

PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS  
**SEDIMENT STOCKPILE  
LOCATION #2**

**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**

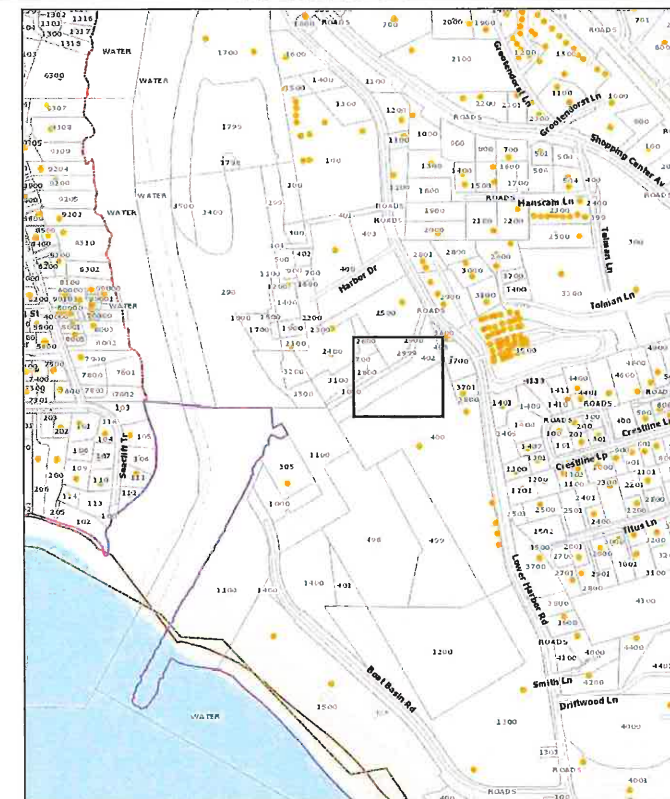
TITLE: SEDIMENT STOCKPILE  
REFERENCE: PB114  
LOCATION: HARBOR ST  
TAX LOT(S): 2500

**DRAWING REGISTER**

PB114-C100 COVER SHEET  
PB114-C101 GRADING NOTES  
PB114-C102 EXISTING CONDITIONS  
PB114-C103 PROPOSED SEDIMENT STOCKPILE



PROJECT OVERVIEW  
SCALE 1":100'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**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.

**LEGEND**

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



ENGINEER: **EMC** ENGINEERS-SCIENTISTS, LLC  
 Grant, Pava, Jacksonville, Medford, OR  
 16930 Lower Harbor Rd., Brookings, OR 97415  
 www.emc-engineers.com

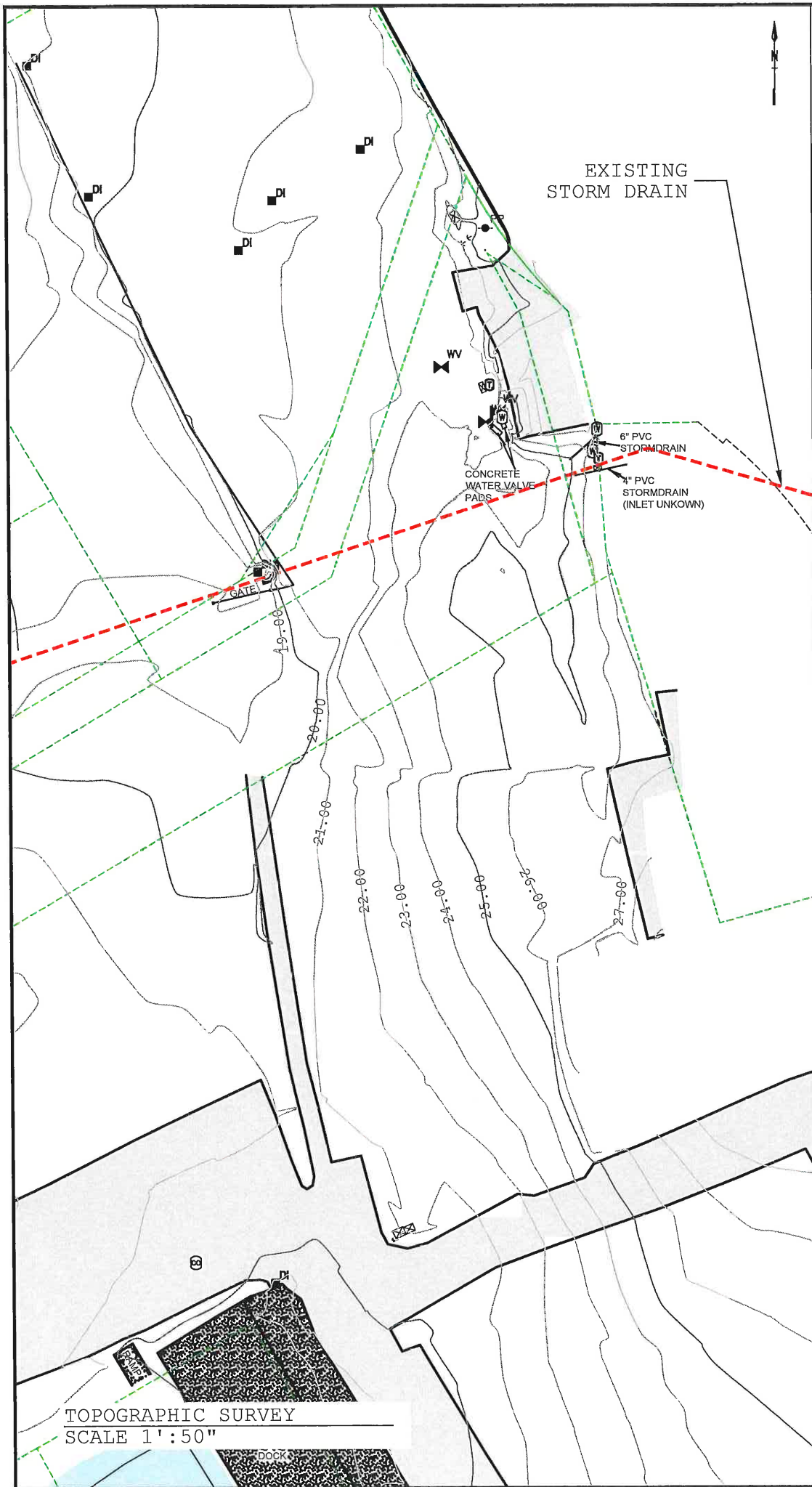
NO.	DATE	BY	REVISION



PREPARED FOR:  
**PORT OF BROOKINGS**  
16930 Lower Harbor Rd., Brookings, OR 97415  
(LOT 2500, MAP '360522DB')

Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C-100  
 File No.: PB114





TOPOGRAPHIC SURVEY  
SCALE 1" : 50"

**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 SHELL 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 OR 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 ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
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.

ENGINEER:



NO.	DATE	REVISION	BY

PREPARED FOR: (LOT 2900, MAP '360522DB')

**PORT OF BROOKINGS**

16330 Lower Harbor Rd, Brookings, OR 97415



Date 04/04/2021

Drawn By INFRADRAFT

Sheet No.

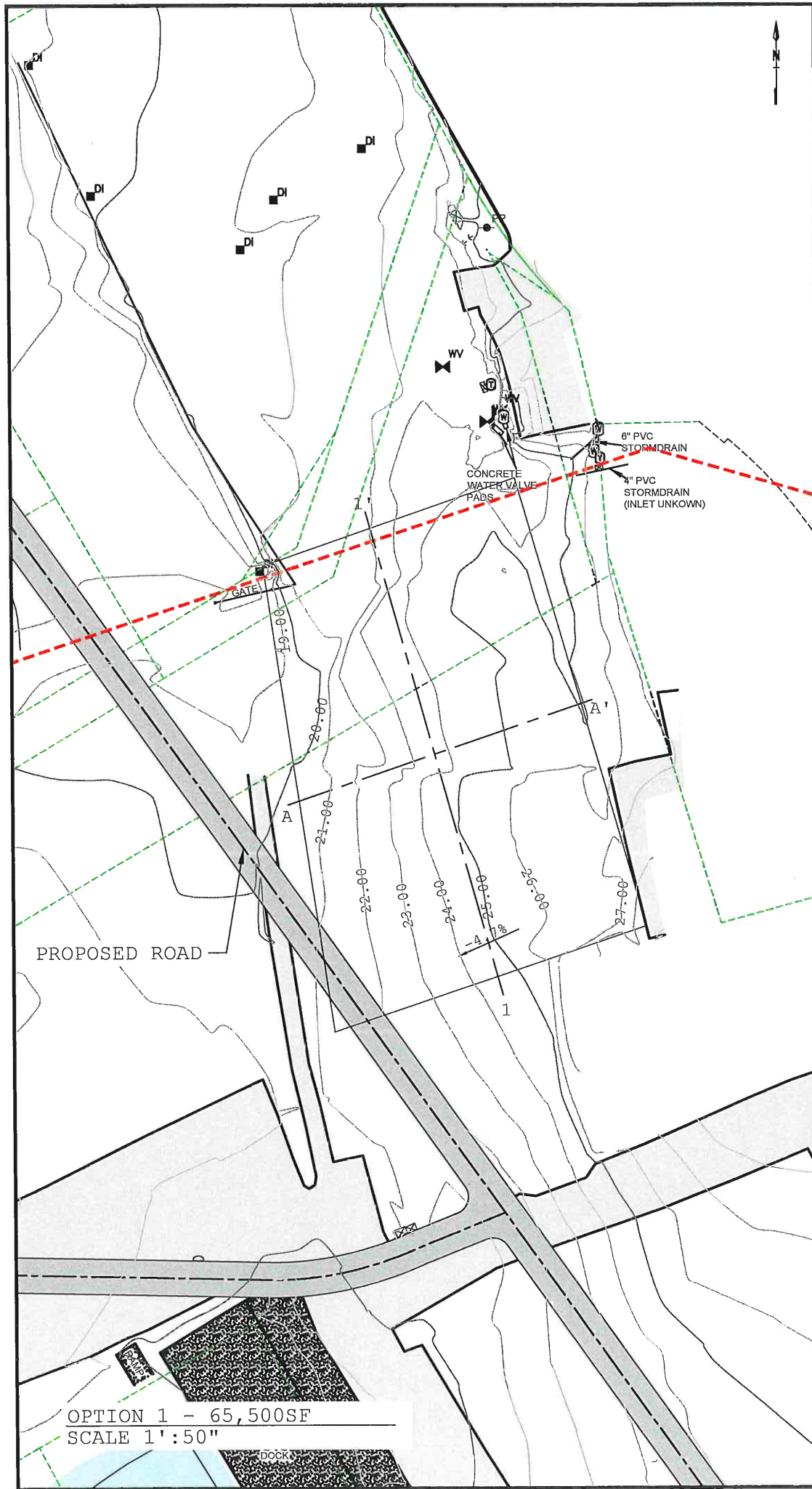
C-101

File No.

PB114



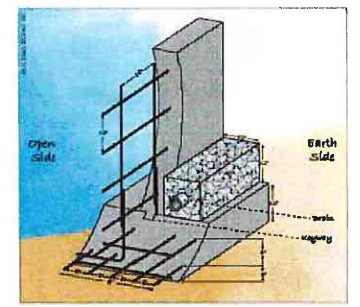
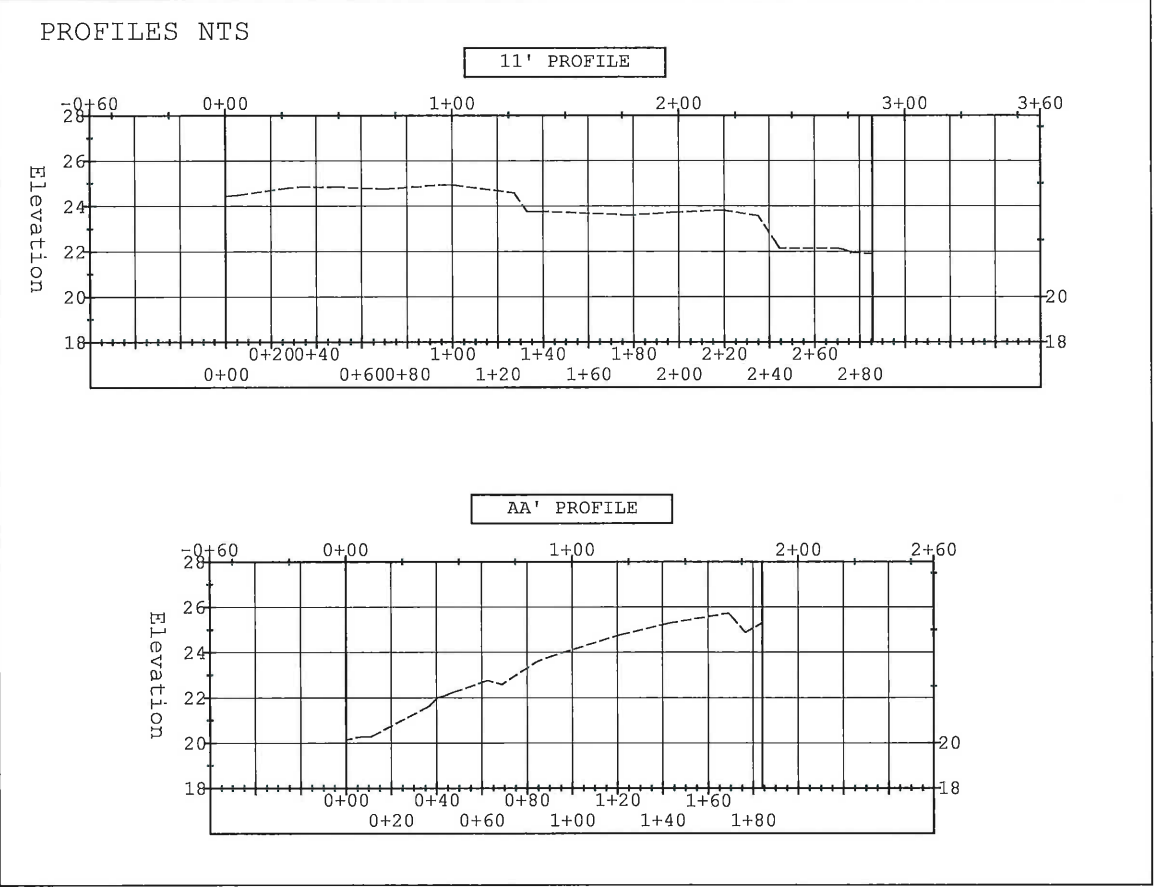




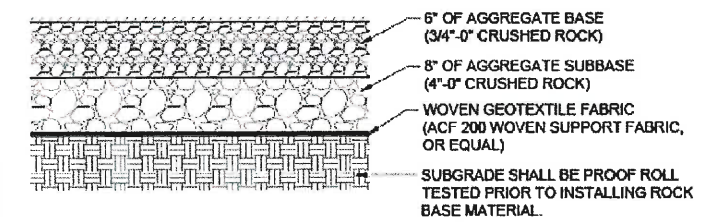
**NEW SEDIMENT STORAGE AREA**

AREA: 45,185SF

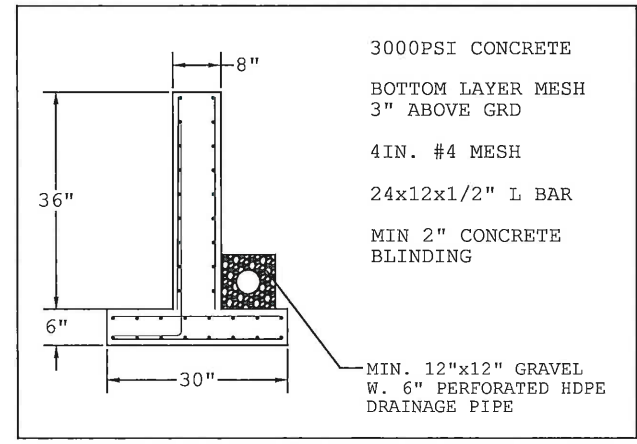
APPROX. STORAGE CAPACITY  
7,350 cu.yards



RETAINING WALL  
DETAIL NTS



SUB-GRADE  
PREPARATION DETAIL



REINFORCED CONCRETE  
RETAINING WALL DETAIL



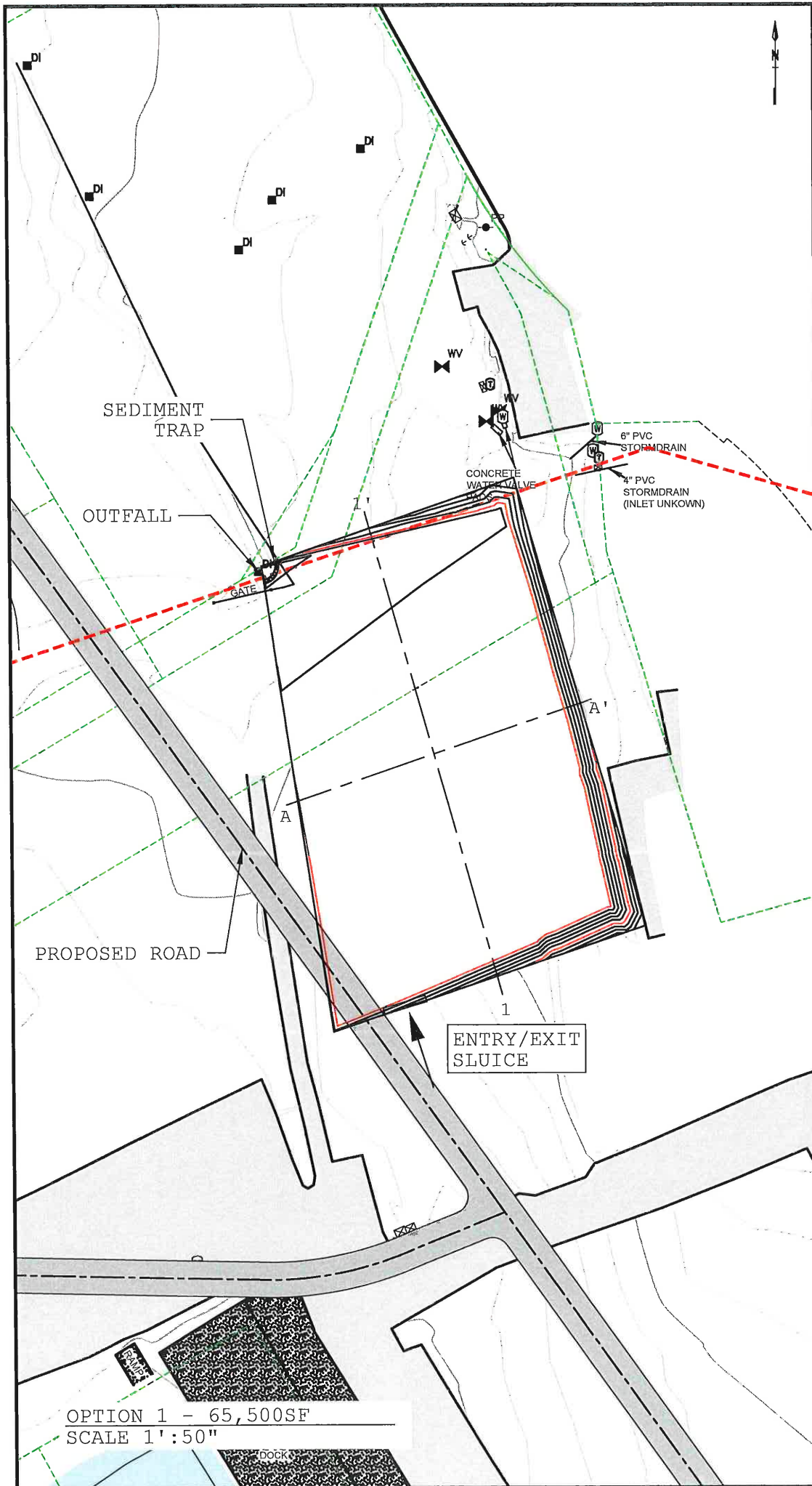
OPTION 1 - 65,500SF  
SCALE 1' : 50"

ENGINEER: **EMC**  
 ENGINEERS & ARCHITECTS  
 16330 Lower Harbor Rd, Brookings, OR 97415  
 Phone: (541) 338-2222  
 Fax: (541) 338-2223  
 Email: info@emc-engineers.com

NO.	DATE	REVISION	BY








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

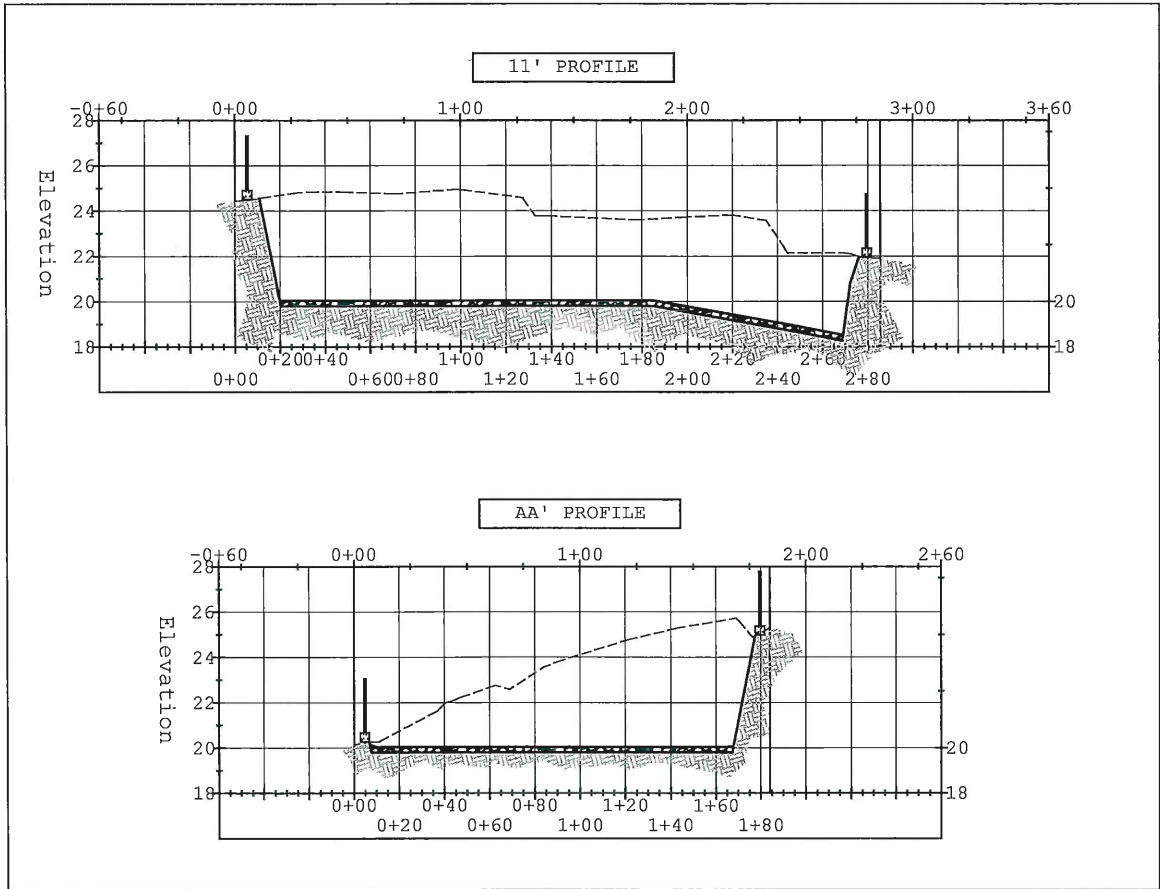
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File No.	PB114



**NEW SEDIMENT STORAGE AREA**

**LEGEND**

-  6" AGGREGATE BASE
-  3/4"-0" CRUSHED ROCK
-  8" AGGREGATE SUBBASE
-  4" 0" CRUSHED ROCK
-  WOVEN GEOTEXTILE FABRIC ACF200
-  PROOF ROLLED SUBGRADE
-  ENGINEERED FILL



SEDIMENT STORAGE GRADING  
NTS

OPTION 1 - 65,500SF  
SCALE 1' : 50"

ENGINEER:  
**EMC**  
Engineers-Scientists, LLC

NO.	DATE	REVISION

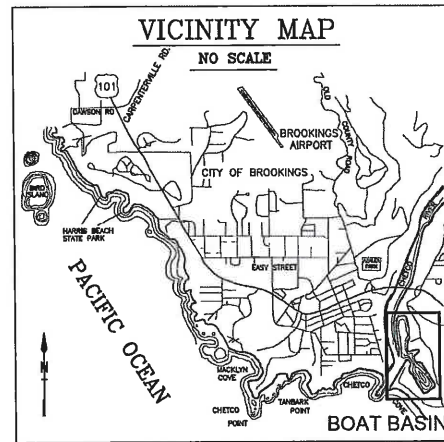


PREPARED FOR: (LOT 2900, MAP '360522DB')  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415



Date	04/04/2021
Drawn By	INFRADRAFT
Sheet No.	C103
File No.	PB114





# 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

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### UTILITY STATEMENT

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### 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

