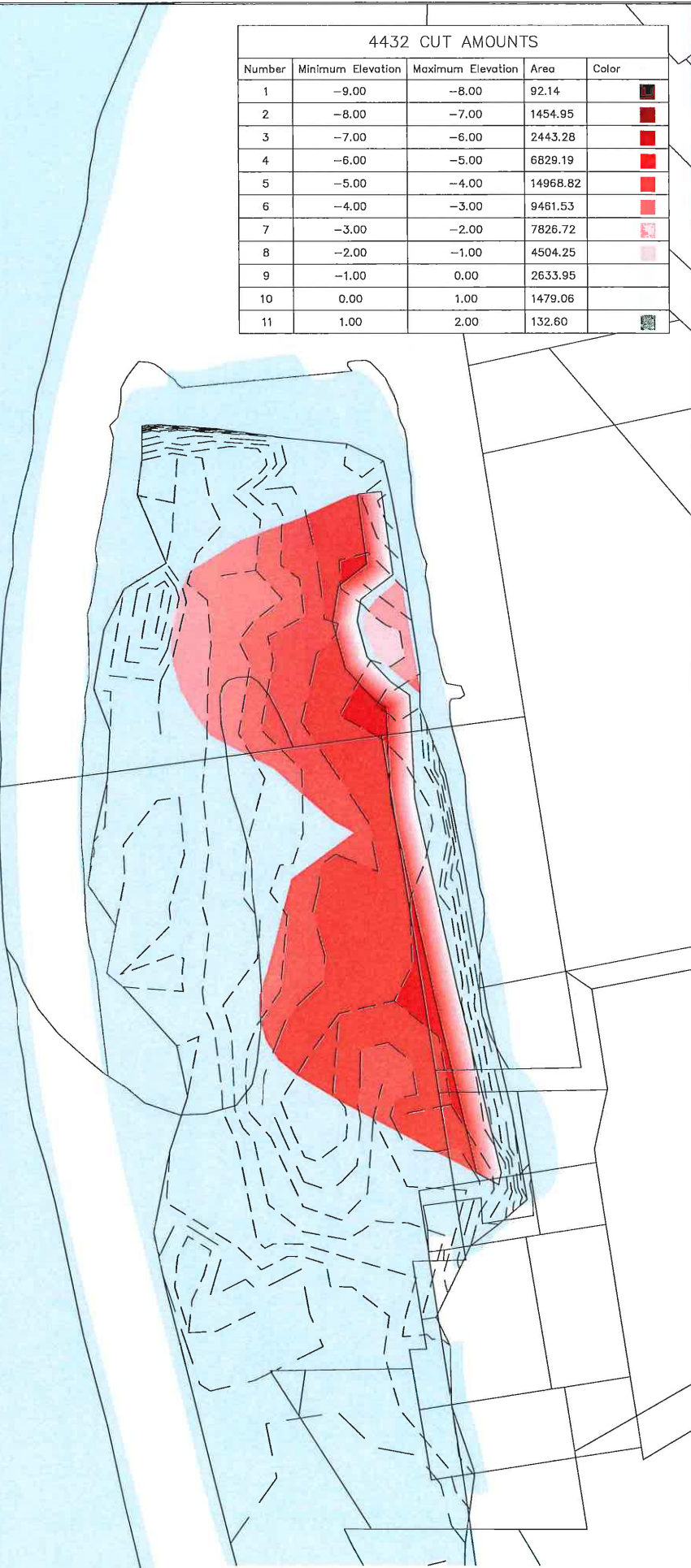
LEGEND

	4432 DEBRIS AREA
	4452 DEBRIS AREA
	ICE HOUSE INLET

PLANNED DREDGING
SCALE 1":150'