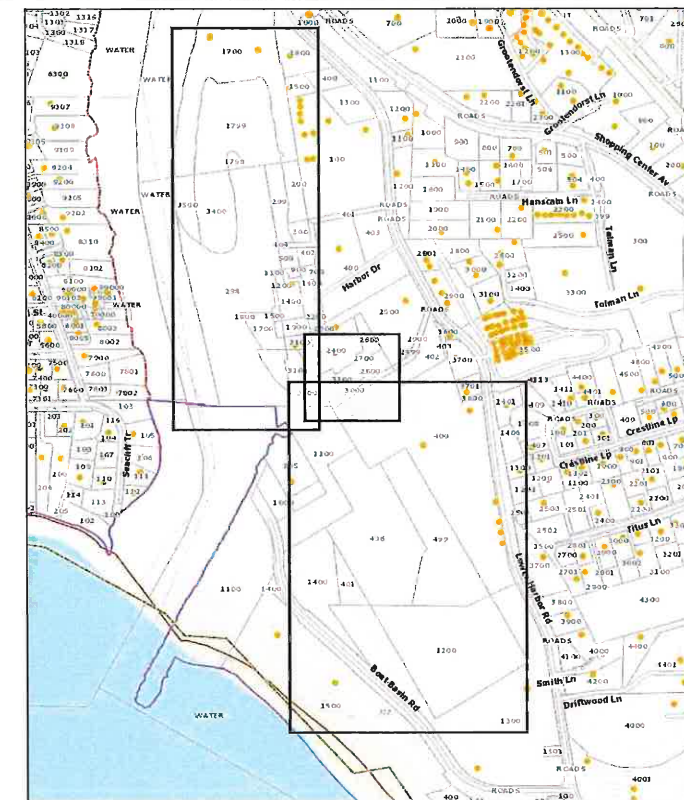
PB115-C100 Cover Sheet  
PB115-C101 Existing Condition  
PB115-C102 Planned Dredging  
PB115-C103 Isopach



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

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6. 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:



Grant Pass • Jacksonville • Medford, OR  
1000 NE Oregon Street, Suite 200  
Medford, OR 97504  
Phone: 541.754.1234  
Fax: 541.754.1235  
www.emc-engineers.com

NO.	DATE	BY	REVISION

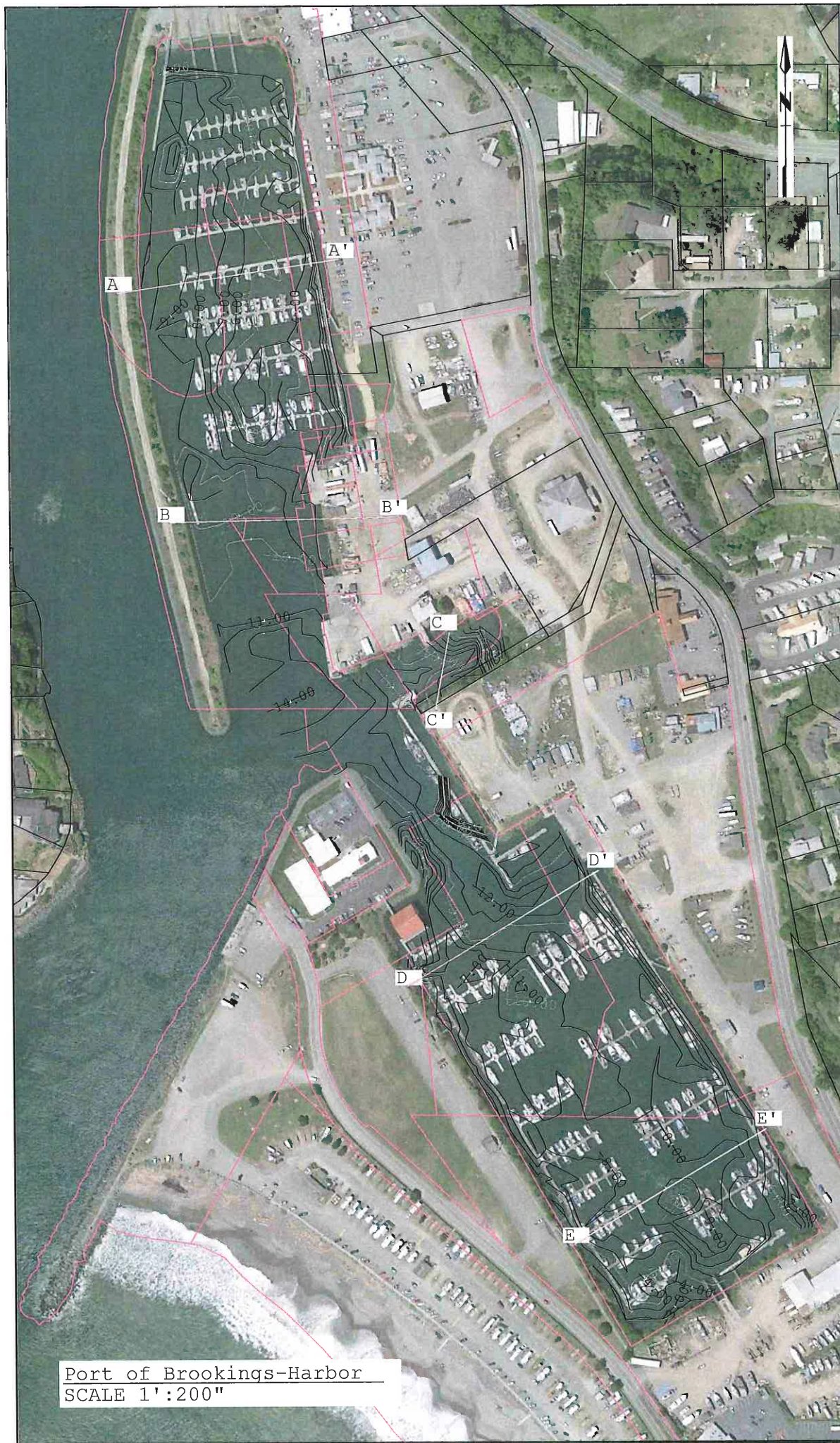
PREPARED FOR:

**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





Port of Brookings-Harbor  
SCALE 1':200"



2019 BATHYMETRIC SURVEY  
SCALE 1':200"



ENGINEER:

EMC  
Engineers/Scientists, LLC

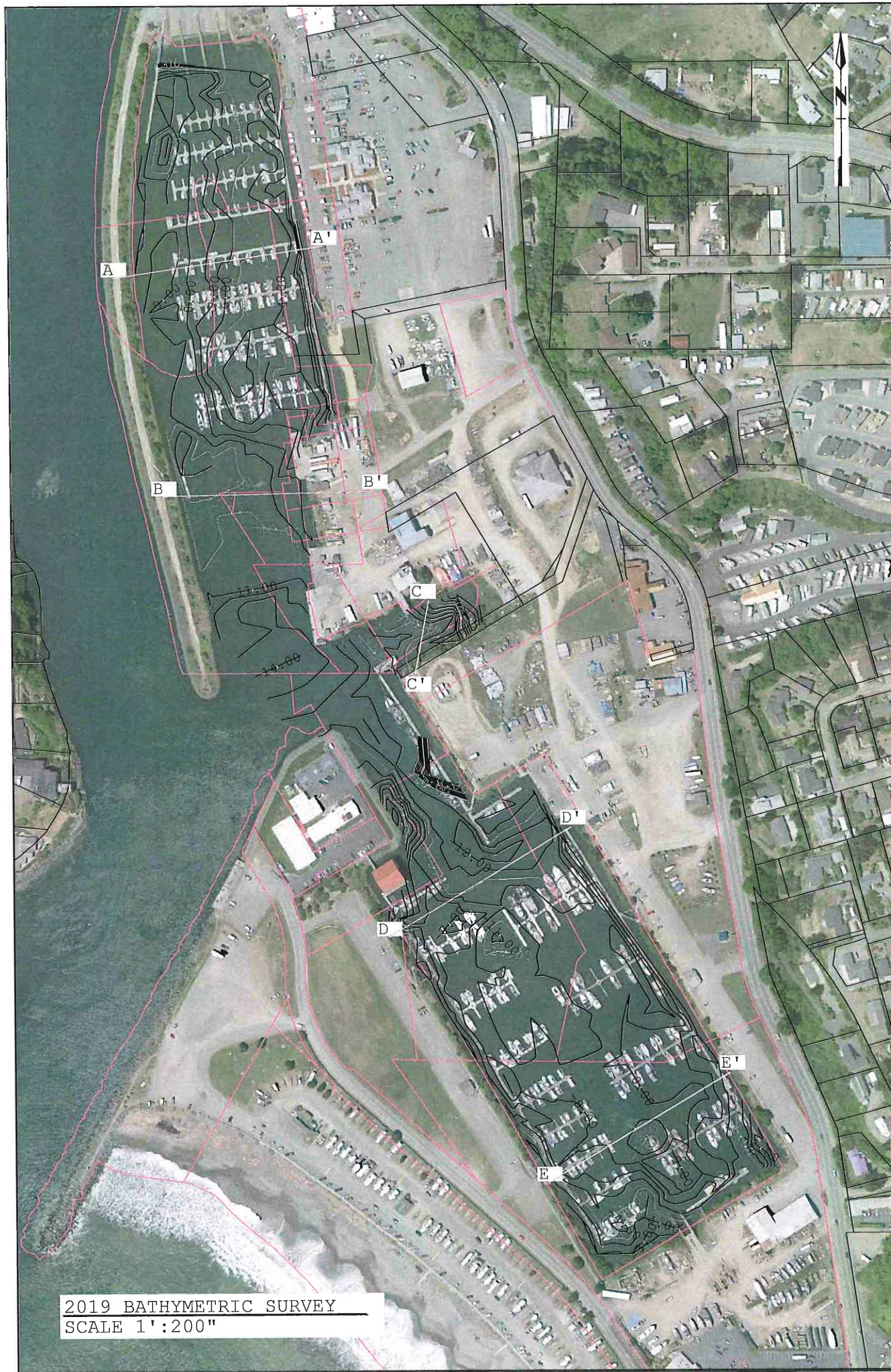
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**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415



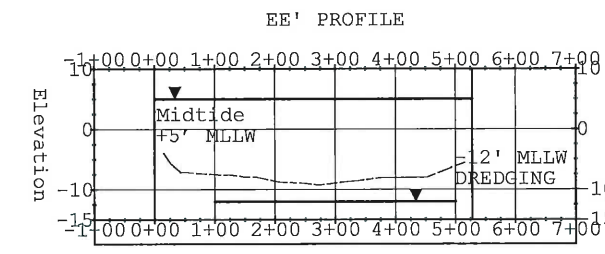
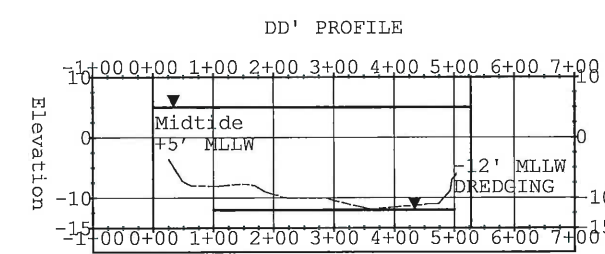
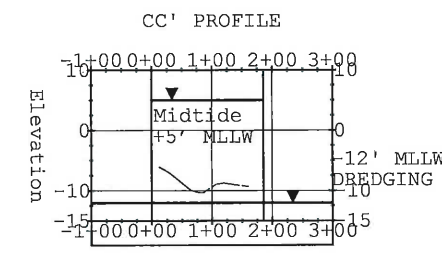
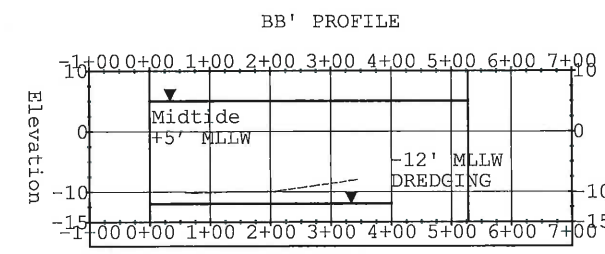
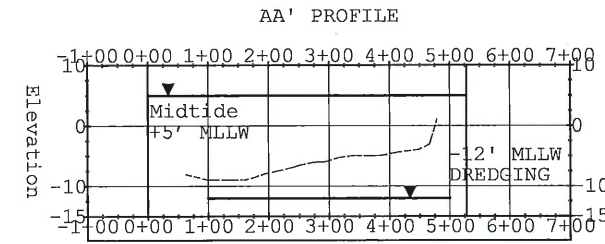
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12/26/2020  
Drawn By  
INFRADRAFT  
Sheet No.  
C-101  
File No.  
PB115

NO.	DATE	REVISION	BY





2019 BATHYMETRIC SURVEY  
SCALE 1':200"



PROFILES  
HZ SCALE 1':200"

ENGINEER:



NO.	DATE	REVISION	BY



PREPARED FOR: (LOT 2800, MAP '360522DB')  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

Date	12/26/2020
Drawn By	INFRADRAFT
Sheet No.	C-102
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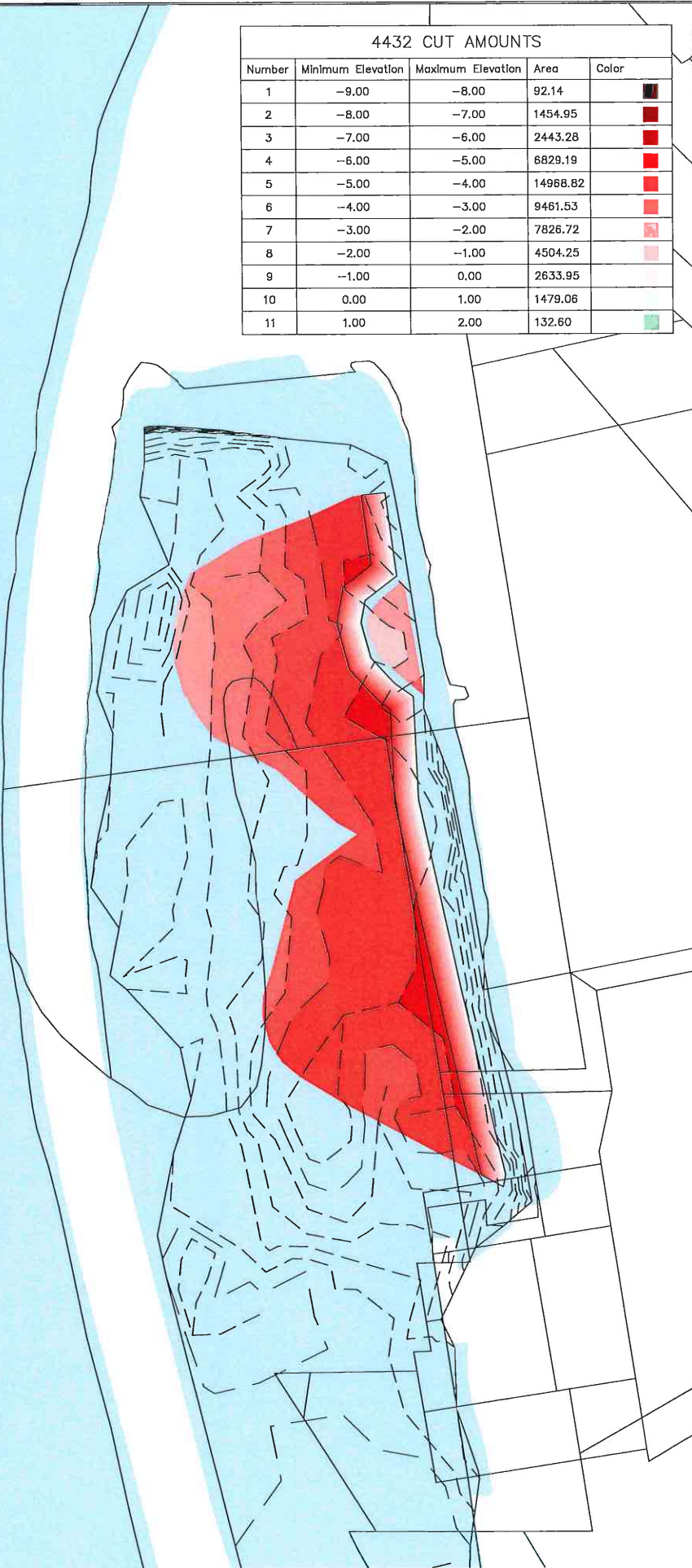


**LEGEND**

- 4432 DEBRIS AREA
- 4452 DEBRIS AREA
- ICE HOUSE INLET

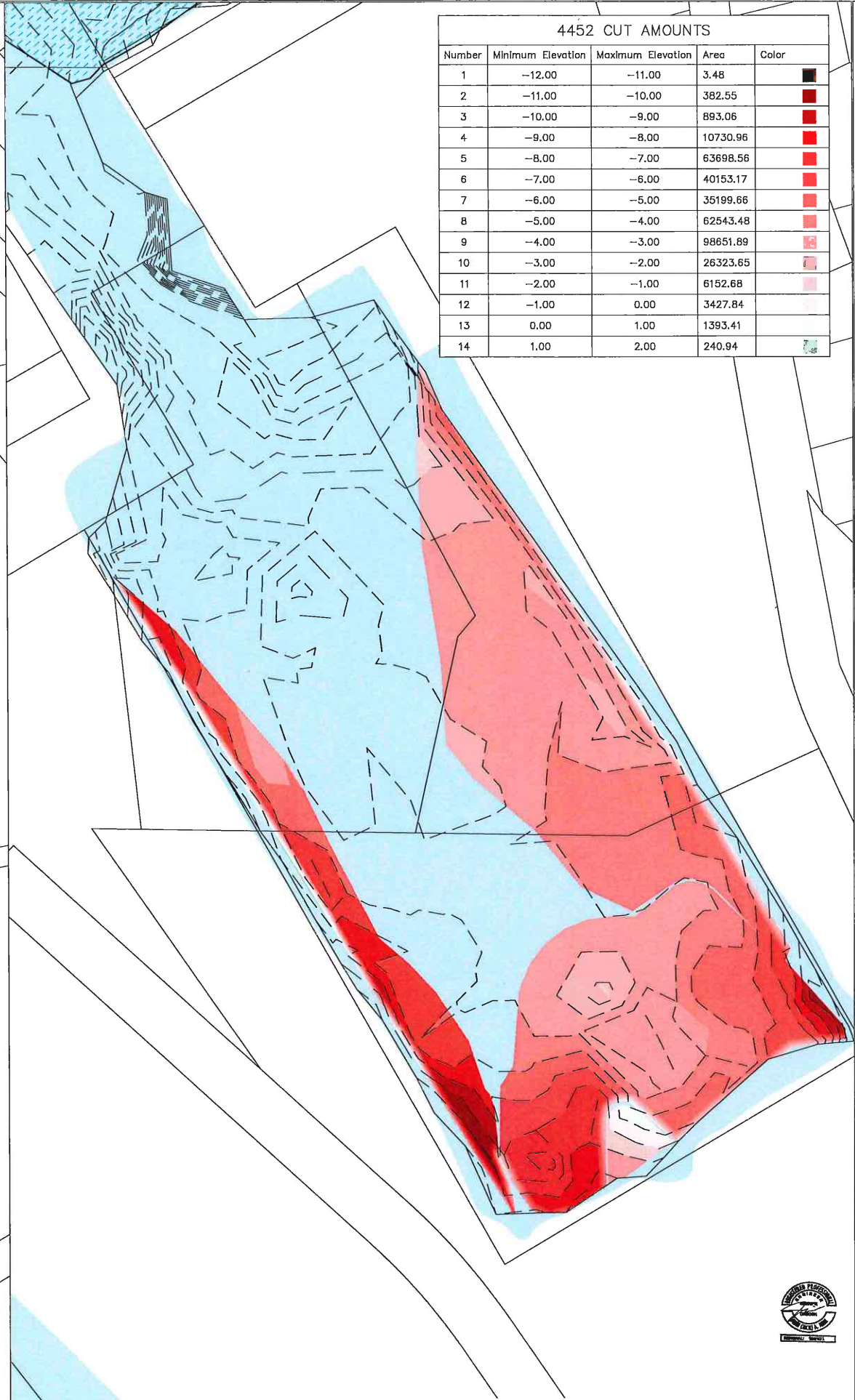
PLANNED DREDGING  
SCALE 1" : 150'

4432 CUT AMOUNTS				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-9.00	-8.00	92.14	█
2	-8.00	-7.00	1454.95	█
3	-7.00	-6.00	2443.28	█
4	-6.00	-5.00	6829.19	█
5	-5.00	-4.00	14968.82	█
6	-4.00	-3.00	9461.53	█
7	-3.00	-2.00	7826.72	█
8	-2.00	-1.00	4504.25	█
9	-1.00	0.00	2633.95	█
10	0.00	1.00	1479.06	█
11	1.00	2.00	132.60	█



NORTH BASIN ISOPACH  
SCALE 1" : 80'

4452 CUT AMOUNTS				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-12.00	-11.00	3.48	█
2	-11.00	-10.00	382.55	█
3	-10.00	-9.00	893.06	█
4	-9.00	-8.00	10730.96	█
5	-8.00	-7.00	63698.56	█
6	-7.00	-6.00	40153.17	█
7	-6.00	-5.00	35199.66	█
8	-5.00	-4.00	62543.48	█
9	-4.00	-3.00	98651.89	█
10	-3.00	-2.00	26323.65	█
11	-2.00	-1.00	6152.68	█
12	-1.00	0.00	3427.84	█
13	0.00	1.00	1393.41	█
14	1.00	2.00	240.94	█



SOUTH BASIN ISOPACH  
SCALE 1" : 80'

ENGINEER:  
**EMC**  
Environmental Management  
Construction Management  
Engineering  
16330 Lower Harbor Rd, Brookings, OR 97415  
www.emcinc.com

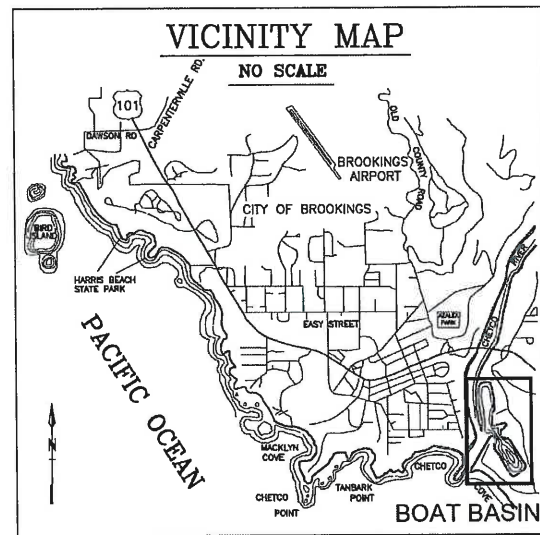
NO.	DATE	REVISION	BY

PORT OF BROOKINGS  
16330 Lower Harbor Rd, Brookings, OR 97415

PREPARED FOR:  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

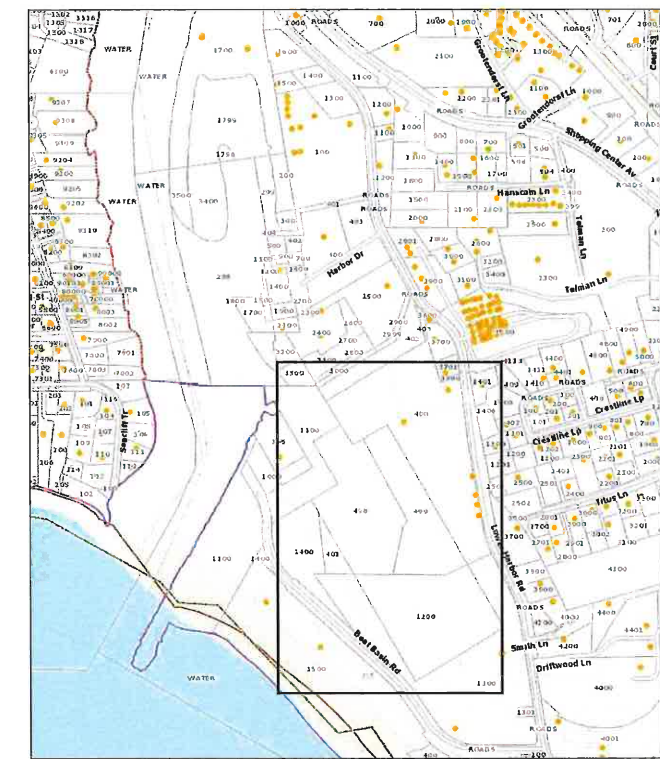
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Drawn By: INFRADRAFT  
Sheet No.: C103  
File No.: 115





PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

### SOUTH BASIN EMBANKMENT RECONSTRUCTION



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**NATURAL FEATURES**

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**EXISTING TREE CANOPY**

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**

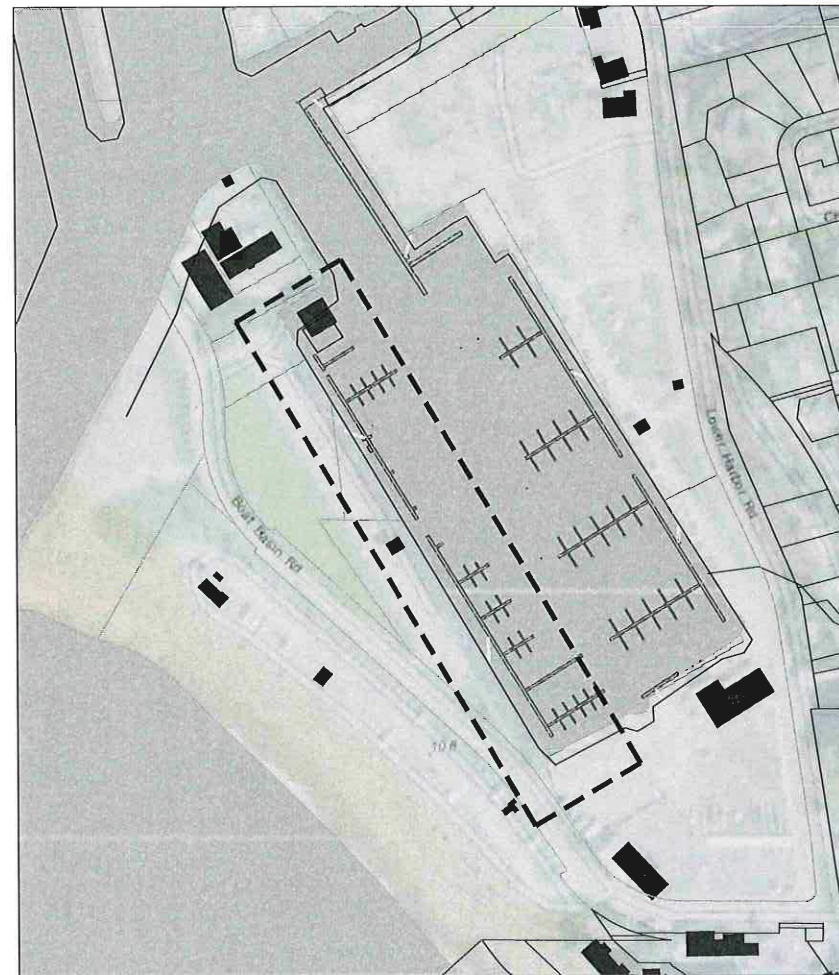
LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

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PROJECT OVERVIEW  
SCALE 1" : 200'

**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 DESCRIPTION**

TITLE: SOUTH BASIN EMBANKMENT RECONSTRUCTION  
REFERENCE: PB113  
LOCATION: SOUTH BASIN  
TAX LOT(S): 401,498,1100,1200,1300,1400

**DRAWING REGISTER**

PB113-C100	Cover sheet
PB113-C101	Notes
PB113-C102	Existing Condition
PB113-C102A	EXISTING EMBANKMENT VIEWS
PB113-C103	Embankment
PB113-C104	Details
PB113-C105	Plan details

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



NO.	DATE	FOR CLIENT REVIEW	BY
1	12/8/2020		



PREPARED FOR:  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415



Date: 12/8/2020  
Drawn By: INFRA DRAFT  
Sheet No.: C-100  
File No.: 113



**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**

- Jobsite safety is the responsibility of the Contractor.
- 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.
- All materials to be shipped, handled and stockpiled in accordance with the manufacturers recommendations and good construction practices.
- Locations must be verified at the site with the geotechnical engineer and the Port of Brookings Harbor representative prior to placement.
- Abide by local, state and federal building ordinances, including all safety requirements, in all phases of the project.
- 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.
- Proposed changes to project plans and specifications must be approved by the designer prior to acceptance and implementation at the site.
- Proposed changes must be submitted in writing for review and approval/disapproval by the designer and the owner.
- 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.
- 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.
- 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.
- Sequencing of tasks that requires varying the installed sizes of project materials must be reviewed and approved by the design engineer and owner.
- 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.
- 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.
- 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**

- DEQ 1200-C PERMIT IS NOT 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.

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES**

- 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
- 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
- SOIL DISTURBING ACTIVITIES - EXCAVATION WILL BE LIMITED TO EXISTING MARINA EDGES AS SHOWN ON DRAWING C102
- NON-STORMWATER DISCHARGES - NO DEWATERING, WATER-LINE FLUSHING, PAVEMENT WASH WATERS OR IRRIGATION WATER DISCHARGES ARE PLANNED FOR THIS PROJECT.
- ESTIMATED START DATE FOR CONSTRUCTION - 02/01/21 - 03/30/21
- 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).
- RECEIVING WATERS - PACIFIC OCEAN
- SPECIAL ENVIRONMENTAL CONSIDERATIONS - SEE SECTION BELOW DESCRIBING PRECAUTION REGARDING CREOSOTE COATED PILES TO BE EXTRACTED. ESA OPINIONS PROVIDED BY USACE, NMFS AND ODFW.
- 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.
- 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>



NO.	DATE	REVISION
1	12/8/2020	FOR CLIENT REVIEW
2		REVISION



PREPARED FOR: CLUT 2000, MAP 380352017  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

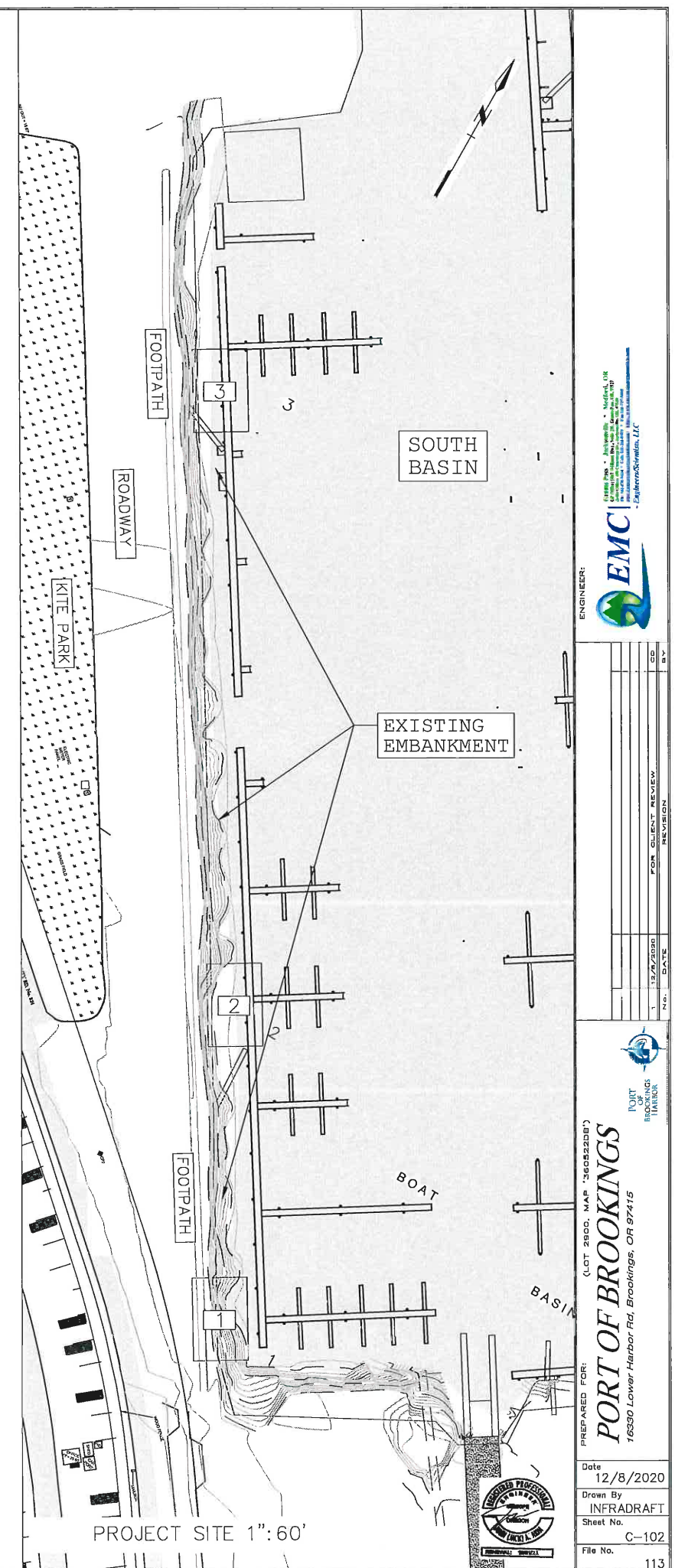


Date: 12/8/2020  
Drawn By: INFRADRAFT  
Sheet No.: C-101  
File No.: 113





EXISTING CONDITIONS  
SCALE 1" : 100'



PROJECT SITE 1" : 60'

ENGINEER:  
**EMC**  
EMC Engineering & Construction, LLC  
16330 Lower Harbor Rd, Brookings, OR 97415  
www.emc-engineering.com

No.	DATE	REVISION	BY
1	12/8/2020	FOR CLIENT REVIEW	

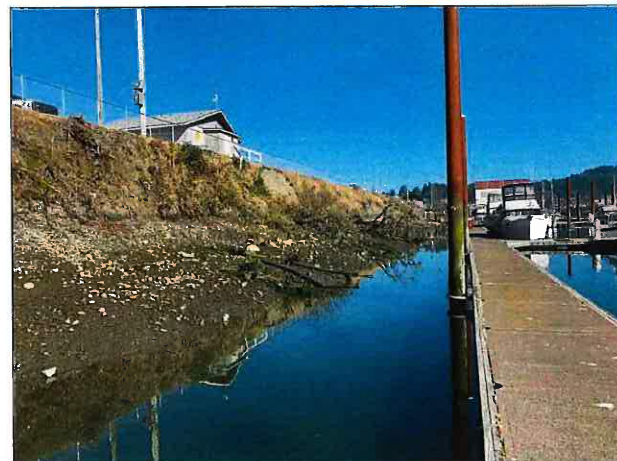
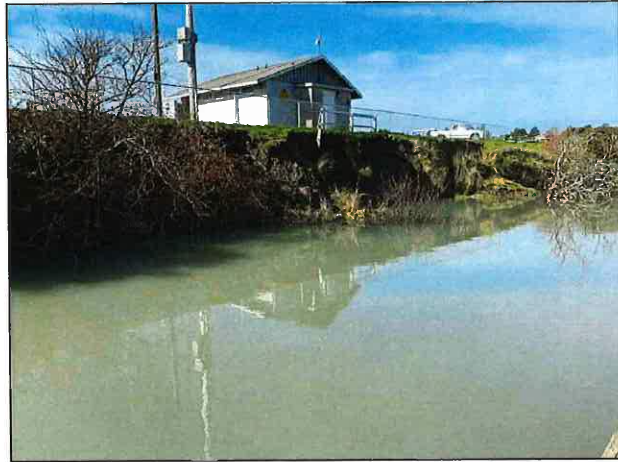
PORT OF BROOKINGS  
16330 Lower Harbor Rd, Brookings, OR 97415

PREPARED FOR:  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

Date: 12/8/2020  
Drawn By: INFRADRAFT  
Sheet No.: C-102  
File No.: 113







EXISTING EMBANKMENT VIEWS

ENGINEER:  
**EMC**  
 ENGINEERS & ARCHITECTS, LLC  
 16330 Lower Harbor Rd, Brookings, OR 97415  
 541.338.2200  
[www.emc-engineers.com](http://www.emc-engineers.com)

NO.	DATE	REVISION	BY
1	12/3/2020	FOR CLIENT REVIEW	



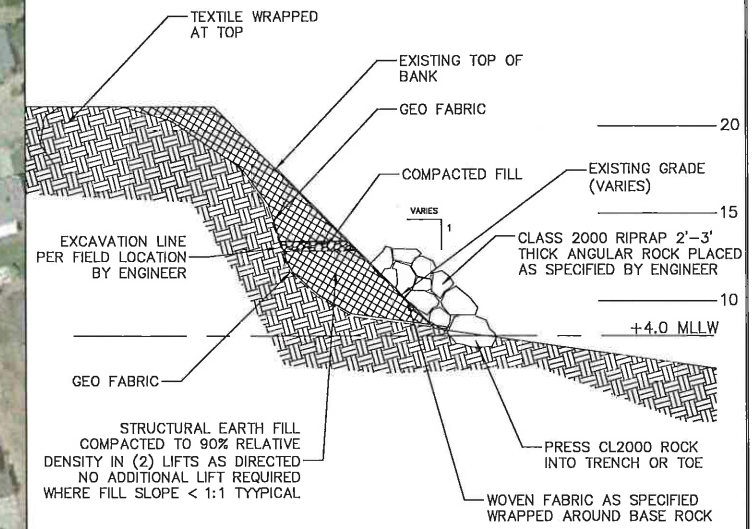
PREPARED FOR:  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415



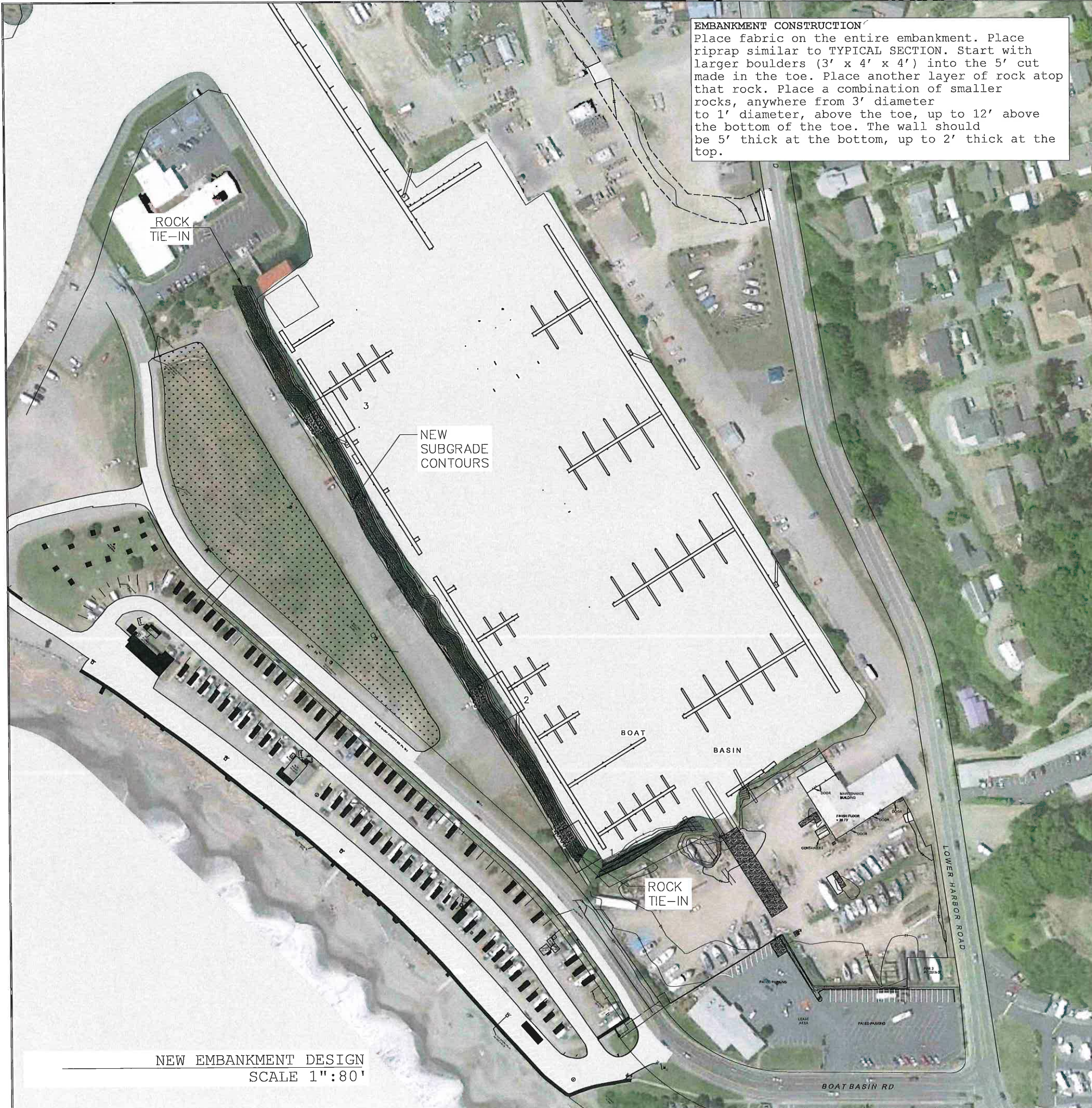
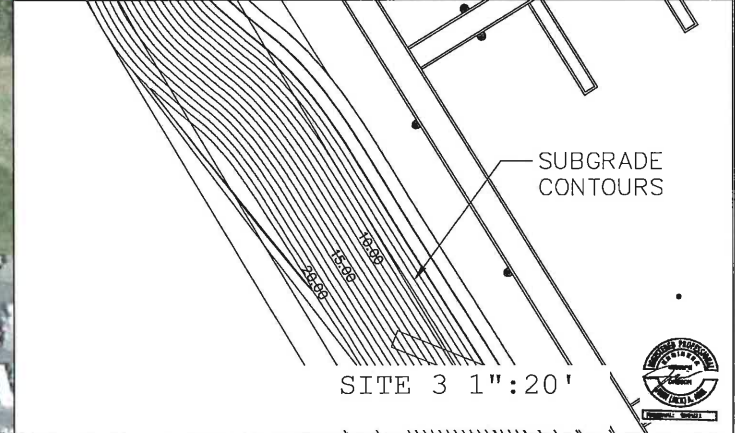
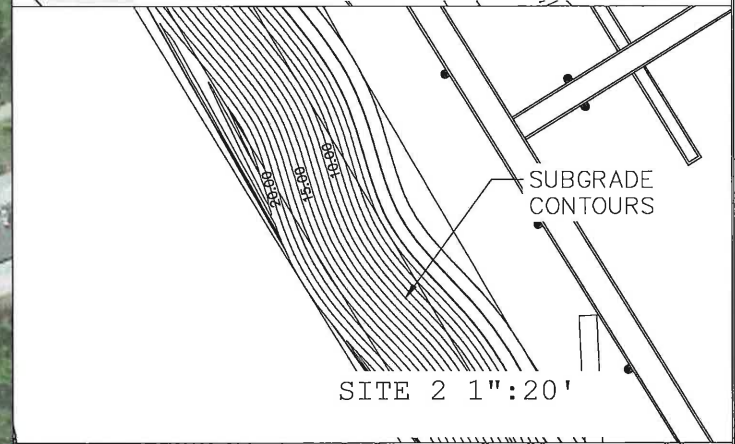
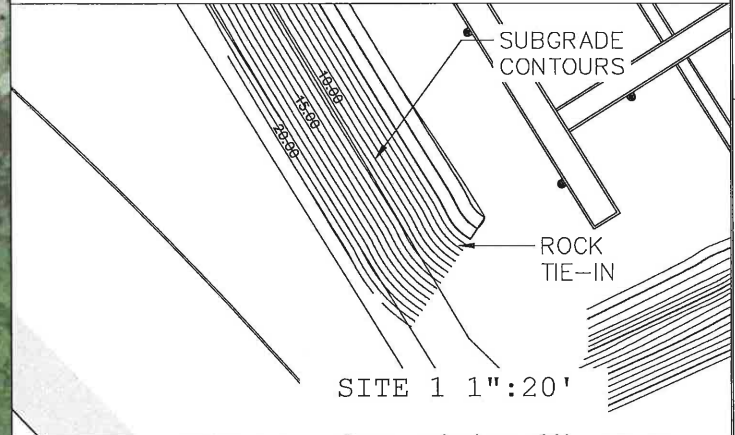
Date: 01/6/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C-102A  
 File No.: 113



**EMBANKMENT CONSTRUCTION**  
 Place fabric on the entire embankment. Place riprap similar to TYPICAL SECTION. Start with larger boulders (3' x 4' x 4') into the 5' cut made in the toe. Place another layer of rock atop that rock. Place a combination of smaller rocks, anywhere from 3' diameter to 1' diameter, above the toe, up to 12' above the bottom of the toe. The wall should be 5' thick at the bottom, up to 2' thick at the top.



TYPICAL EMBANKMENT CROSS-SECTION



NEW EMBANKMENT DESIGN  
 SCALE 1" : 80'

ENGINEER:  
 EMCI  
 ENGINEERS & ARCHITECTS, LLC

NO.	DATE	FOR CLIENT REVIEW	REVISION	CD BY
1	12/8/2020			

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

Date: 12/8/2020  
 Drawn By: INFRADRAFT  
 Sheet No.: C-103  
 File No.: 113



**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 toe 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.

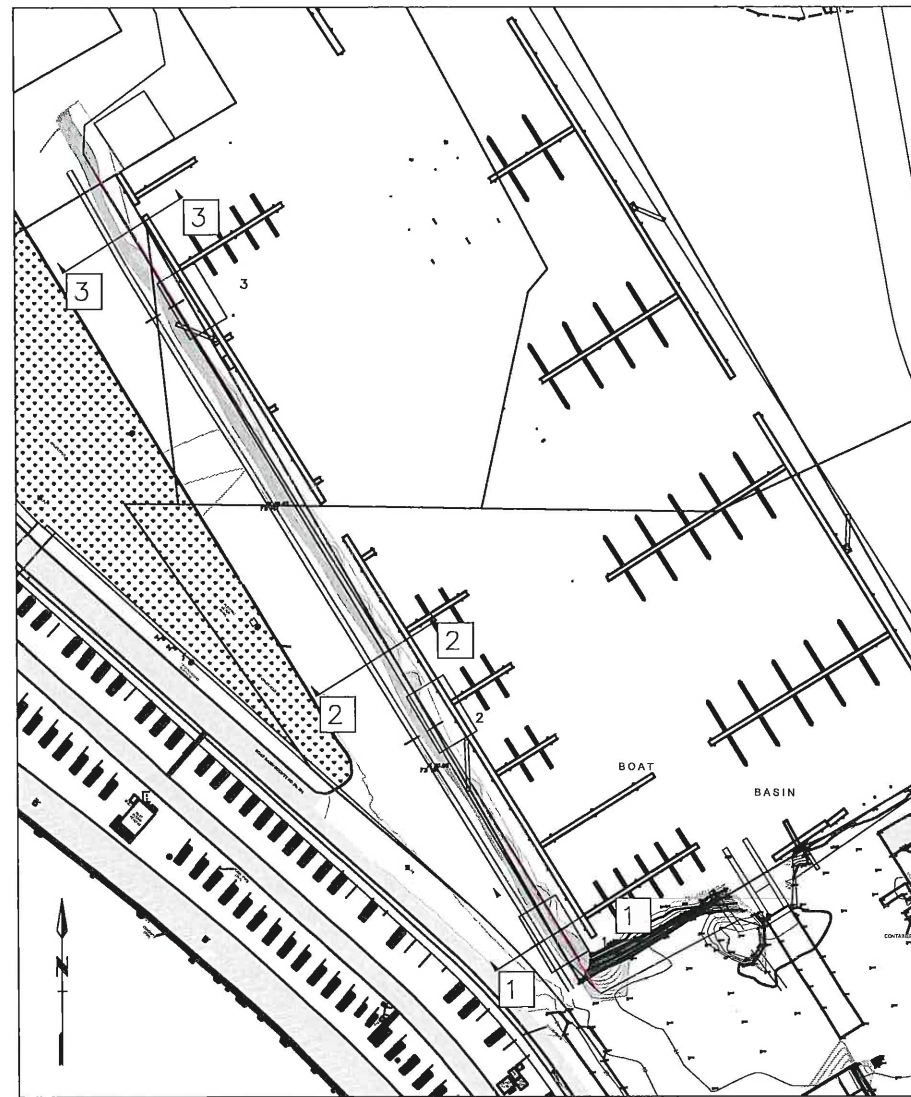
Actions that will require the use of materials that are hazardous or toxic to aquatic life (such as motor fuel, oil, or drilling fluid), are included within the pollution and erosion control plan sections of this narrative, to be managed by EMC and enforced by the Port of Brookings-Harbor. The plan includes 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.