4432 CUT AMOUNTS

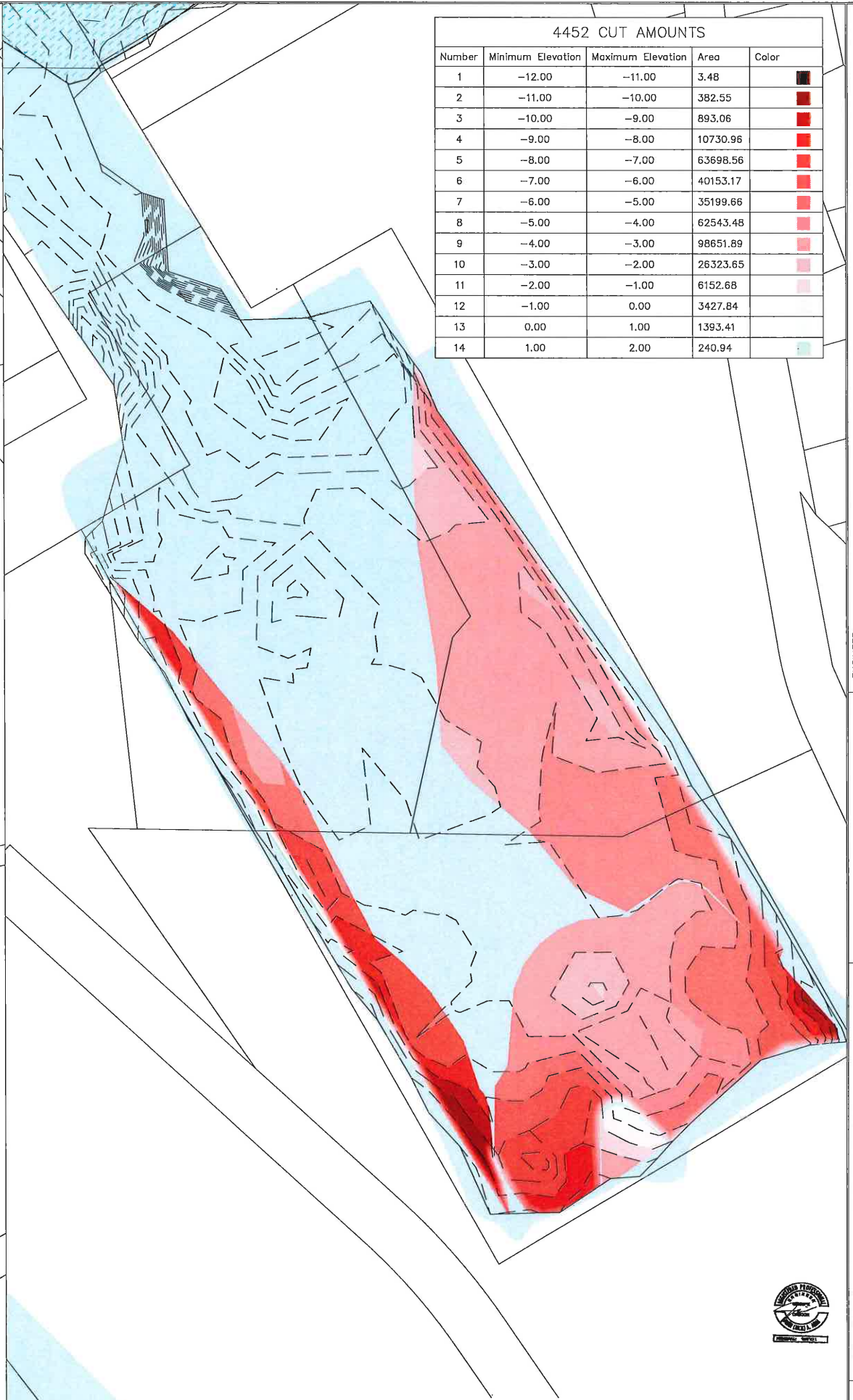
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-9.00	-8.00	92.14	Dark Red
2	-8.00	-7.00	1454.95	Red
3	-7.00	-6.00	2443.28	Light Red
4	-6.00	-5.00	6829.19	Very Light Red
5	-5.00	-4.00	14968.82	Lightest Red
6	-4.00	-3.00	9461.53	Very Lightest Red
7	-3.00	-2.00	7826.72	Lightestest Red
8	-2.00	-1.00	4504.25	Very Lightestest Red
9	-1.00	0.00	2633.95	Lightestestest Red
10	0.00	1.00	1479.06	Very Lightestestest Red
11	1.00	2.00	132.60	Lightestestestest Red



NORTH BASIN ISOPACH
SCALE 1":80'

4452 CUT AMOUNTS

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-12.00	-11.00	3.48	Dark Red
2	-11.00	-10.00	382.55	Red
3	-10.00	-9.00	893.06	Light Red
4	-9.00	-8.00	10730.96	Very Light Red
5	-8.00	-7.00	63698.56	Lightest Red
6	-7.00	-6.00	40153.17	Very Lightest Red
7	-6.00	-5.00	35199.66	Lightestest Red
8	-5.00	-4.00	62543.48	Very Lightestest Red
9	-4.00	-3.00	98651.89	Lightestestest Red
10	-3.00	-2.00	26323.65	Very Lightestestest Red
11	-2.00	-1.00	6152.68	Lightestestestest Red
12	-1.00	0.00	3427.84	Very Lightestestestest Red
13	0.00	1.00	1393.41	Lightestestestestest Red
14	1.00	2.00	240.94	Very Lightestestestestest Red



SOUTH BASIN ISOPACH
SCALE 1":80'

ENGINEER:
EMC
Environmental Management Corporation
16350 Lower Harbor Rd., Brookings, OR 97415
503.338.1111
www.emcinc.com

NO.	DATE	REVISION	BY

PREPARED FOR:
PORT OF BROOKINGS
16350 Lower Harbor Rd., Brookings, OR 97415

Date: 12/28/2020
Drawn By: INFRADRAFT
Sheet No.: C103
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