SITES 1, 2, 3 SECTION LINES

**Nonwoven Geotextile**

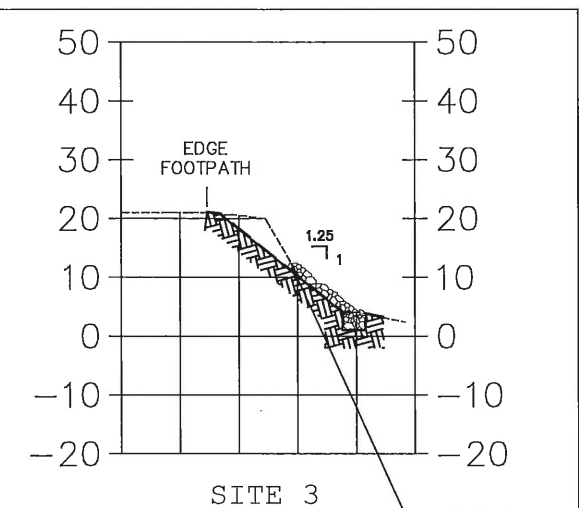
NTPEP APPROVED - GTX-2013-01-019 US 300NW is a nonwoven needlepunched geotextile made of 100% polypropylene staple filaments. US 300NW resists ultraviolet and biological deterioration, rotting, naturally encountered bases and acids. Polypropylene is stable within a pH range of 2 to 13. US 300NW meets the following M.A.R.V. values except where noted:



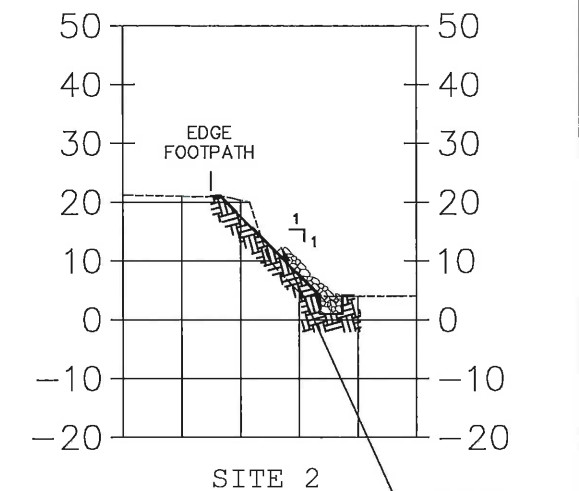
PROPERTY	TEST METHOD	ENGLISH	METRIC
Weight - Typical	ASTM D-5261	12 oz/sy	407 g/sm
Tensile Strength	ASTM D-4632	300 lbs	1,335 N
Elongation @ Break	ASTM D-4632	50%	50%
Mullen Burst*	ASTM D-3786*	580 psi	3,999 kPa
Puncture Strength*	ASTM D-4833*	180 lbs	801 N
CBR Puncture	ASTM D-6241	850 lbs	3,782 N
Trapezoidal 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/sf	3,055 l/min/sm
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

ROLL SIZE	ROLL DIAMETER	AREA	WEIGHT
12.5' x 360'	23.0 in	500 sqy	380 lbs
15' x 300'	25.0 in	500 sqy	380 lbs

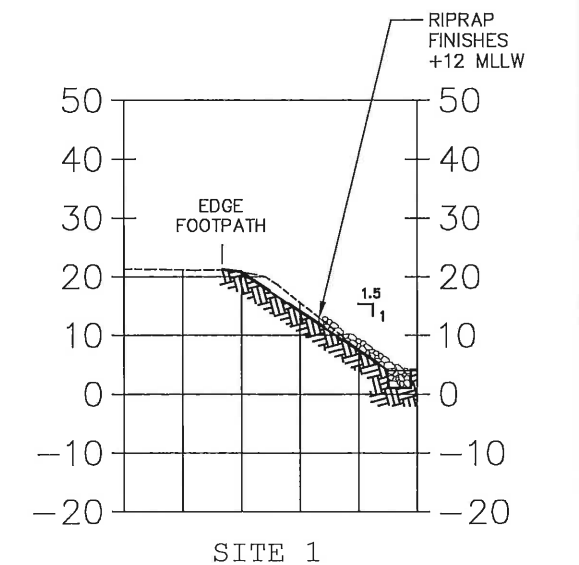
VOLUME REPORT	
(APPROXIMATE)	
GEOTEXTILE FABRIC	4498 SQ YD
CLASS 2000 RIP RAP	2462.34 CU YD
CUT	1792 CU YD
FILL	966 CU YD



SITE 3  
RIPRAP FINISHES +12 MLLW



SITE 2  
RIPRAP FINISHES +12 MLLW



SITE 1  
RIPRAP FINISHES +12 MLLW  
CROSS-SECTIONS NTS



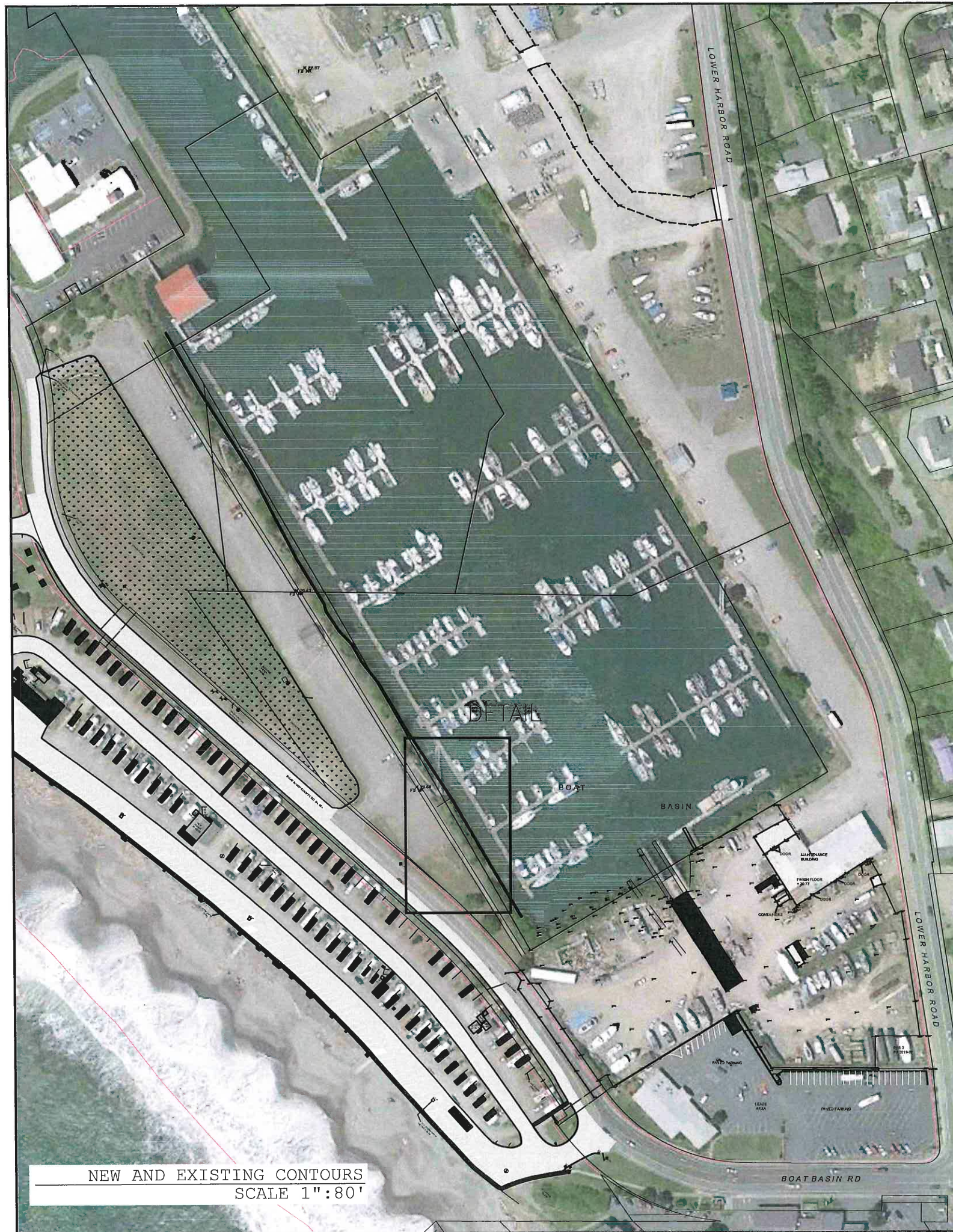
NO.	DATE	FOR	CLIENT	REVIEW	BY
1	12/8/2020				



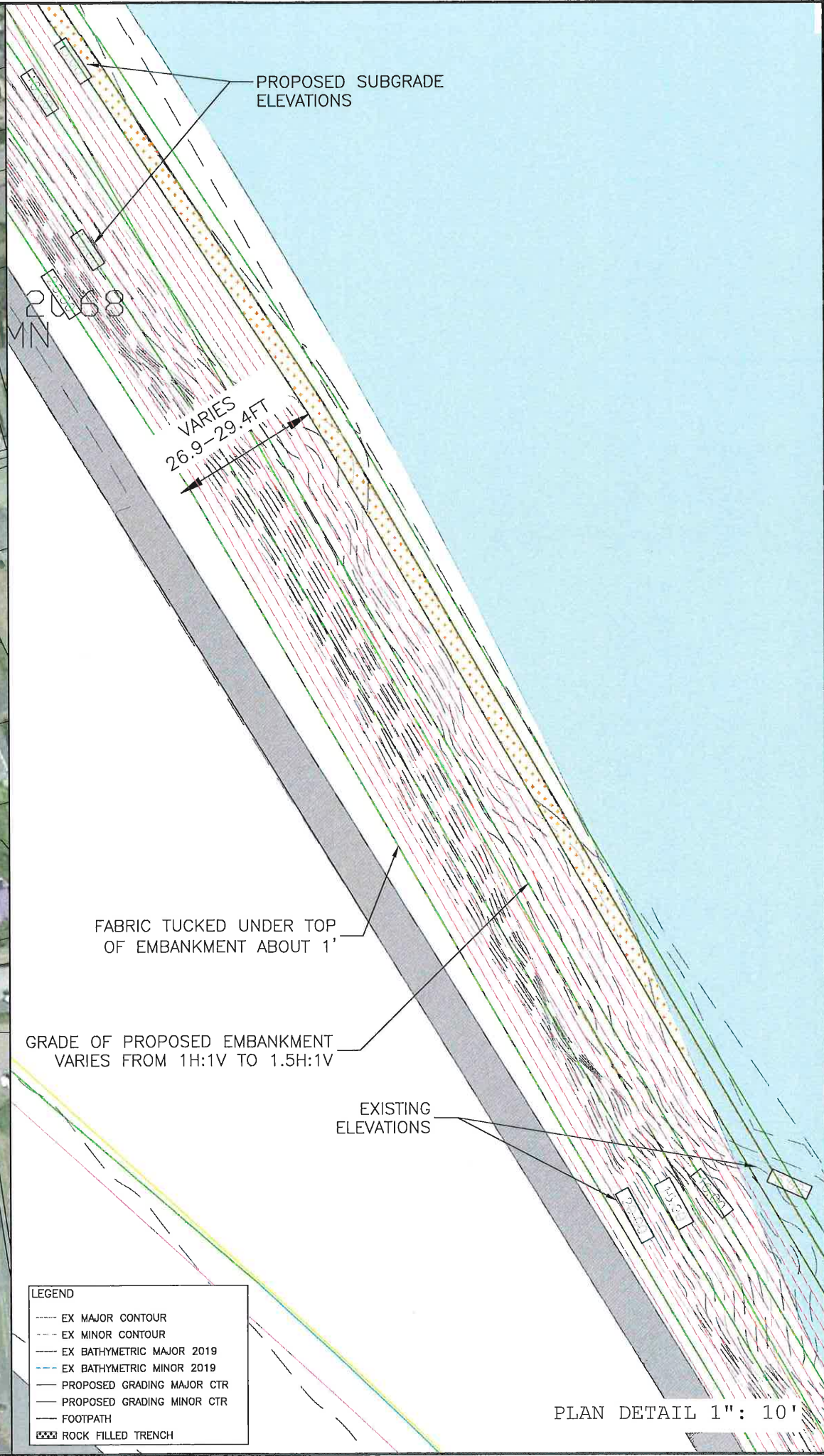
PREPARED FOR: (LOT 2000, MAP 380352001)  
**PORT OF BROOKINGS**  
16300 Lower Harbor Rd, Brookings, OR 97415

Date: 12/8/2020  
Drawn By: INFRADRAFT  
Sheet No.: C-104  
File No.: 113





NEW AND EXISTING CONTOURS  
SCALE 1":80'



LEGEND

- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- EX BATHYMETRIC MAJOR 2019
- EX BATHYMETRIC MINOR 2019
- PROPOSED GRADING MAJOR CTR
- PROPOSED GRADING MINOR CTR
- FOOTPATH
- ███ ROCK FILLED TRENCH

PLAN DETAIL 1": 10'

ENGINEER:  EMC

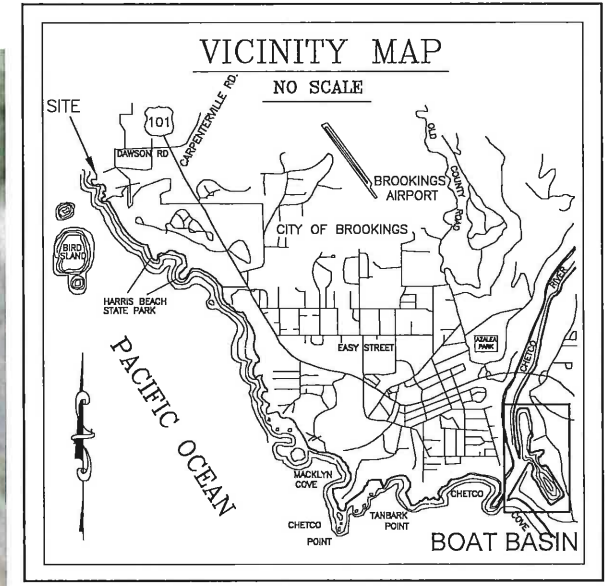
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**PORT OF BROOKINGS**  
1635D Lower Harbor Rd, Brookings, OR 97415

Date: 12/27/2020  
Drawn By: INFRADRAFT  
Sheet No.: C105  
File No.: 113

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1	12/23/2020				

PORT BROOKINGS TRUCK



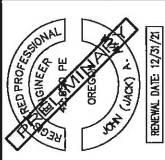


**SHEET INDEX**

C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS
C2.0	OPTION 4 ROCK WALL

REVISIONS	BY:

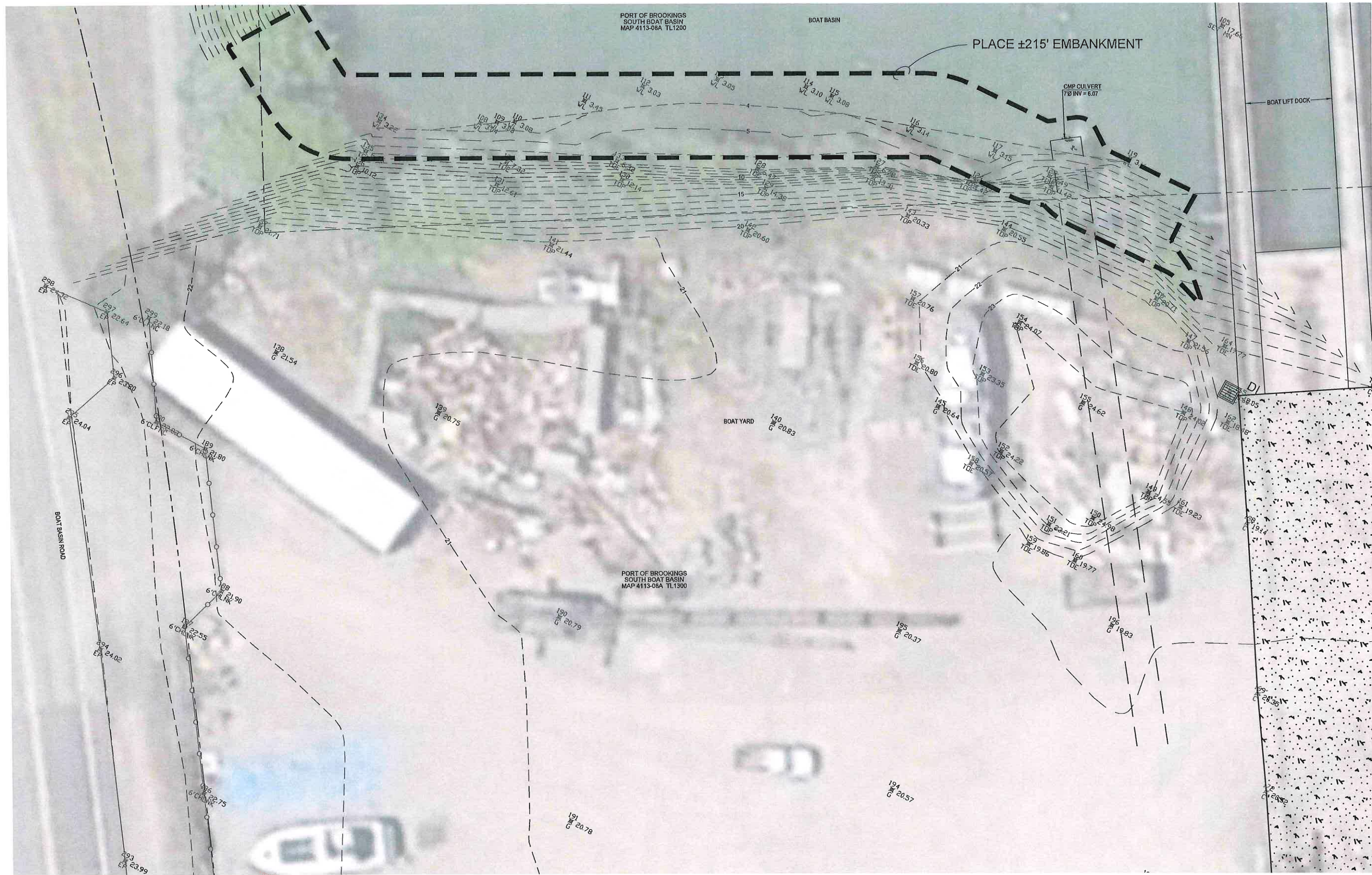
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**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**SOUTH BOAT BASIN WALL**

DRAWN BY: JG  
 DATE: 18 APR 2021  
 JOB No: #  
 SHEET No:  
**C0.0**  
 COVER SHEET

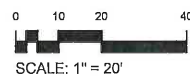




**SURVEY BY**  
 ROBERTS & ASSOCIATES LAND SURVEYING, INC.  
 611 SPRUCE STREET  
 BROOKINGS, OR 97415  
 (541) 469-0162

**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 <2cm.

**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

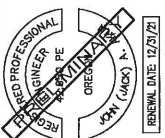


**EXISTING CONDITIONS**  
 SCALE: 1" = 20' (24x36)



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**SOUTH BOAT BASIN WALL**

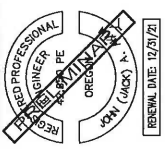
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 DATE: 18 APR 2021  
 JOB No: #  
 SHEET No:

**C1.0**  
 EXISTING  
 CONDITIONS



REVISIONS	BY:

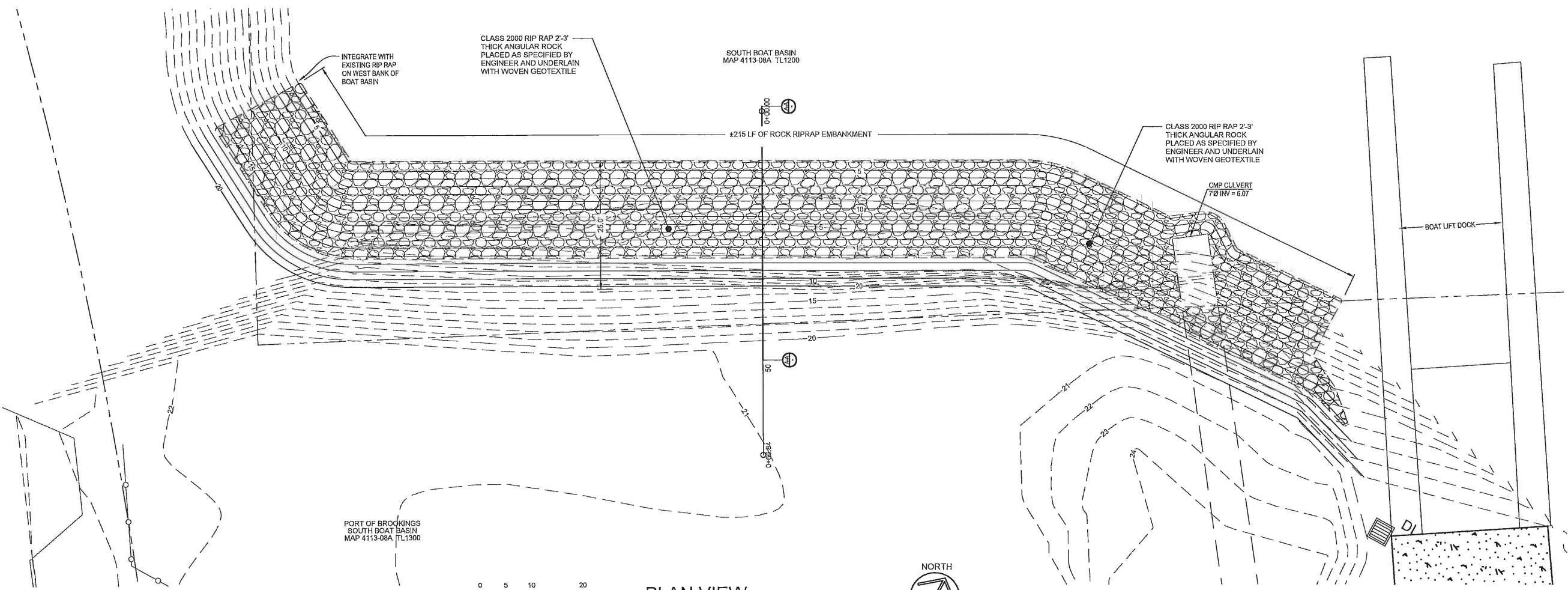
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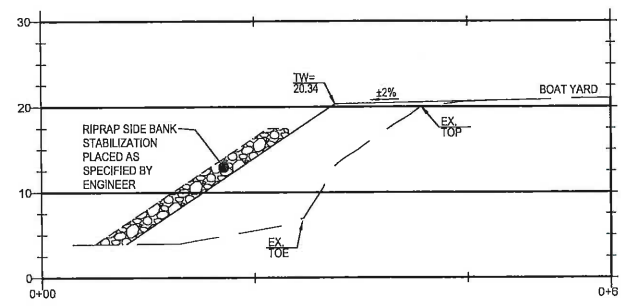
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DRAWN BY: JG  
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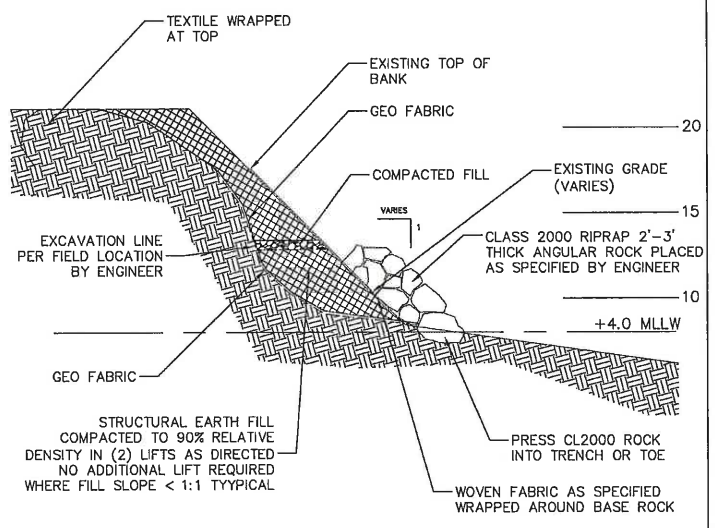
**C2.0**  
 OPTION 4  
 ROCK WALL



**PLAN VIEW**  
 SCALE: 1" = 10' (24x36)  
 NORTH



**A-A**  
**ROCK EMBANKMENT - SECTION A - A**  
 SCALE: 1" = 10' (H & V)



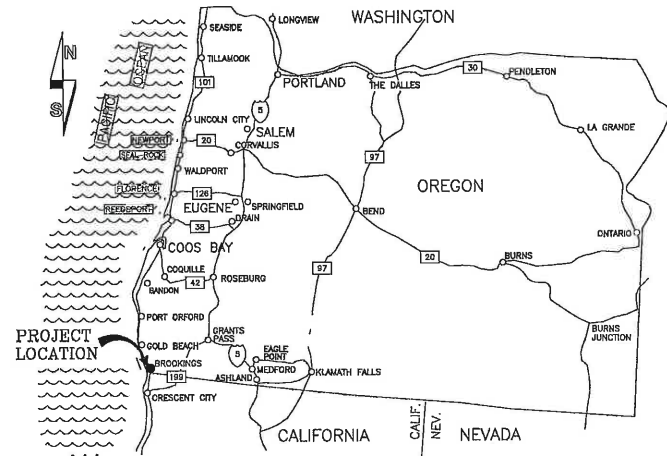
**TYPICAL EMBANKMENT CROSS SECTION**  
 NOT TO SCALE

PLACE FABRIC ON THE ENTIRE EMBANKMENT. PLACE RIPRAP SIMILAR TO TYPICAL SECTION. START WITH LARGER BOULDERS (3' x 4' x 4') INTO THE 5' CUT MADE IN THE TOE. PLACE ANOTHER LAYER OF ROCK ATOP THAT ROCK. PLACE A COMBINATION OF SMALLER ROCKS, ANYWHERE FROM 3' DIAMETER TO 1' DIAMETER, ABOVE THE TOE, UP TO 12' ABOVE THE BOTTOM OF THE TOE. THE WALL SHOULD BE 5' THICK AT THE BOTTOM, UP TO 2' THICK AT THE TOP.

**EMBANKMENT CONSTRUCTION NOTES**

**PROPOSED ROCK EMBANKMENT - OPTION 4**  
 SCALE: 1" = 10' (24x36)





**LOCATION MAP**  
NOT TO SCALE

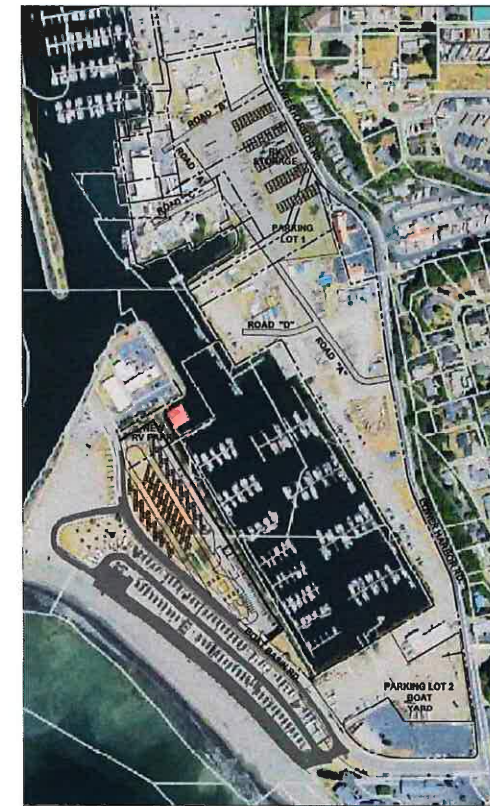


**PORT OF BROOKINGS HARBOR**

**KITE FIELD RV PARK**

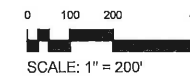


**KITE FIELD PARK EXTENTS**



**PROJECT OVERVIEW**

SCALE: 1" = 200' (24 x 36) 1" = 400' (11 x 17)



**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		

**SHEET INDEX**

C1.0	PROJECT DETAILS
C1.1	EXISTING CONDITIONS
C2.0	SEQUENCING
C2.1	SEQUENCING
C2.2	SEQUENCING
C2.3	CROSS SECTIONS
C2.4	CROSS SECTIONS
C2.5	CROSS SECTIONS
C3.0	PRELIMINARY RV LAYOUT
C4.0	ROAD SECTIONS
C4.1	DRAINAGE DETAILS
C4.2	GENERAL NOTES
C5.0	EROSION CONTROL PLAN
C5.1	EROSION CONTROL NOTES
C5.2	EROSION CONTROL DETAILS

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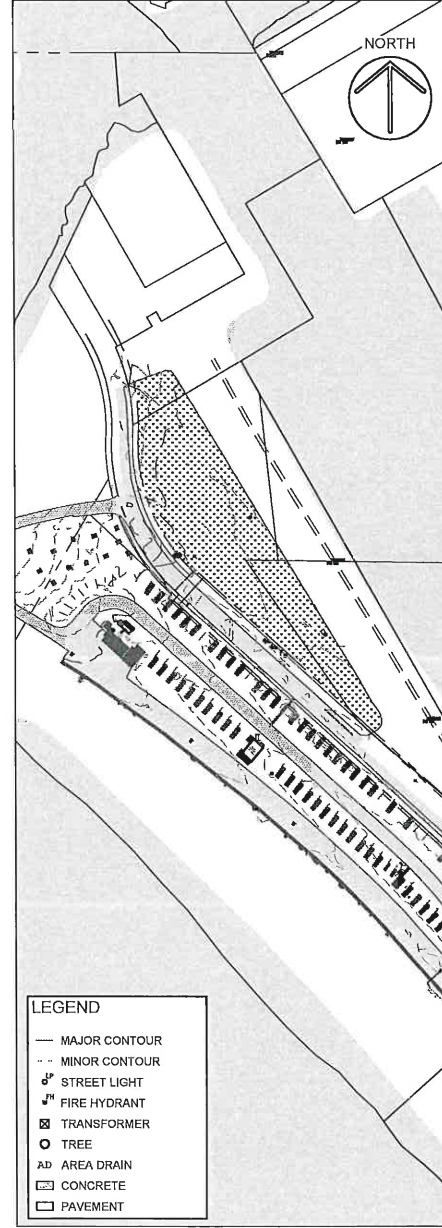
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 JOB No: PB116  
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**C1.0**  
 PROJECT  
 DETAILS





PORT OF BROOKINGS HARBOR  
TAX LOTS

SCALE: NOT TO SCALE



PORT OF BROOKINGS HARBOR  
TOPOGRAPHIC SURVEY

SCALE: NOT TO SCALE



PORT OF BROOKINGS HARBOR  
EXISTING ACTION AREA

SCALE: NOT TO SCALE

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**KITE FIELD RV PARK**

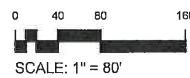
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**C1.1**  
 EXISTING  
 CONDITIONS



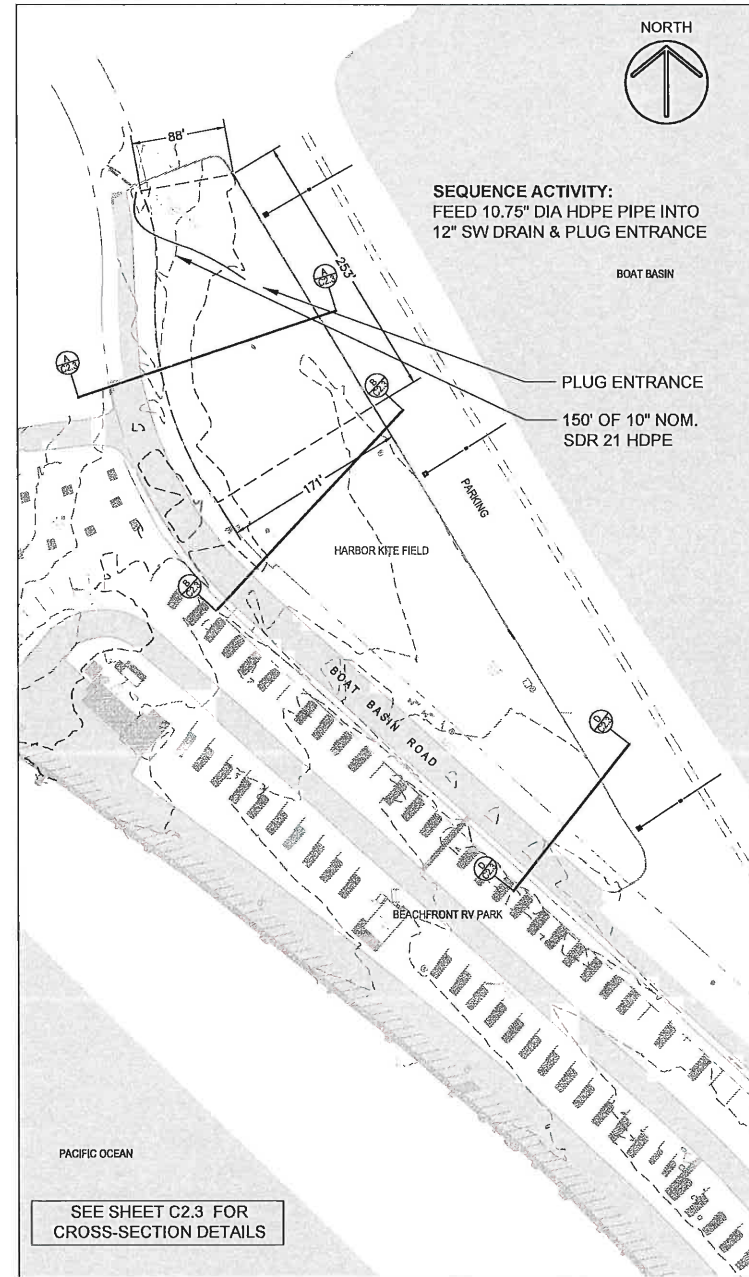


SEQUENCE #0: EXISTING CONDITIONS

SCALE: 1" = 80' (24x36)

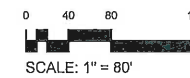


SCALE: 1" = 80'



SEQUENCE #1: SEDIMENT & COLLECTION AREA

SCALE: 1" = 80' (24x36)



SCALE: 1" = 80'

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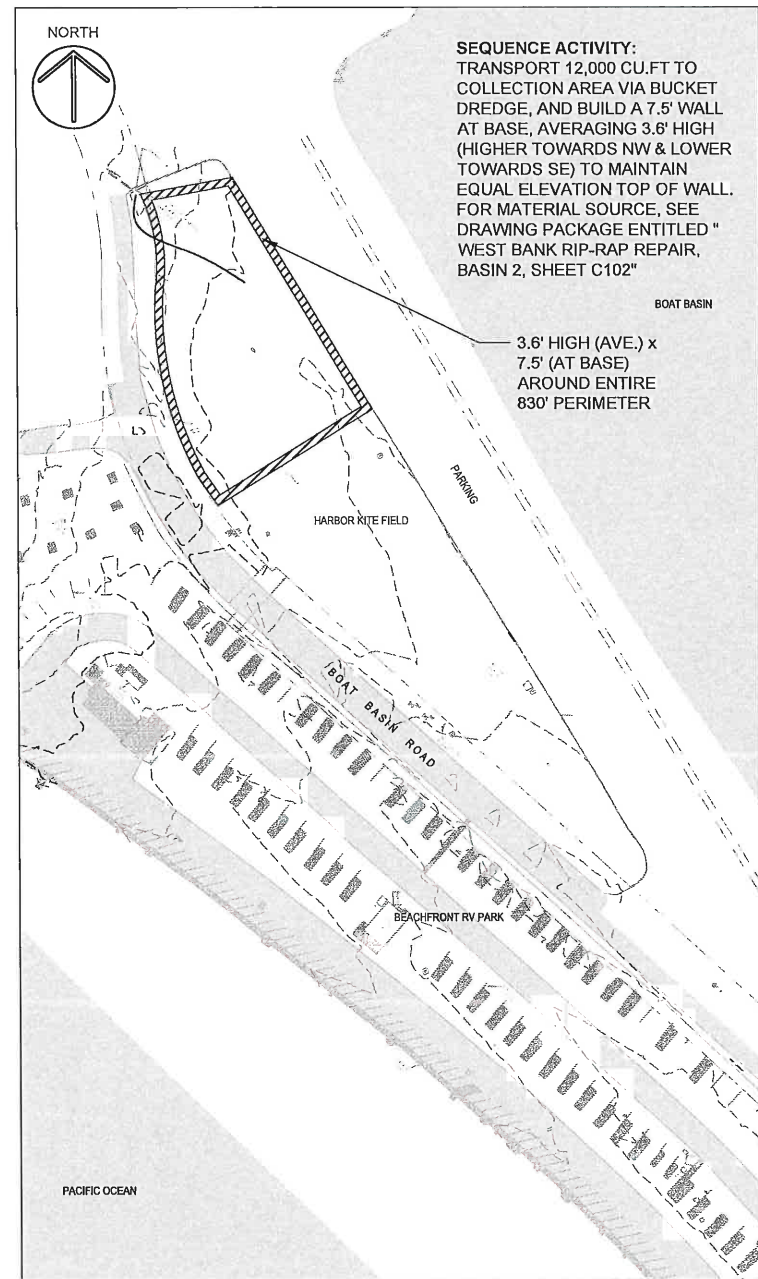
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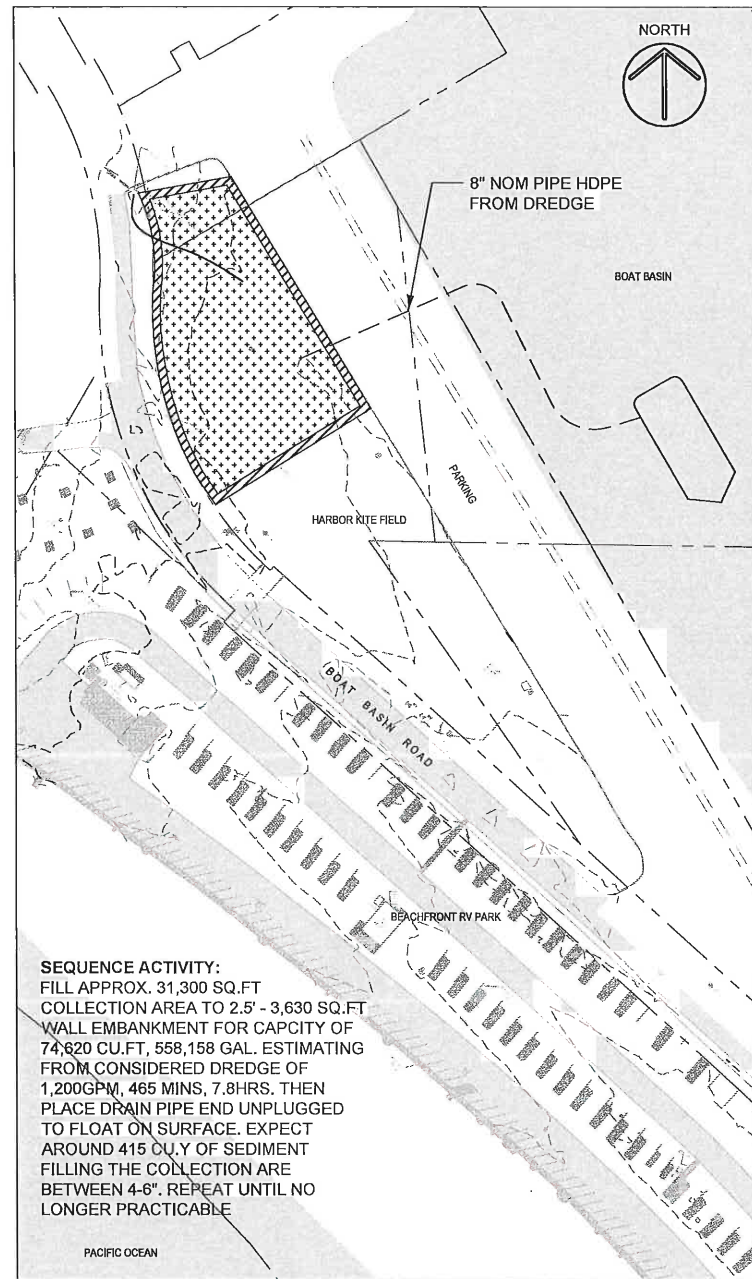
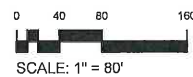
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 SEQUENCING





**SEQUENCE #2: PERIMETER WALL**

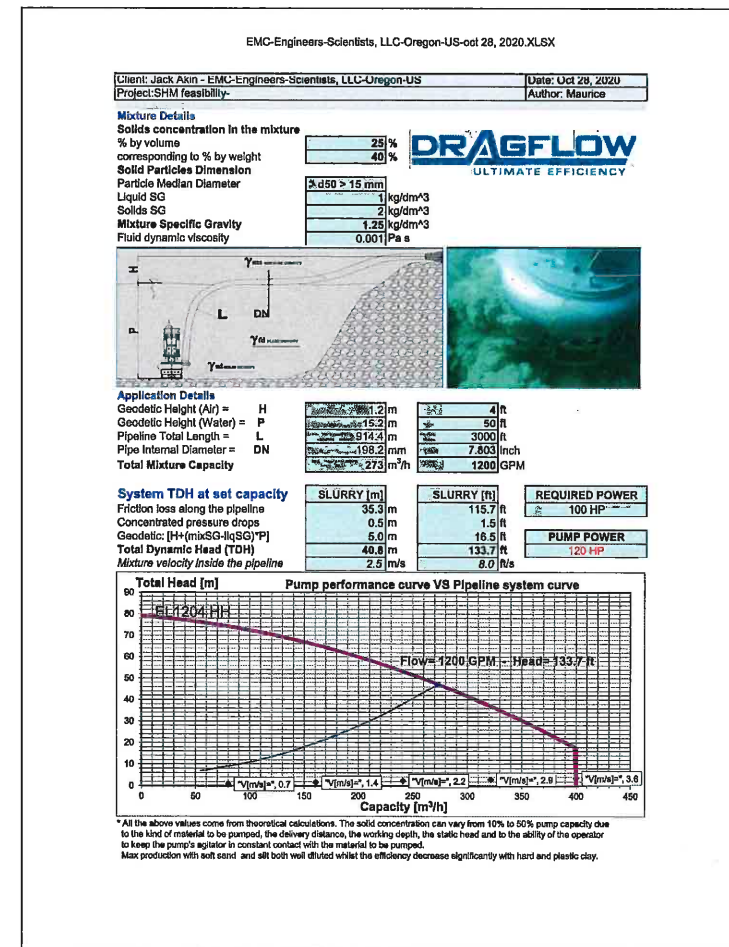
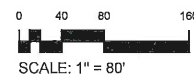
SCALE: 1" = 80' (24x36)



**SEQUENCE ACTIVITY:**  
 FILL APPROX. 31,300 SQ.FT COLLECTION AREA TO 2.5' - 3,630 SQ.FT WALL EMBANKMENT FOR CAPACITY OF 74,620 CU.FT, 558,158 GAL. ESTIMATING FROM CONSIDERED DREDGE OF 1,200GPM, 465 MINS, 7.8HRS. THEN PLACE DRAIN PIPE END UNPLUGGED TO FLOAT ON SURFACE. EXPECT AROUND 415 CU.Y OF SEDIMENT FILLING THE COLLECTION AREA BETWEEN 4-6". REPEAT UNTIL NO LONGER PRACTICABLE

**SEQUENCE #3: FILLING PART 1**

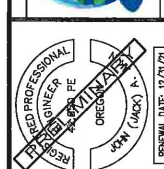
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**SEDIMENT DRAGFLOW SPECIFICATIONS**

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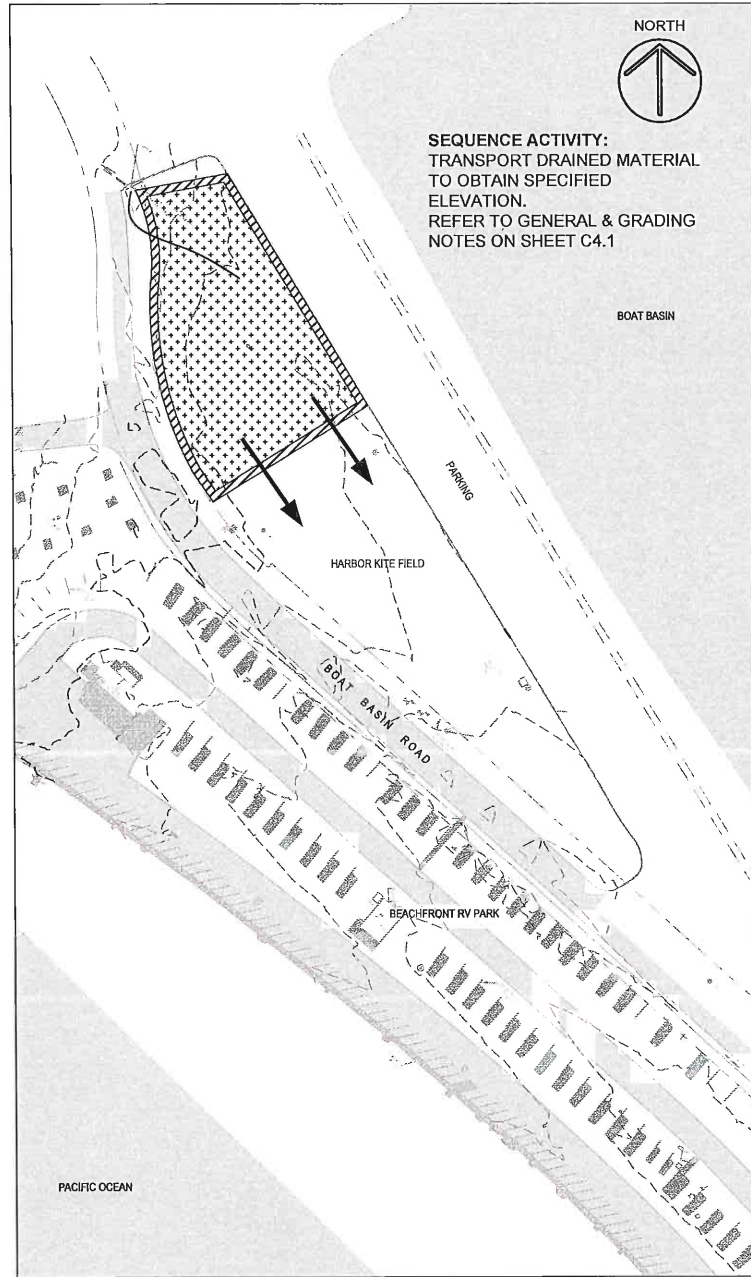

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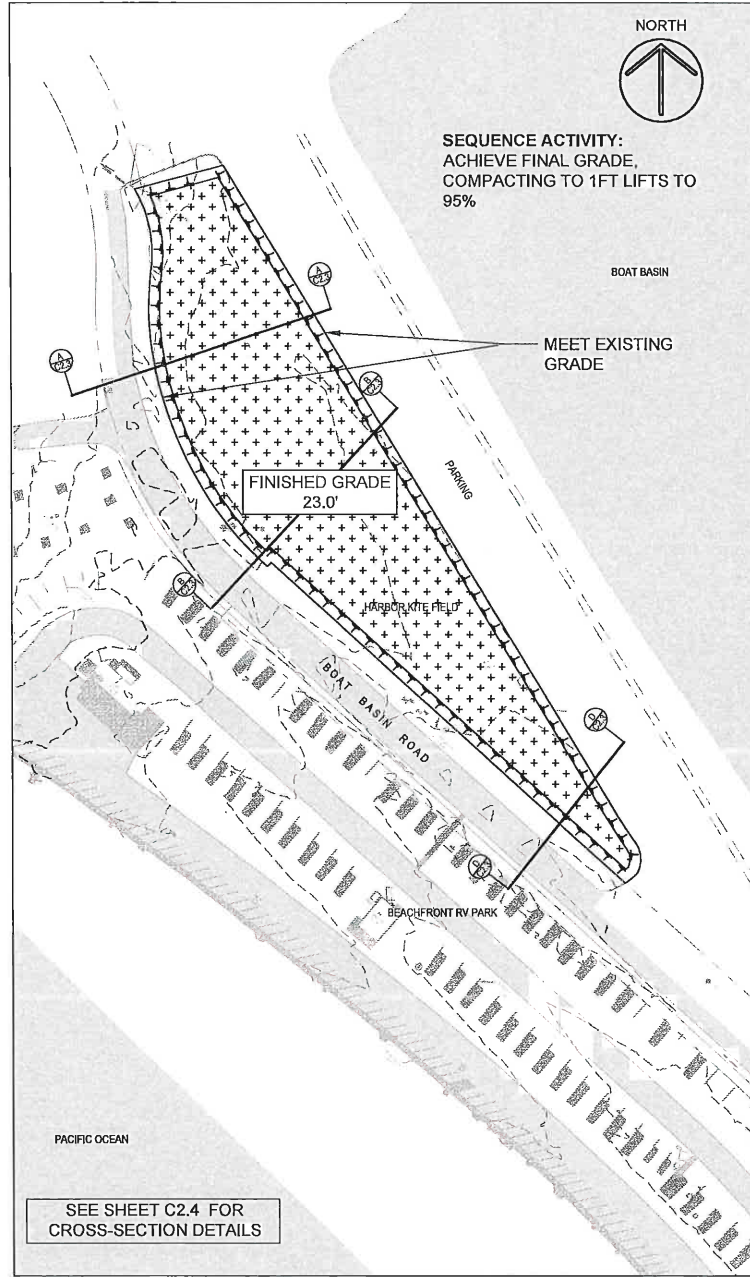
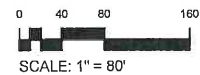
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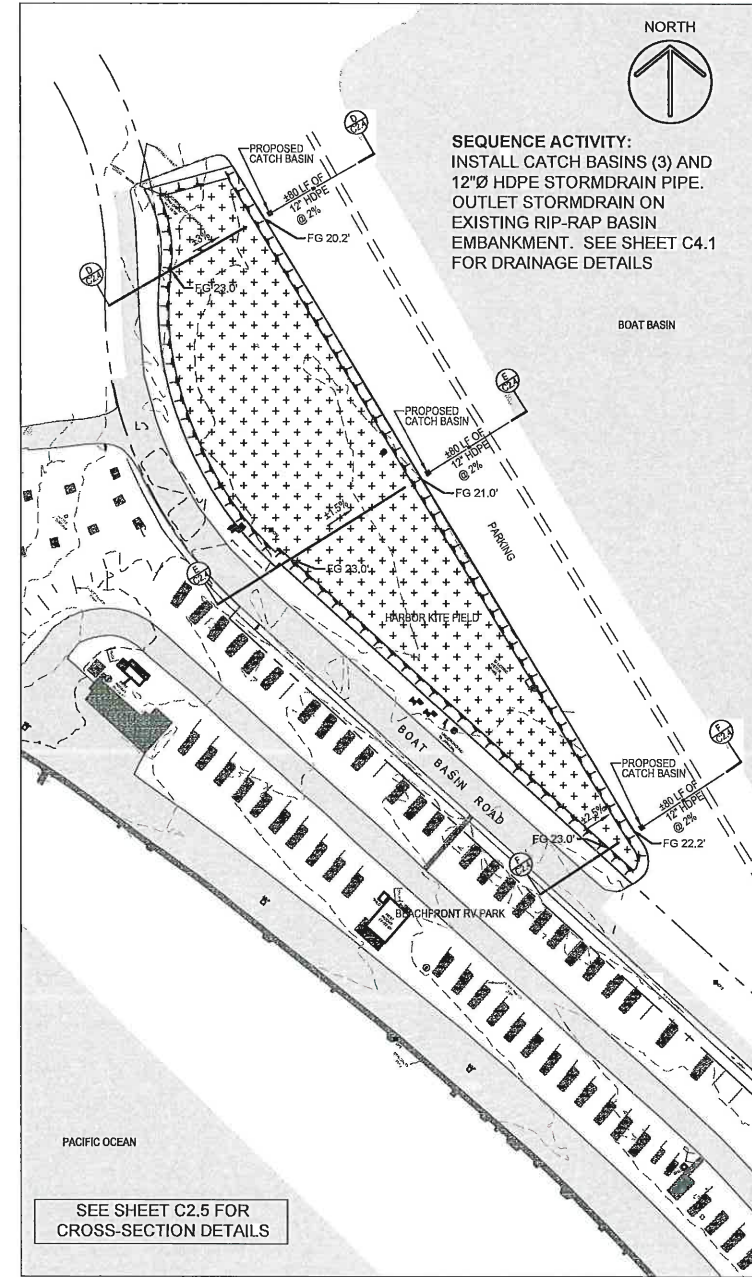
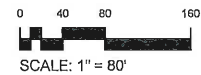
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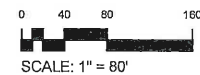
**SEQUENCE #5: GRADING AND COMPACTION**

SCALE: 1" = 80' (24x36)



**SEQUENCE #6: DRAINAGE**

SCALE: 1" = 80' (24x36)



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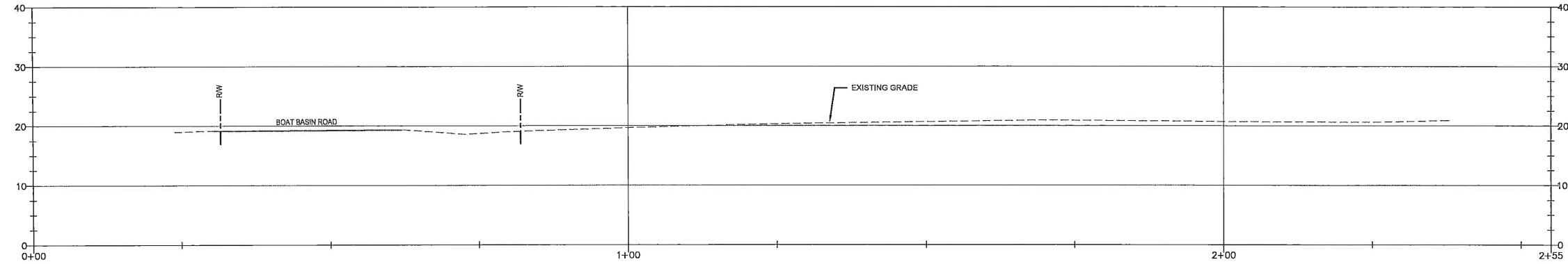
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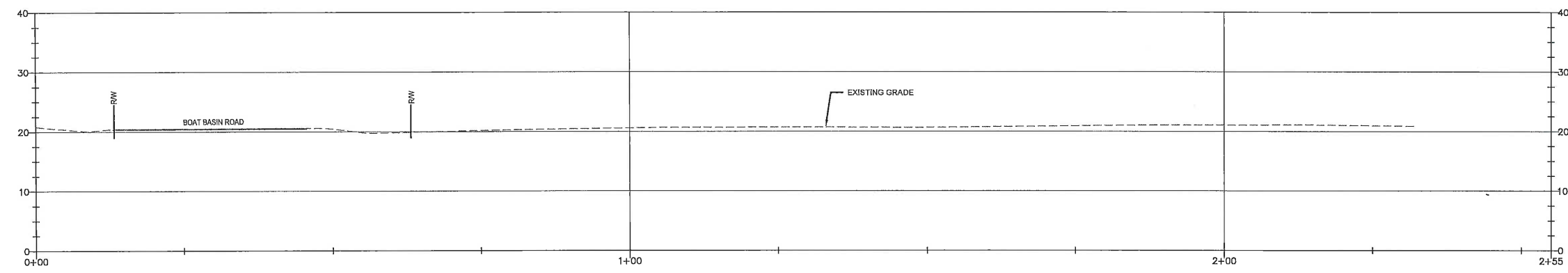
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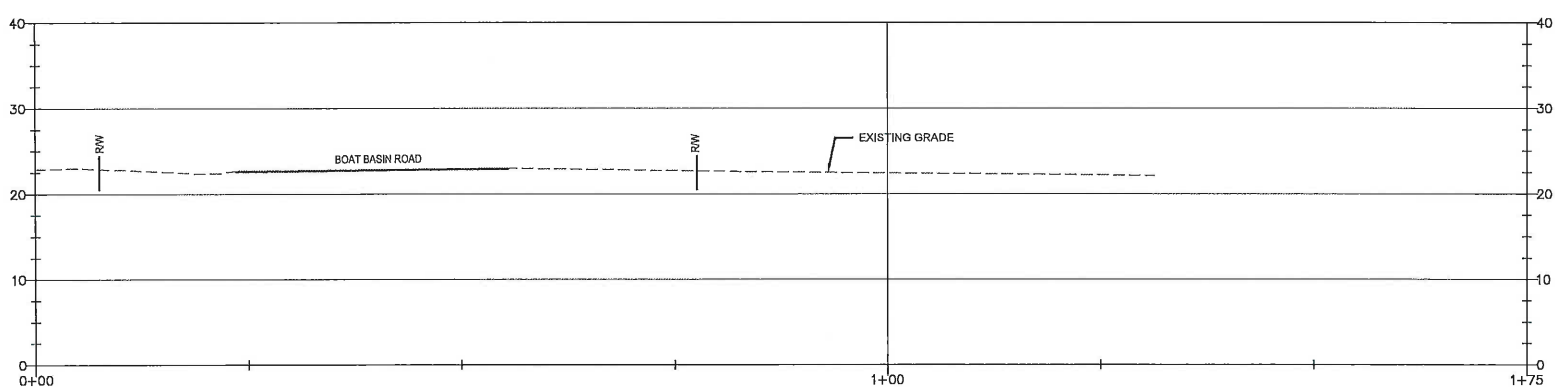




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SCALE: 1" = 10' (H & V)



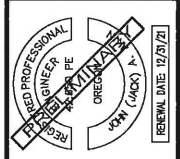
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SCALE: 1" = 10' (H & V)



**C-C** EXISTING CROSS SECTION - "C - C" SEE SHEET C2.0  
SCALE: 1" = 10' (H & V)

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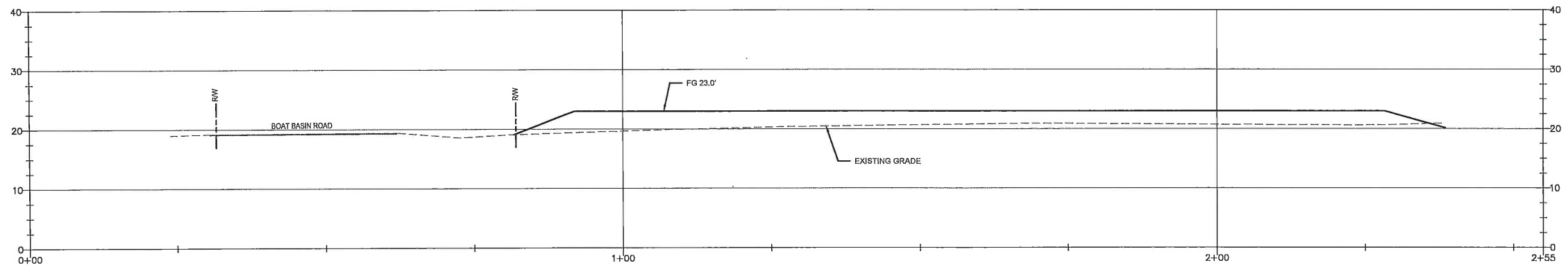
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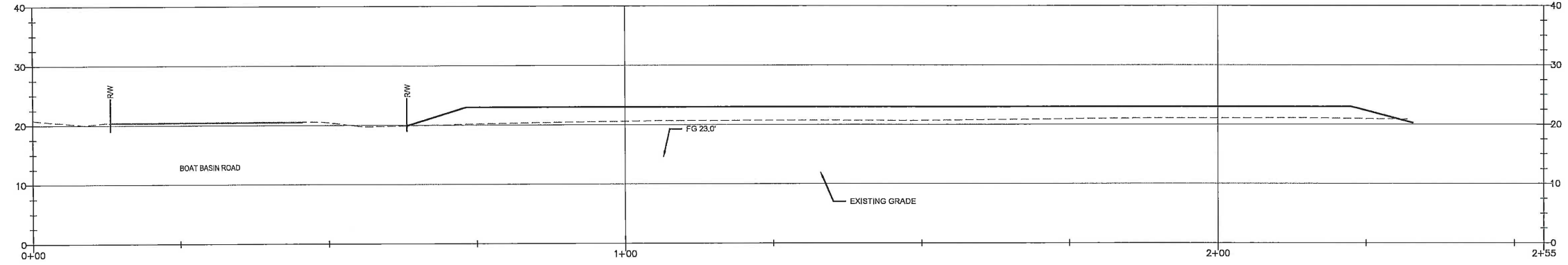
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 KITE FIELD RV PARK

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 JOB No: PB116  
 SHEET No:  
**C2.3**  
 CROSS SECTIONS

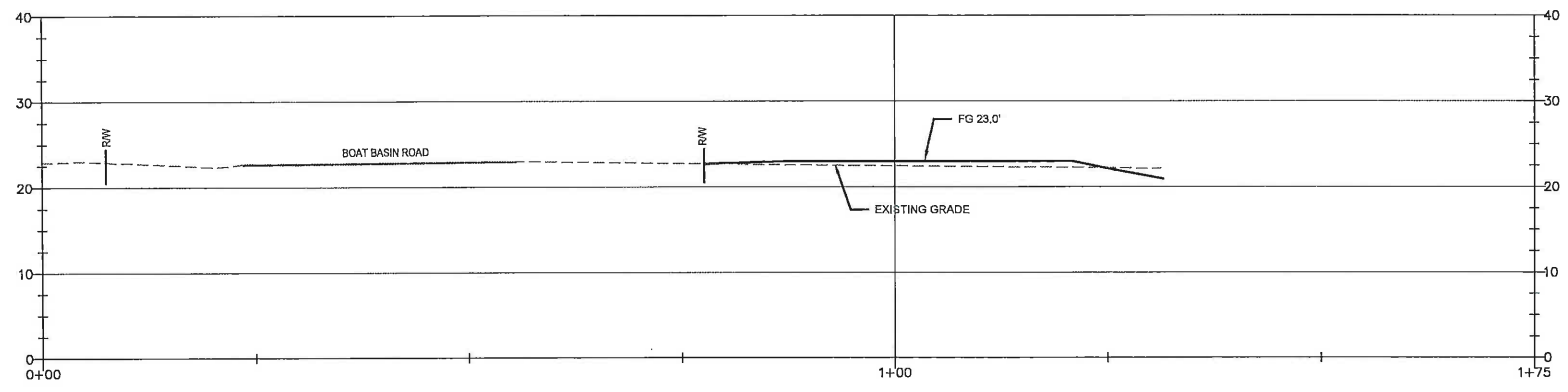




**A-A**  
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 SCALE: 1" = 10' (H & V)



**B-B**  
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 SCALE: 1" = 10' (H & V)

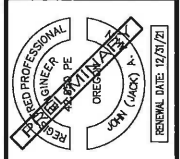


**C-C**  
 PROPOSED CROSS SECTION - "C - C" SEE SHEET C2.2  
 SCALE: 1" = 10' (H & V)

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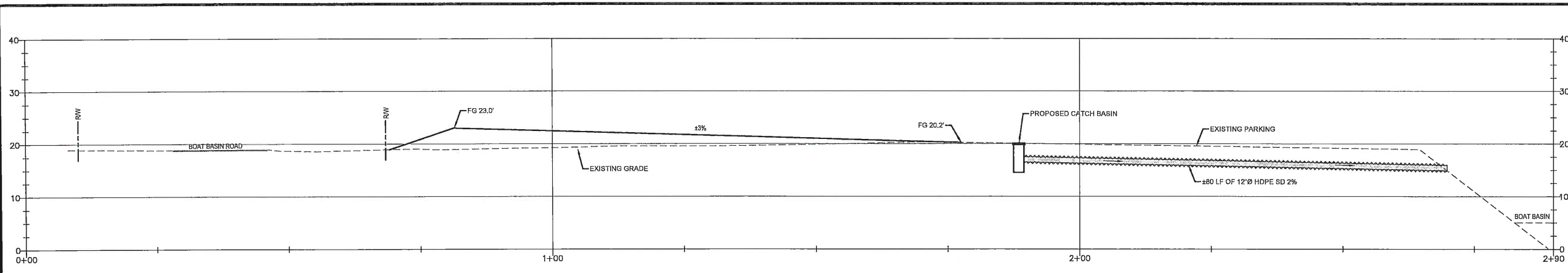
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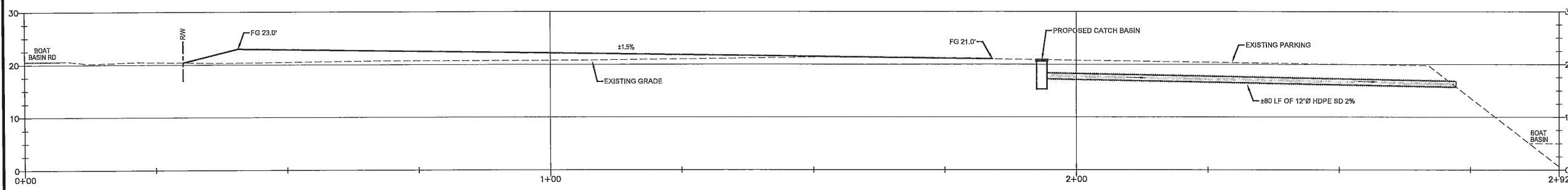
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JOB No:	PB116
SHEET No:	<b>C2.4</b>
CROSS SECTIONS	

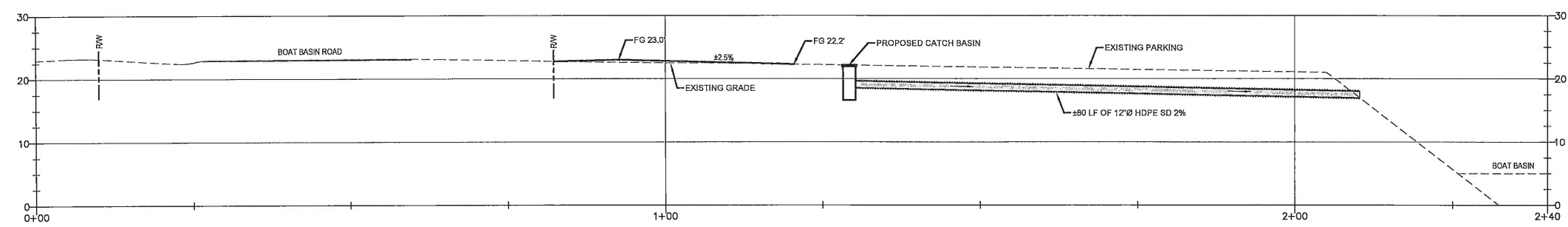




**D-D**  
 PROPOSED CROSS SECTION - "D - D" SEE SHEET C2.2  
 SCALE: 1" = 10' (H & V)



**E-E**  
 PROPOSED CROSS SECTION - "E - E" SEE SHEET C2.2  
 SCALE: 1" = 10' (H & V)



**F-F**  
 PROPOSED CROSS SECTION - "F - F" SEE SHEET C2.2  
 SCALE: 1" = 10' (H & V)

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 STATE OF OREGON  
 No. 12345  
 (Jack) Yass  
 EXPIRES: 12/31/21  
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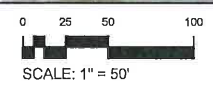
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 KITE FIELD RV PARK

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 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C2.5**  
 CROSS SECTIONS



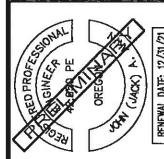


**KITE FIELD RV PARK PRELIMINARY LAYOUT**  
 SCALE: 1" = 50' (24x36)



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**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**KITE FIELD RV PARK**

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C3.0**  
 PRELIMINARY  
 RV LAYOUT

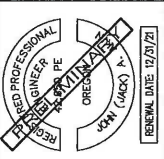


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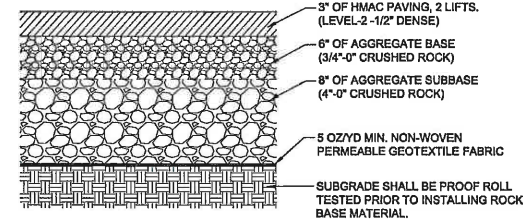


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**KITE FIELD RV PARK**

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C4.0**  
 ROAD  
 SECTIONS

### CONCRETE NOTES

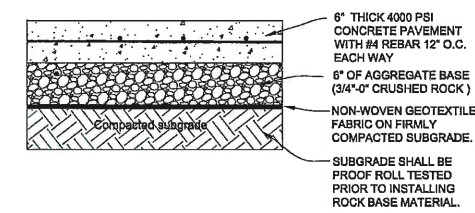
- PROVIDE A MINIMUM 8' TRANSITION SECTION WHEN JOINING CURBS OF DIFFERENT CROSS SECTIONS.
- CONCRETE SHALL NOT BE PLACED UNTIL FORMS HAVE BEEN INSPECTED AND APPROVED.
- CONCRETE SHALL BE COMMERCIAL GRADE RETAINING THE FOLLOWING CHARACTERISTICS: ENTRAINED AIR - 4.0% TO 7.0%; SLUMP - 8 INCHES OR LESS; COMPRESSIVE STRENGTH - MINIMUM 3,000 PSI AT 28 DAYS; TEMPERATURE - MINIMUM 50°F TO MAXIMUM 90°F.
- ALL CONCRETE STRUCTURES REINFORCED WITH REBAR SHALL BE VIBRATED TO REMOVE VOIDS.
- 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 "DUMMY" TOOLED JOINTS AT 5' INTERVALS ON CURBS, SIDEWALKS AND APPROACHES. CONTRACTION JOINT GROOVES SHALL BE AT MINIMUM 1/2" DEEP OR ONE-THIRD THE THICKNESS OF THE CONCRETE.
- PROVIDE EXPANSION JOINTS OPPOSITE ADJUTING EXPANSION JOINTS IN ADJUTING 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 CURBS AND ECRS, 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 TWELVE-FOOT 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.
- CONCRETE SHALL BE REMOVED TO THE NEAREST CONTRACTION JOINT, COLD JOINT OR CRACK WITHIN 4' OF THE REPLACEMENT AREA. CONCRETE SHALL BE SAW CUT WITH A SMOOTH, UNIFORM JOINT PROVIDED.
- EXISTING A/C SHALL BE REMOVED/REPLACED ALONG ENTIRE CURB SECTION TO A MINIMUM 18" WIDTH UNLESS APPROVED BY ENGINEER OF RECORD.



- NOTES**
- AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
  - 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.
  - JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
  - PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
  - PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

### 3 ASPHALT SECTION - DRIVE AISLES

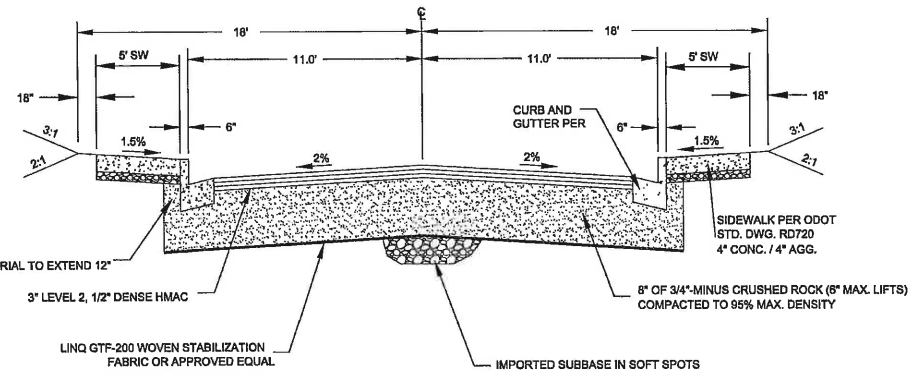
SCALE: NTS



- NOTES**
- 3/4"-0" AGGREGATE BASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD A.
  - JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, INSTALL ADDITIONAL CRUSHED ROCK PER ENGINEERS RECOMMENDATIONS.

### 4 REINFORCED CONCRETE SECTION

SCALE: NTS



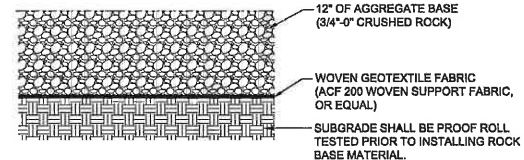
### STREET SECTION

SCALE: NTS THE PORT OF BROOKINGS HARBOR STREET STANDARDS

- NOTES**
- AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
  - 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.
  - JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
  - PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
  - PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

### GENERAL NOTES

- MAXIMUM CUT AND FILL SLOPES SHALL BE MAXIMUM OF 3:1 FOR FILL AND MAXIMUM OF 2:1 FOR CUT.
- PUE GRADE AS SHOWN, EMBANKMENT, WHERE REQUIRED, SHALL BE CONSTRUCTED FROM SELECT NATIVE SOILS.
- IMPORTED SUBBASE (WHERE APPLICABLE) TO BE 4"-0" CRUSHED ROCK.

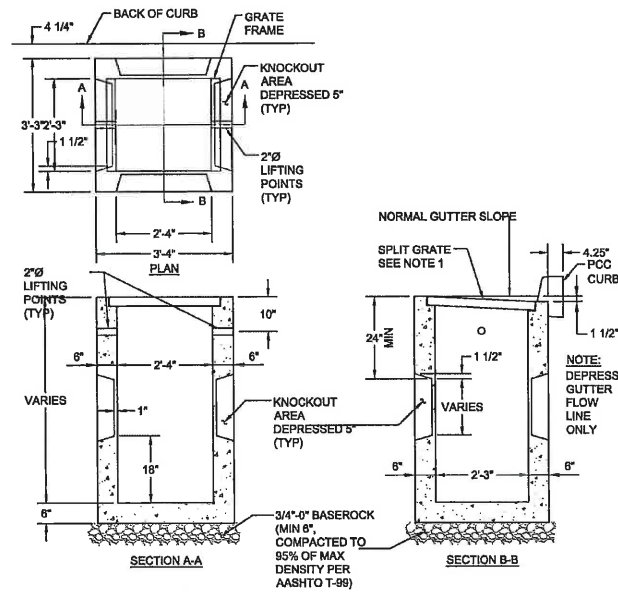


- NOTES**
- AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
  - JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.

### 2 EMERGENCY VEHICLE GRAVEL SECTION

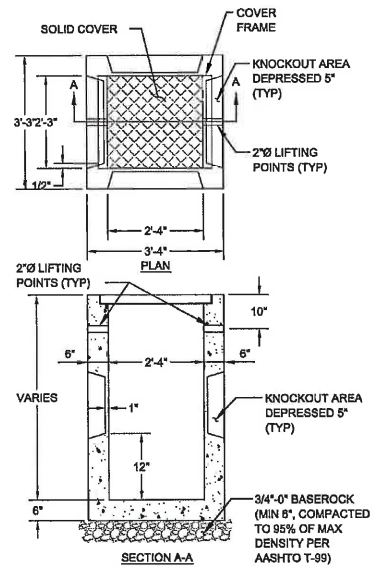
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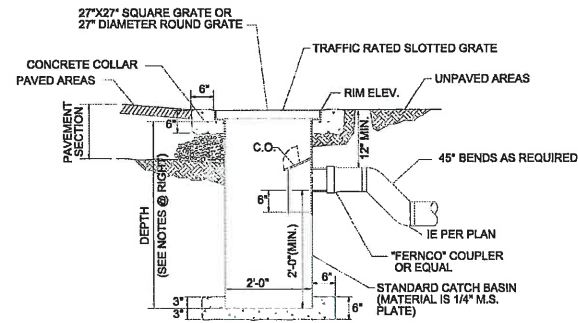
- NOTES**
1. GRATE AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION. GRATE AND FRAME TO BE ODOT G-2 TYPE 2 (BICYCLE SAFE).
  2. FOR PRECAST BOX, CURB MUST BE HAND FORMED 10" EACH SIDE OF CATCH BASIN.
  3. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
  4. CATCH BASIN AND GRATE SHALL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

**1 CATCH BASIN**  
SCALE: NTS



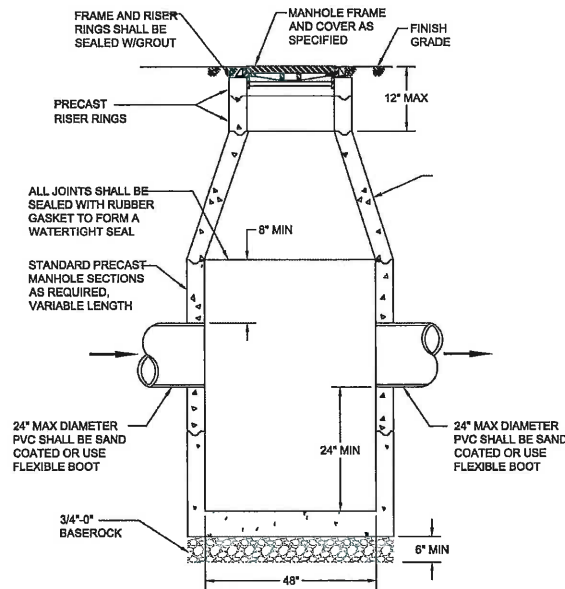
- CONSTRUCTION NOTES:**
1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
  2. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
  3. JUNCTION BASIN AND GRATE SHALL MEET HS20 LOADING.
  4. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
  5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24"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

**4 JUNCTION BASIN**  
SCALE: NTS



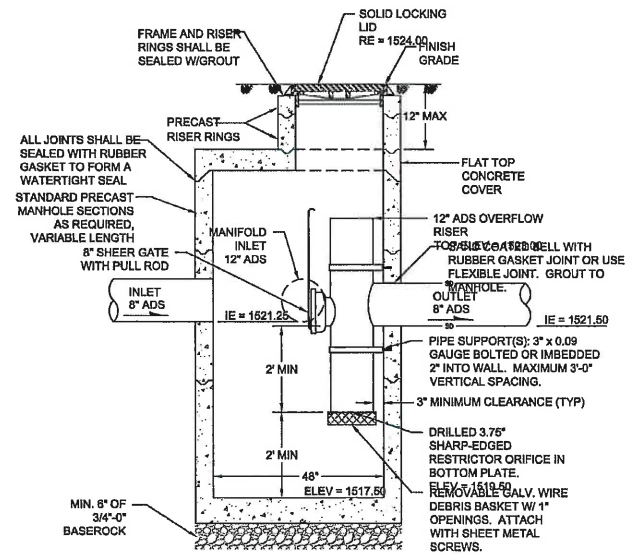
- GENERAL NOTES:**
1. ASPHALT COAT ALL SURFACES OF CATCH BASIN AND CLEANOUT AFTER WELDING OR HOT DIP GALVANIZE (AT MANUFACTURER'S DISCRETION)
  2. BREAK SHARP CORNERS AFTER WELDING.
  3. ALL WELDED STEEL CONSTRUCTION
  4. 10 GAUGE STEEL MINIMUM THICKNESS
  5. OPENING ON BOTTOM OF WATERSEAL TO BE GREATER, OR EQUAL TO AREA IN OUTLET PIPE.
  6. STANDARD DEPTH: 48"
- NOTE:** LYNCH OR APPROVED EQUAL CATCH BASIN.
- NOTE:** LOCATE ROUND BASIN IN PAVED AREAS, AND SQUARE BASINS ARE TO BE USED WHEN LOCATED NEXT TO CURB.

**2 LYNCH STYLE CATCH BASIN**  
SCALE: NTS



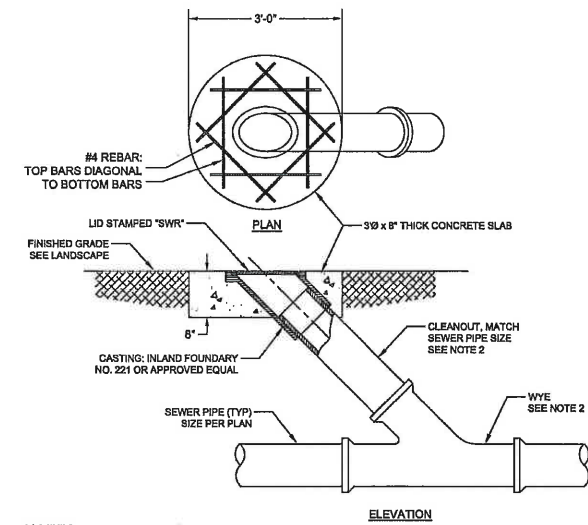
- NOTE**
- ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C 478.

**5 48" STORM MANHOLE**  
SCALE: NTS



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

**3 CONTROL STRUCTURE MANHOLE**  
SCALE: NTS (FONDS 2 & 3)

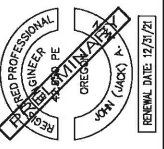


- NOTES**
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2015 ODOT STANDARD SPECIFICATIONS SECTION 0440. MINIMUM 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
  2. FITTINGS AND PIPE TO BE GASKETED PVC SDR 26.

**6 TYPICAL CLEANOUT**  
SCALE: NTS

REVISIONS	BY:	DATE:

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 614.275.1111 • www.emcinc.com



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**KITE FIELD RV PARK**

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C4.1**  
 DRAINAGE  
 DETAILS



**GENERAL NOTES**

1. ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE INTENDED TO BE, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCE STANDARD IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS. APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
  - 1.1. CURRENT OREGON STRUCTURAL SPECIALTY CODE
  - 1.2. CURRENT OREGON PLUMBING SPECIALTY CODE
  - 1.3. CURRENT OREGON ELECTRICAL SPECIALTY CODE
  - 1.4. NATIONAL FIRE PROTECTION ASSOCIATION
  - 1.5. CURRENT CURRY COUNTY STANDARDS SPECIFICATIONS FOR PUBLIC WORKS INFRASTRUCTURE.
2. WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF THE CURRENT "STANDARD SPECIFICATIONS FOR CONSTRUCTION", ODOT/AMERICAN PUBLIC WORKS ASSOCIATION (APWA), UNLESS OTHERWISE COVERED BY THE SPECIFICATIONS WRITTEN FOR THIS PROJECT OR THE COUNTY SPECIFICATIONS.
3. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE PROJECT ENGINEER AND/OR CITY ENGINEER. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CITY AND PROJECT ENGINEER TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.
4. PRIOR TO ANY SITE DISTURBING ACTIVITY INCLUDING CLEARING, LOGGING OR GRADING, THE SITE BOUNDARIES & CLEARING LIMITS AS SHOWN ON THESE PLANS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR AND ALL ESC MEASURES SHALL BE INSTALLED AS IDENTIFIED ON THE EROSION & SEDIMENT CONTROL PLAN.
5. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. ALL SITE WORK IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS. ANY DEVIATION FROM THESE PLANS WILL REQUIRE PRIOR APPROVAL FROM THE OWNER, ENGINEER AND APPROPRIATE PUBLIC AGENCIES PRIOR TO PERFORMING THE CHANGES IN THE FIELD.
7. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (DIAL 811) AT LEAST TWO BUSINESS DAYS PRIOR TO CONSTRUCTION. THE APPLICANT OR HIS REPRESENTATIVE AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF CONFLICTS EXIST.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
9. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. STREET WASHING WILL NOT BE ALLOWED WITHOUT PRIOR CITY APPROVAL.
10. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO INITIATING WORK. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN CONFLICTS OCCUR BETWEEN THE PLANS AND FIELD CONDITIONS. CONFLICTS SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION. REVISIONS SHALL BE FORMALLY APPROVED BY THE APPLICANT AND PROJECT ENGINEER PRIOR TO MAKING CHANGES IN THE FIELD.
11. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY UTILITY RELOCATIONS WITH UTILITY COMPANIES.
12. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
13. CONTRACTOR SHALL DOCUMENT AND RECORD FIELD CHANGES, PIPE INVERT, PIPE SLOPE, AND ANY OTHER CRITICAL AS-CONSTRUCT DATA AS-BUILT DRAWINGS AND FINAL REPORTS WILL BE REQUIRED BEFORE FINAL APPROVAL.
14. WORK IN COUNTY RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE LOCAL AUTHORITY.
15. APPROVED PERMANENT TRAFFIC CONTROL SIGNS AND MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED PRIOR TO FINAL APPROVAL.
16. DURING PROJECT CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TEMPORARY CONSTRUCTION SIGNS, TRAFFIC CONTROL SIGNS, DELINEATORS AND TEMPORARY MARKINGS AS REQUIRED.
17. ACCESS BY EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
18. ALL CLEARED AND GRUBBED MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED AT AN APPROVED LOCATION.
19. ALL AREAS WITH ABANDONED UTILITY LINES, STORM DRAINS, UNDERGROUND TANKS, ETC. WHICH MAY PROVIDE VOID SPACE BENEATH THE SURFACE SHALL BE REMOVED. WHEN APPROVED BY THE ENGINEER THE VOID SPACE MAY BE FILED WITH APPROVED MATERIAL. ALL TANKS OR HAZARDOUS MATERIALS SHALL BE DEALT WITH IN ACCORDANCE TO ALL LOCAL, STATE AND FEDERAL LAWS.
20. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
21. CONTRACTOR IS RESPONSIBLE FOR ANY ASPHALT GRINDING, OVERLAY AND SLURRY SEAL. ALL SPECIFICATIONS SHALL COMPLY WITH ALL LOCAL AUTHORITY REQUIREMENTS.
22. CONSTRUCTION SHALL CONFORM TO THE 2018 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE OREGON CHAPTER OF APWA, AND THE CURRENT AMENDMENTS OF THE APPROVING AGENCY.
23. ALL CONCRETE SHALL BE 3300 PSI AT 28 DAYS UNLESS OTHERWISE SPECIFIED.
24. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN AND/OR MAINTAIN EXISTING PUBLIC STREETS OF SOIL OR OTHER DEBRIS DEPOSITED BY CONSTRUCTION OPERATIONS AND REPAIR ALL STREETS DAMAGED BY CONSTRUCTION OPERATIONS IN A TIMELY MANNER TO AVOID INCONVENIENCES OR HAZARDS TO THE PUBLIC.
25. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER AT 1-800-332-2344.
26. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE PRE-QUALIFIED WITH THE PORT OF BROOKINGS HARBOR PRIOR TO ANY CONSTRUCTION OF THIS PROJECT.
27. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AND SECURE APPROVAL OF THE PLAN FROM THE AGENCY AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
28. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED BY THE SPECIFICATIONS.
29. WHERE CONNECTING TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE AND ALLOW THE ENGINEER TO VERIFY EXACT LOCATION AND ELEVATION BEFORE LAYING ANY NEW PIPE ON THAT SYSTEM.
30. REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE CONSULTING ENGINEER BEFORE CHANGES ARE IMPLEMENTED.
31. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 757.542 TO 757.562, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HAND-EXPOSE (POTHOLE) UNDERGROUND FACILITIES AND USE REASONABLE CARE TO AVOID DAMAGING THEM.
32. PLACEMENT OR STORAGE OF SPOILS FROM THE SEWER LINE TRENCHES IS NOT PERMITTED ON HARD SURFACE STREETS WITHIN PUBLIC RIGHT-OF-WAY. SPOILS STORED IN OTHER RIGHT-OF-WAY AREAS SHALL BE COVERED TO PREVENT EROSION.
33. FORMS OF ADEQUATE SIZE AND CONFIGURATION TO MEET CONCRETE THICKNESS REQUIREMENTS SHALL BE USED AROUND OUTSIDES OF OUTSIDE-DROP MANHOLES.
34. GRANULAR MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE PORT OF BROOKINGS HARBOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE MATERIAL.

**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 3:1 FOR FILL AND MAXIMUM OF 2:1 FOR CUT.
7. USE OF CURRY COUNTY WATER SUPPLY FOR DUST CONTROL.

**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"\*. THOROUGHLY TAMPING EACH LAYER. THESE COMPACTED LAYERS MUST EXTEND FOR ONE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE SIDE OF THE TRENCH. MATERIALS TO COMPLETE THIS FILL OVER 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 JUST 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 ENGINEER OF RECORD 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 BUILT 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 CITY ACCEPTANCE.
9. ALL PIPES SHALL HAVE A MINIMUM OF 30" COVER AT THE TOP OF THE BELL, OR 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.

**SANITARY SEWER NOTES**

1. THE SANITARY SEWER SYSTEM IS TO BE OWNED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR
2. INSPECTION AND ACCEPTANCE IS TO BE THE RESPONSIBILITY OF THE PORT OF BROOKINGS HARBOR.
3. ALL WORK SHALL CONFORM TO THE LATEST VERSION OF THE APWA/ODOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND COB STANDARD SPECIFICATIONS AND DRAWINGS. CURRY COUNTY STANDARDS SHALL TAKE PRECEDENCE.
4. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR AND THE PORT OF BROOKINGS HARBOR IS REQUIRED PRIOR TO STARTING WORK.
5. CONTRACTOR SHALL NOTIFY COB 48 HOURS IN ADVANCE OF CONSTRUCTION.
6. CONTRACTOR SHALL OBTAIN PREQUALIFIED STATUS WITH COB PRIOR TO PERFORMING WORK ON SEWER TO BE OWNED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR, INCLUDING TAPS ON EXISTING SEWER MAINS.
7. CONFINED SPACE CERTIFICATION WILL BE VERIFIED PRIOR TO PERFORMING WORK ON THE PORT OF BROOKINGS HARBOR FACILITIES REQUIRING CONFINED SPACE ENTRY. PERSONAL PROTECTIVE EQUIPMENT INCLUDING BUT NOT LIMITED TO GAS DETECTION METERS, FALL PROTECTION AND A CONFINED SPACE RESCUE SYSTEM WILL BE REQUIRED.
8. CONTRACTOR IS RESPONSIBLE FOR THE TESTING OF SANITARY SEWER FACILITIES PER COB SPECIFICATIONS. TESTING OF SEWER FACILITIES IS SUBJECT TO THE PORT OF BROOKINGS HARBOR ACCEPTANCE.
9. CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF EXISTING SEWER FLOWS DURING CONSTRUCTION. UPON REQUEST, A SEWER BYPASS PLAN MUST BE SUBMITTED TO THE PORT OF BROOKINGS HARBOR FOR APPROVAL PRIOR TO BYPASSING OR BLOCKING EXISTING SEWER.
10. SANITARY SEWER WORK SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
11. NOTIFY ENGINEER IF ANY EXISTING ONSITE SEWER LATERALS ARE FOUND. UTILIZATION OF SUCH LATERALS IS SUBJECT TO COMPLETION OF TV INSPECTION, DYE TEST, AND APPROVAL OF LOCAL AUTHORITIES. ABANDON EXISTING LATERALS NOT UTILIZED PER LOCAL AUTHORITY STANDARDS.
12. 100-FT MAX LINEAR RUN BETWEEN CLEANOUTS. 135" MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

**WATER NOTES**

- ALL WATER WORKS SHALL BE DONE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE PORT OF BROOKINGS HARBOR STANDARDS STANDARD SPECIFICATIONS.
1. SERVICE CONNECTIONS ARE TO BE INSTALLED FOR EACH PARCEL PER CURRY COUNTY STANDARDS.
  2. COVER OVER EXISTING MAINS SHALL NOT BE CHANGED WITHOUT WRITTEN AUTHORIZATION OF THE PORT OF BROOKINGS HARBOR.
  3. NEW MAINS ARE TO BE PRESSURE TESTED, DISINFECTED AND PROVEN TO BE BACTERIOLOGICALLY SAFE PRIOR TO PLACING NEW MAINS IN SERVICE BY THE PORT OF BROOKINGS HARBOR. PRESSURE TESTING SHALL NOT BE DONE UNTIL ALL EXCAVATION AND BACKFILL UP TO SUBGRADE HAS BEEN ESTABLISHED.
  4. INITIAL BACKFILL TO TOP OF WATER MAINS AND FIRE HYDRANTS RUNS SHALL BE COMPACTED IN ACCORDANCE WITH CURRY COUNTY STANDARD SPECIFICATION FOR TRENCH EXCAVATION AND BACKFILL, OR BACKFILL MATERIAL AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE CONTROLLING AGENCY.
  5. WATER MAINS AND FIRE HYDRANTS ARE TO BE INSTALLED WITH REFERENCE ALIGNMENT AND GRADE STATUS AND ONLY UPON NOTIFICATION OF CURRY COUNTY INSPECTOR.
  6. WATER MAINS ARE TO BE INSTALLED AFTER SEWERS.
  7. FIRE HYDRANT RUNS ARE TO BE INSTALLED BEFORE CURBS AND GUTTERS. IN THE EVENT A WATER MAIN IS INSTALLED LARGER THAN EIGHT (8) INCHES, OR IF THE MAIN HAS MORE THAN THREE (3) FEET OF COVER, THE CONTRACTOR WILL BE REQUIRED TO INSTALL AN OFFSET SIMILAR TO STANDARD DETAIL 4.37 TO PERMIT USE OF A STANDARD 3'-6" BURY FIRE HYDRANT.
  8. STUBS SERVICE RUNS SHALL BE INSTALLED PRIOR TO CURB AND GUTTER AND AFTER PUBLIC UTILITY EASEMENTS ARE GRADED TO CURB LEVELS.
  9. APPROVED PLANS AND SPECIFICATION SHALL BE AVAILABLE AT SITE OF THE CONSTRUCTION AT ALL TIMES DURING CONSTRUCTION OF WATER FACILITIES.
  10. SEPARATION OF WATER MAIN, INCLUDING SERVICE LINES AND SANITARY SEWER, SHALL BE IN ACCORDANCE WITH CURRENT OREGON STATE HEALTH DIVISION RULES. THE STANDARDS EXCEPT IN ALL CASES RUNNING PARALLEL WITH EACH OTHER, THERE SHALL BE A 10 FOOT SEPARATION CENTER LINE TO CENTER LINE. REFER CURRY COUNTY STANDARDS (STANDARD DETAILS NO 4.39).
  11. NO ABOVE-GROUND APPURTENANCES OR PHYSICAL STRUCTURES OF ANY KIND SHALL BE WITHIN FIVE (5) FEET (HORIZONTALLY) OF ANY WATER FACILITY WHETHER THAT WATER FACILITY IS ABOVE OR BELOW GROUND. THIS DISTANCE SHALL BE TEN (10) FEET (HORIZONTALLY) WHEN WATER AND SANITARY SEWER FACILITIES ARE CONCERNED.
  12. NO BELOW-GROUND UTILITY LINES OR OTHER SERVICE OF ANY KIND SHALL BE WITHIN FIVE (5) FEET (HORIZONTALLY) OF ANY WATER FACILITY WHEN RUNNING PARALLEL TO THE WATER FACILITY.
  13. NO BELOW-GROUND UTILITY LINES OR OTHER SERVICE OF ANY KIND SHALL BE WITHIN SIX (6) INCHES (VERTICALLY) OF ANY WATER FACILITY WHEN RUNNING PERPENDICULAR TO THE WATER FACILITY. THIS DISTANCE SHALL BE EIGHTEEN (18) INCHES (VERTICALLY) WHEN WATER AND SANITARY SEWER FACILITIES ARE CONCERNED.
  14. BLASTING OR EXPLOSIVE WORK WILL NOT BE ALLOWED WITHIN 30 FEET OF EXISTING WATER FACILITIES AND ONLY THEN USING PROPER INDUSTRY STANDARDS AND THROUGH A PERMIT PROCESS WITH THE FIRE DEPARTMENT OR OTHER AGENCY JURISDICTION.
  15. THE CURRY COUNTY REQUIRES "POLY PIGS" TO BE USED ON ALL NEWLY LAID WATER LINES.
  16. ALL DRY TAP WATER SERVICES AND AIR RELEASE VALVES SHALL BE INSTALLED BY A CURRY COUNTY PRE-QUALIFIED INSTALLER.
  17. ONLY STATE OF OREGON-APPROVED BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED.

**APPLICABLE CODES**

ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND CITY CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE INTENDED TO BE, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCE STANDARD IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO TO FOLLOWING:

- OREGON STANDARD DRAWINGS (ODOT)  
 CURRY COUNTY ADOPTED STANDARD DETAILS AND SPECIFICATIONS  
 OPSC: OREGON PLUMBING SPECIALTY CODE, LATEST EDITION  
 OFC: OREGON FIRE CODE, LATEST EDITION  
 NFPA: NATIONAL FIRE PROTECTION ASSOCIATION 101 LIFE SAFETY CODE, LATEST EDITION

**PAVEMENT MARKING NOTES**

1. ALL STRIPING AND SIGNAGE SHALL BE PER MUTCD STANDARDS OR AS DIRECTED BY THE LOCAL AUTHORITY.
2. ALL STRIPING AND MARKINGS INSIDE PUBLIC RIGHT OF WAY SHALL BE PER LOCAL AUTHORITY STANDARDS.
3. ALL STRIPING SHALL MEET ADA REQUIREMENTS.

**ADA NOTES**

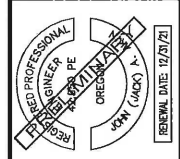
1. ALL ADA ACCESSIBLE FACILITIES SHALL BE INSTALLED PER THE CURRENT ADA REQUIREMENTS AND PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES. (PROWAG)
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE ACCESSIBLE PATH OF TRAVEL COMPLIES WITH AMERICAN DISABILITIES ACT AND ALL LOCAL CODES.
3. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/8" BEVELED AT 1:2 MAX SLOPE, OR VERTICAL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE NOTED.

**INSPECTION AND TESTING NOTES**

1. 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.
2. TESTING MUST BE PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY RETAINED BY CONTRACTOR.
3. 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. BASEROCK PROOF-ROLL SHALL TAKE PLACE LESS THAN 24 HOURS PRIOR TO PAVING AND SHALL BE WITNESSED BY THE ENGINEER OR GOVERNING AGENCY.
4. THE APPROVED INDEPENDENT LABORATORY SHALL PROVIDE CERTIFICATION 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.
5. PROVIDE ENGINEER WITH SPOT ELEVATION VERIFICATION FOR SUB-GRADE AND TOP OF AGGREGATE PRIOR TO PLACING CONCRETE, ASPHALT, AND/OR STRUCTURES (WHEN INCLUDED IN THE PROJECT).

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**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 KITE FIELD RV PARK

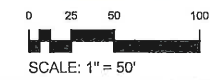
DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C4.2**  
 GENERAL NOTES





**KITE FIELD RV PARK PRELIMINARY EROSION CONTROL PLAN**

SCALE: 1" = 50' (24x36)



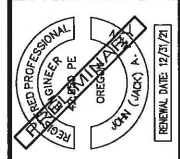
**SHEET INDEX**

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**EMC** - Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**KITE FIELD RV PARK**

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C5.0**  
 ESC  
 PLAN



**ESCP STANDARD NOTES:**

- HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE ENGINEER TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SCHEDULE A.12.B AND SCHEDULE B.1)
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SCHEDULE B.1.C AND B.2)
- RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, THE ABOVE RECORDS MUST BE RETAINED BY THE PERMIT REGISTRANT BUT DO NOT NEED TO BE AT THE CONSTRUCTION SITE. (SCHEDULE B.2.C)
- ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A.8.A)
- THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SCHEDULE A.12.C.I)
- SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SCHEDULE A.12.C.IV. AND V)
- PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.7.A.III)
- IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SCHEDULE A.8.C.I.(1) AND (2))
- PRESERVE EXISTING VEGETATION WHEN PRACTICAL, AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.A.V)
- MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SCHEDULE A.7.B.I.AND (2)(A)(B))
- INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SCHEDULE A.8.C.I.(5))
- CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SCHEDULE A.7.C)
- CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SCHEDULE A.7.D.I)
- ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
- APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SCHEDULE A.8.C.I.(3))
- ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.II.(7))
- PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMP'S MUST BE IN PLACE PRIOR TO LAND DISTURBING ACTIVITIES. (SCHEDULE A.7.D.II AND A.8.C.I.(4))
- WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II (5))
- CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SCHEDULE A.8)
- USE BMP'S TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
- IMPLEMENT THE FOLLOWING BMP'S WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES. EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES. SPILL KITS IN ALL VEHICLES. REGULAR MAINTENANCE. SCHEDULE FOR MACHINERY AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCHEDULE A. 7.E.III.)
- USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A.7.A.IV)
- THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.II)
- IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
- TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED, THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A.7.B)
- AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMP'S MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A.7.E.II.(2))
- CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND BARE GROUND ACTIVITIES DURING WET WEATHER. (SCHEDULE A.7.A.I)
- SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
- OTHER SEDIMENT BARRIERS (SUCH AS BIOSAGS); REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.I)
- CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III & IV)
- WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A REOCCURENCE 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 TIMEFRAME. (SCHEDULE A.9.B.I)
- THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
- THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
- PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
- DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. (SCHEDULE A.8.C.III (1) AND D.3.C.II AND III)

**WET WEATHER CONSTRUCTION**

THE SITE SOILS ARE CONSIDERED VERY MOISTURE SENSITIVE AND, AS SUCH, ARE SUSCEPTIBLE TO DISTURBANCE BY CONSTRUCTION EQUIPMENT, PARTICULARLY DURING PERIODS OF WET WEATHER. DURING WET WEATHER, THE CONTRACTOR SHALL MINIMIZE TRAFFIC ON PREPARED SOIL SUBGRADE AREAS. 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. THE GRADING CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EXCESSIVE RUNOFF EROSION.

INSPECTION FREQUENCY	
SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING AT LEAST ONCE EVERY TWO WEEKS, REGARDLESS OF WHETHER OR NOT RUNOFF IS OCCURRING.
2. 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 PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CALENDAR DAYS.	ONCE EVERY MONTH.
4. 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.
5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS.	MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

**IMPLEMENTATION OF CONTROL MEASURES:**

- A. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP (PARAGRAPH A.12). FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT.
- B. ALL PERMIT REGISTRANTS MUST PREVENT THE DISCHARGE OF SIGNIFICANT AMOUNTS OF SEDIMENT TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. THE FOLLOWING CONDITIONS INDICATE THAT A SIGNIFICANT AMOUNT OF SEDIMENT HAS LEFT OR IS LIKELY TO LEAVE THE SITE:
- EARTH SLIDES OR MUD FLOWS;
  - CONCENTRATED FLOWS OF STORMWATER SUCH AS RILLS, RIVULETS OR CHANNELS THAT CAUSE EROSION WHEN SUCH FLOWS ARE NOT FILTERED, SETTLED OR OTHERWISE TREATED TO REMOVE SEDIMENT;
  - SEDIMENT LADEN OR TURBID FLOWS OF STORMWATER THAT ARE NOT FILTERED OR SETTLED TO REMOVE SEDIMENTS AND TURBIDITY;
  - DEPOSITS OF SEDIMENT AT THE CONSTRUCTION SITE IN AREAS THAT DRAIN TO UNPROTECTED STORMWATER INLETS OR TO CATCH BASINS THAT DISCHARGE TO SURFACE WATERS. INLETS AND CATCH BASINS WITH FAILING SEDIMENT CONTROLS DUE TO LACK OF MAINTENANCE OR INADEQUATE DESIGN ARE CONSIDERED UNPROTECTED;
  - DEPOSITS OF SEDIMENT FROM THE CONSTRUCTION SITE ON ANY PROPERTY (INCLUDING PUBLIC AND PRIVATE STREET(S)) OUTSIDE OF THE CONSTRUCTION ACTIVITY COVERED BY THIS PERMIT.
- C. THE PERMIT REGISTRANT MUST ENSURE THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP ARE IMPLEMENTED ACCORDING TO THE FOLLOWING SEQUENCE:
- BEFORE CONSTRUCTION.
    - IDENTIFY, MARK, AND PROTECT (WITH CONSTRUCTION FENCING 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 (FOR EXAMPLE, WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
    - HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE ENGINEER REQUIRED BY CONDITION A.12.B.III TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS;
    - STABILIZE SITE ENTRANCES AND ACCESS ROADS INCLUDING, BUT NOT LIMITED TO CONSTRUCTION ENTRANCES, ROADWAYS AND EQUIPMENT PARKING AREAS (FOR EXAMPLE, USING GEOTEXTILE FABRIC UNDERLAY);
    - INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS.
    - ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK;
    - ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
    - STABILIZE STREAM BANKS AND CONSTRUCT THE PRIMARY RUNOFF CONTROL MEASURES TO PROTECT AREAS FROM CONCENTRATED FLOWS.
  - DURING CONSTRUCTION.
    - LAND CLEARING, GRADING AND ROADWAYS.
      - BEGIN LAND CLEARING, EXCAVATION, TRENCHING, CUTTING OR GRADING ONLY AFTER INSTALLING APPLICABLE SEDIMENT AND RUNOFF CONTROL MEASURES
      - PROVIDE APPROPRIATE EROSION AND SEDIMENT CONTROL BMP'S FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
      - INSTALL ADDITIONAL CONTROL MEASURES AS WORK PROGRESSES AS NEEDED.
      - PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
    - SURFACE STABILIZATION.
      - APPLY TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES (FOR EXAMPLE, TEMPORARY AND PERMANENT SEEDING, OR MULCHING) IMMEDIATELY ON ALL DISTURBED AREAS AS WORK IS COMPLETED. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER ANY EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE.
      - CONSTRUCTION AND PAVING.
        - KEEP EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
    - FINAL STABILIZATION AND LANDSCAPING.
      - PROVIDE PERMANENT EROSION PREVENTION MEASURES ON ALL EXPOSED AREAS.
      - REMOVE AND PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMP'S.
      - REMOVE ALL TEMPORARY CONTROL MEASURES AS AREAS ARE STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS.
  - FINAL STABILIZATION AND LANDSCAPING.
    - PROVIDE PERMANENT EROSION PREVENTION MEASURES ON ALL EXPOSED AREAS.
    - REMOVE AND PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMP'S.
    - REMOVE ALL TEMPORARY CONTROL MEASURES AS AREAS ARE STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS.

**ESCP RESPONSIBILITY**

IT IS THE INTENT OF THIS TEMPORARY EROSION AND SEDIMENT CONTROL PLAN THAT STORM WATER RUNOFF BE CONTROLLED AT ALL TIMES TO PREVENT SOIL EROSION AND TO MAINTAIN WATER QUALITY. ANY AND ALL MEASURES NECESSARY TO DO SO SHALL BE EMPLOYED BY THE CONTRACTOR.

- REGARDLESS OF SITE, WEATHER, SOIL OR OTHER CONDITIONS, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ENSURING THAT EROSION DOES NOT OCCUR ON THE SITE AND THAT POLLUTED OR SILT-LADEN RUNOFF DOES NOT LEAVE THE SITE OR ENTER INTO ANY CREEK, STREAM, WETLAND OR WATER BODY ON THE SITE.
- BEYOND THE MINIMUM REQUIREMENTS SHOWN ON THIS PLAN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND IMPLEMENTING APPROPRIATE METHODS, "BEST MANAGEMENT PRACTICES" (BMP'S), FOR STORM WATER TREATMENT AND CONTROL THAT MEET THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTION.
- THE CONTRACTOR SHALL REPORT ALL WATER QUALITY CONCERNS AND ACTIVITIES TO THE PROJECT ENGINEER. IN THE EVENT THAT THE INSTALLED WATER QUALITY CONTROL MEASURES ARE INEFFECTIVE AT CONTROLLING EROSION AND SEDIMENT, THE CONTRACTOR SHALL IMMEDIATELY REPORT TO AND CONSULT WITH THE PROJECT ENGINEER TO FIND AN APPROPRIATE REMEDY. ALL CONSTRUCTION ACTIVITIES, WITH THE EXCEPTION OF EROSION AND SEDIMENT CONTROL MEASURES, SHALL CEASE UNTIL SUCH TIME AS THE WATER QUALITY IS BROUGHT UNDER CONTROL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING WEATHER FORECASTS AND ANTICIPATING STORM ACTIVITY AND SHALL SCHEDULE ALL PROJECT ACTIVITIES IN ANTICIPATION OF THE WEATHER.
- ALL SUPPLIES AND MATERIALS NECESSARY FOR IMPLEMENTING BMP'S SHALL BE STORED ON SITE AND SHALL BE IMMEDIATELY AVAILABLE FOR USE. SUCH SUPPLIES AND MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO, STRAW BALES OR OTHER MULCHING MATERIAL, SILT FENCING AND STAKES, FILTER FABRIC, ETC.
- DURING AND AFTER RUNOFF PRODUCING STORM EVENTS, CONTRACTOR SHALL MONITOR ALL EROSION CONTROL MEASURES AND SHALL PRIORITIZE IMPLEMENTATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES ABOVE ALL OTHERS.

**ENGINEER**

EMC - ENGINEERING/SCIENTISTS, LLC  
 450 CONESTOGA CIRCLE  
 JACKSONVILLE, OREGON  
 541-261-9629

**NARRATIVE DESCRIPTIONS**

**EXISTING SITE CONDITIONS**

UNPAVED PARKING LOTS, OUTSIDE STORAGE, RECREATIONAL FIELD, BOAT YARD

**DEVELOPED CONDITIONS**

PAVED PARKING LOTS, STORM WATER SEWER SYSTEM, UTILITIES, RECREATIONAL VEHICLE USE, PAVED BOAT YARD

**RECEIVING WATER BODIES**

PORT BASIN THEM PACIFIC OCEAN/CHETCO MOUTH & ESTUARY



Know what's below.  
 Call before you dig.

**INSPECTION FREQUENCY:**

- HOLD A PRE-CON MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC ENGINEER.
- 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 DEQ IN THE FORM OF AN ACTION PLAN.

**RATIONAL STATEMENT**

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S 1200-C PERMIT APPLICATION AND ESCP GUIDANCE DOCUMENT 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 ESCP, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

**STOCKPILE SOILS**

TEMPORARY STOCKPILE LOCATIONS MAY BE ADJUSTED BY CONTRACTOR IN FIELD. CARE SHOULD BE TAKEN TO AVOID UNINTENTIONAL DRAINAGE IMPOUND OR DIVERSION. TOPSOIL STRIPPINGS MAY BE INCORPORATED INTO EROSION CONTROL DIVERSION BERMS.

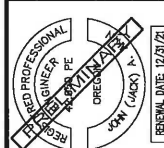
STOCKPILES SHALL NOT BE PLACED WITHIN PROTECTED AREAS, SCREEN BUFFERS, EXISTING DRAINAGE WAYS, UTILITIES EASEMENT, OR RIGHT-OF-WAYS. STOCKPILE MANAGEMENT SHALL COMPLY WITH THE ESC PLAN. ON-SITE TEMPORARY STOCKPILES SHALL BE REMOVED PRIOR TO FINALIZING CONSTRUCTION.

**CONSTRUCTION ACTIVITY / ESTIMATED TIME**

CLEARING:	TO BE DETERMINED
GRADING:	TO BE DETERMINED
UTILITY INSTALL:	TO BE DETERMINED
STREET CONSTRUCTION:	TO BE DETERMINED
FINAL STABILIZATION:	TO BE DETERMINED

REVISIONS	BY:

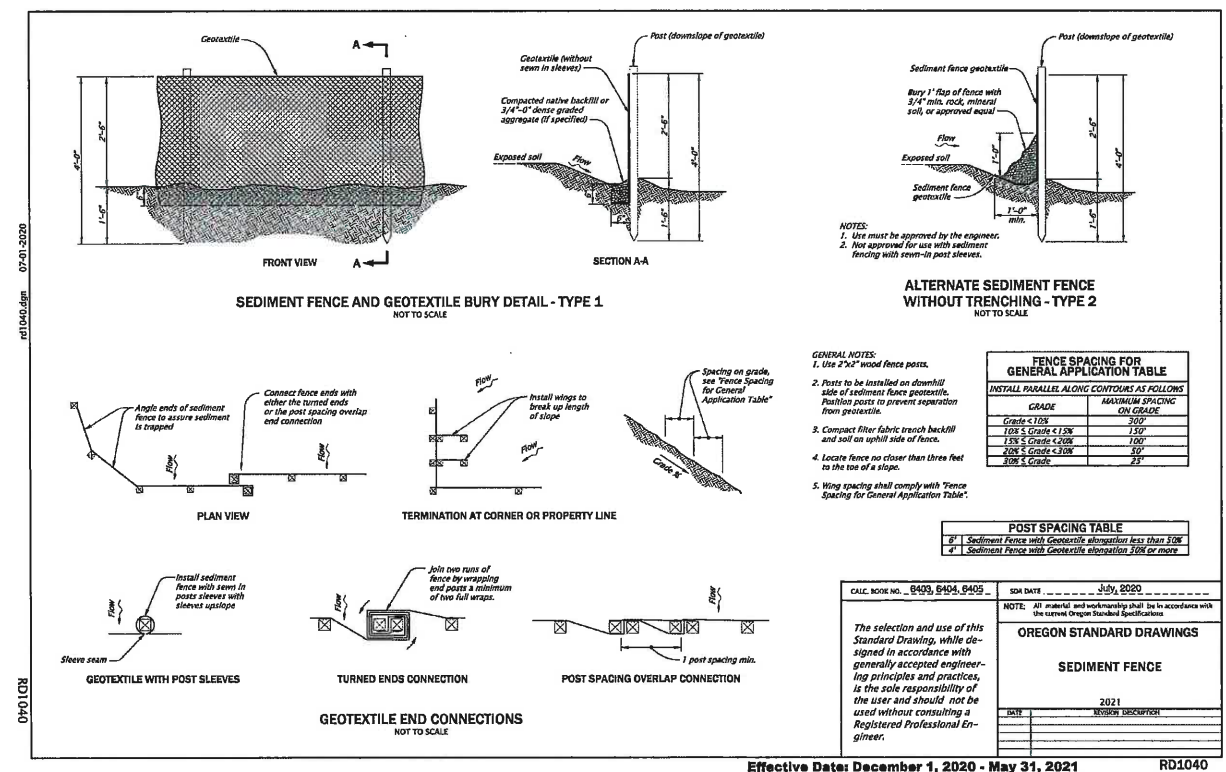
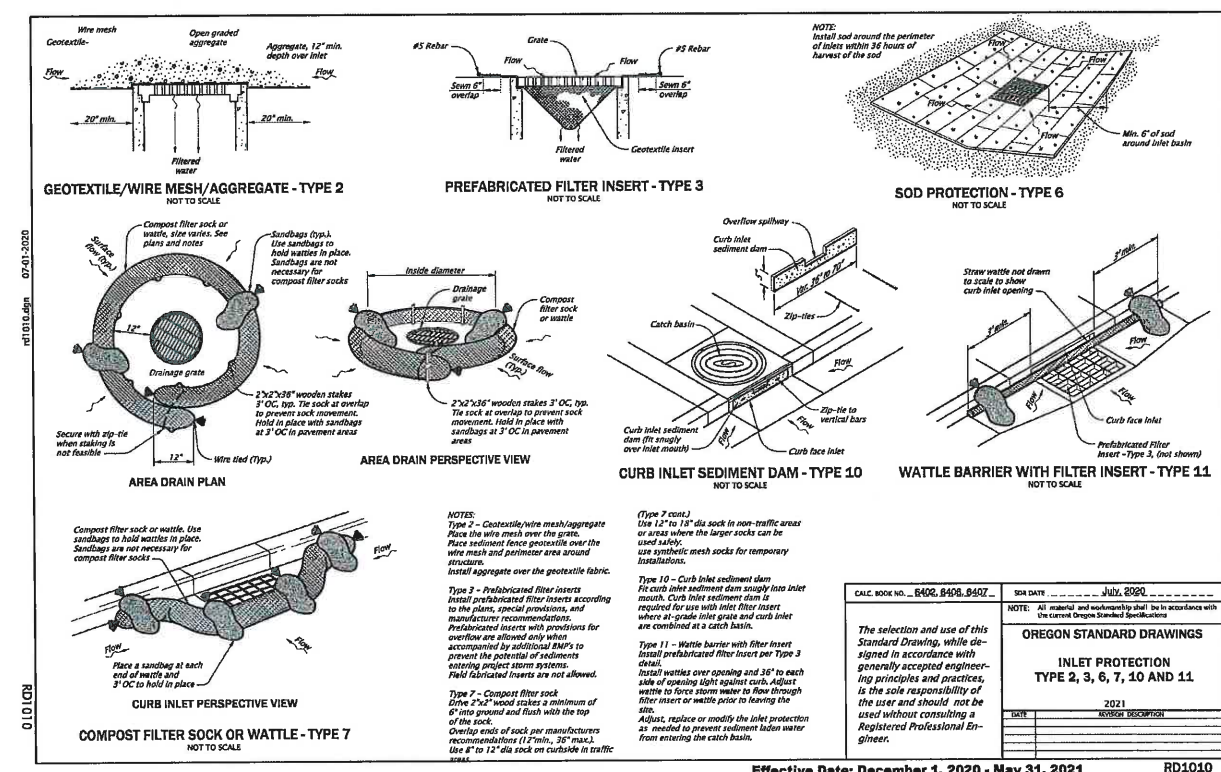
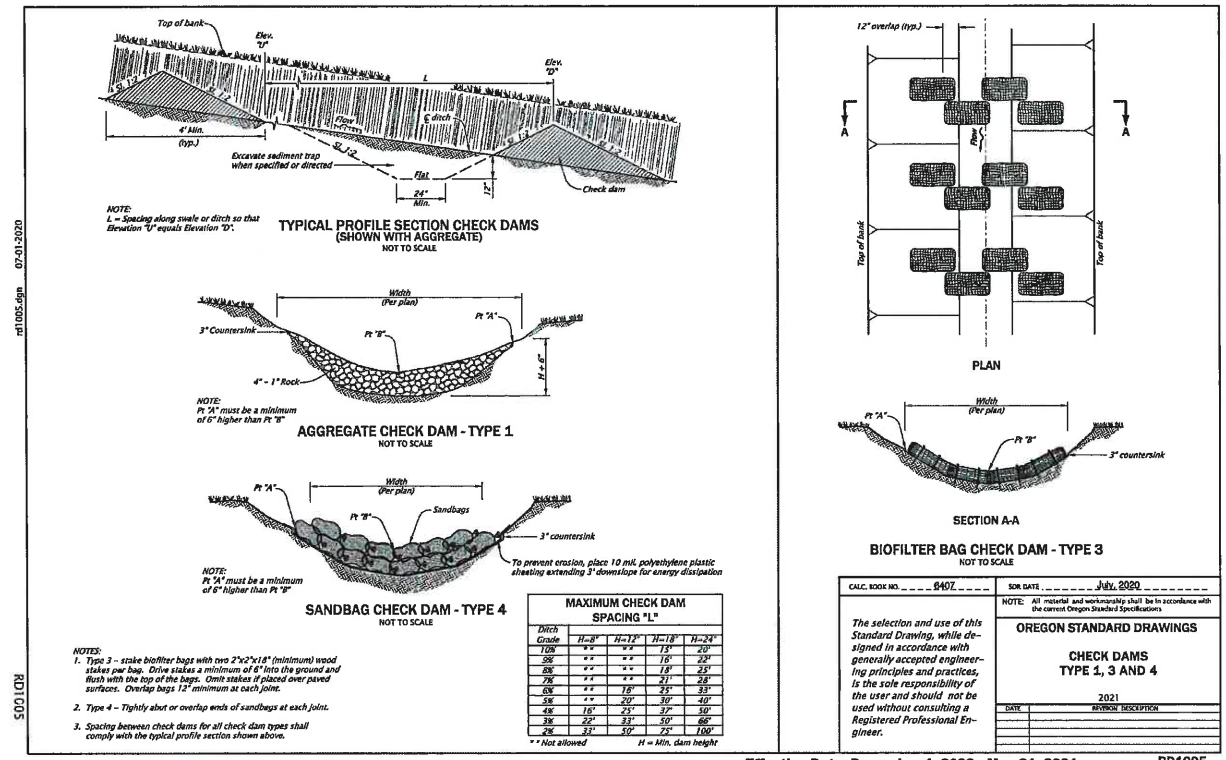
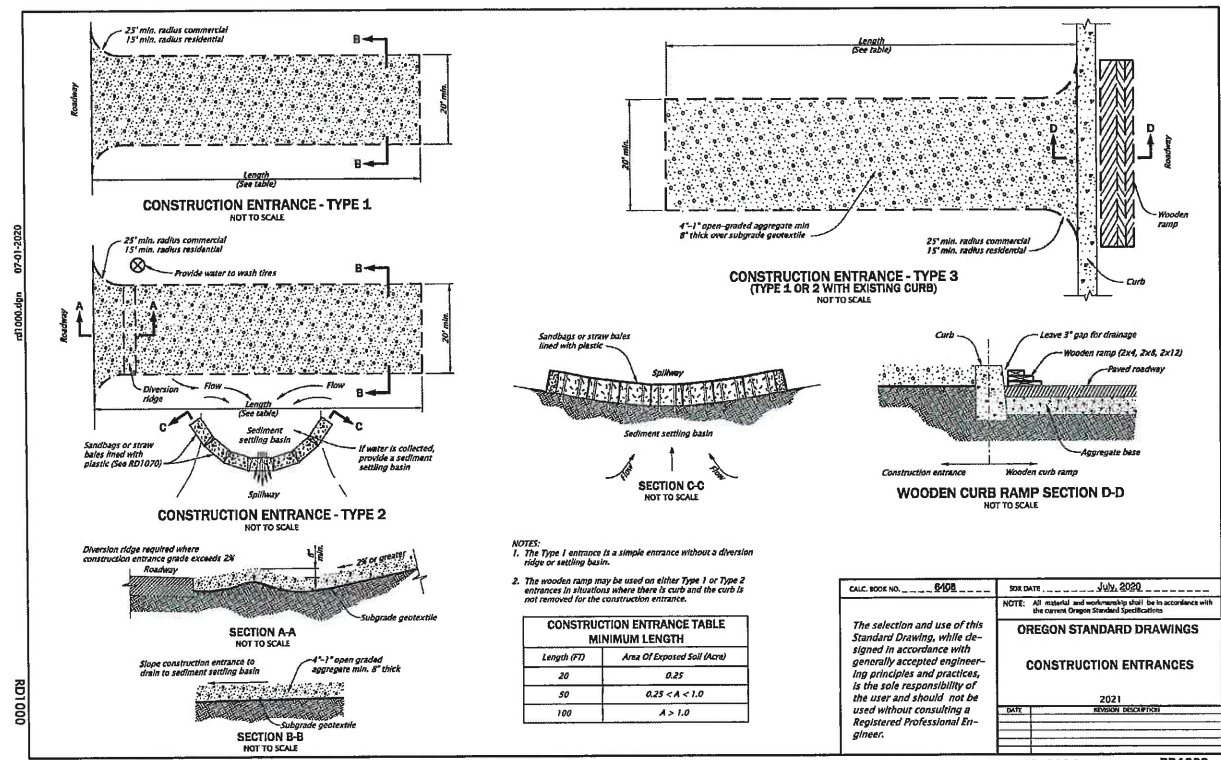
Grant Pass • Jacksonville • Medford, OR  
 CP Office: 1907 Williams Hwy., Suite 110, Grants Pass, OR 97527  
 Phone: 541-844-1411 • Fax: 541-844-9929 • Email: info@emc-engineers.com  
 http://www.emc-engineers.com



PORT OF BROOKINGS HARBOR  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 KITE FIELD RV PARK

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No:  
**C5.1**  
 ESC  
 GENERAL NOTES





REVISIONS BY:


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 CP Office: 1807 Williams Hwy., Suite 116, Grants Pass, OR, 97527  
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 Website: http://www.emcsci.com

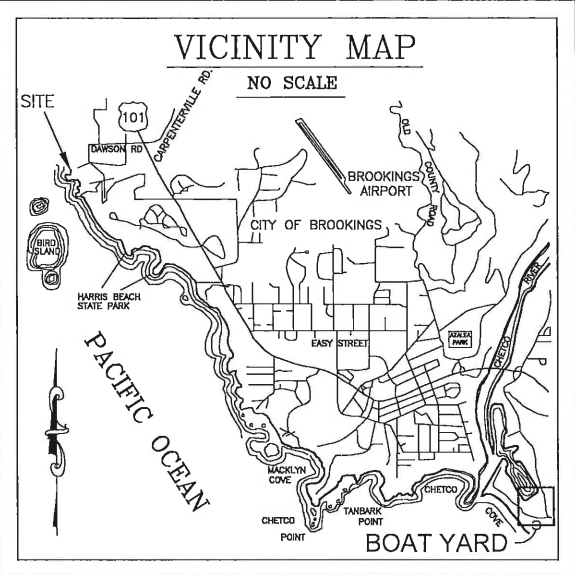
**EMCSCI**  
 Engineers/Scientists, LLC

REGISTERED PROFESSIONAL ENGINEER  
 OREGON LICENSE NO. 12021  
 EXPIRES: 12/31/21

**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 KITE FIELD RV PARK

DRAWN BY: JG  
 DATE: 21 MAR 2021  
 JOB No: PB116  
 SHEET No: **C5.2**  
 ESC  
 STANDARD DETAILS





**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 OR 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 ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOB SITE 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.
12. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

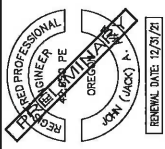
THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

**SHEET INDEX**

- C1.0 COVER SHEET
- C2.0 EXISTING CONDITIONS
- C2.1 GRADING PLAN
- C2.2 FINISHED A/C GRADE
- C3.0 PAVEMENT AREA
- C4.0 STORMWATER CONVEYANCE
- C5.0 NOT USED
- C6.0 PROJECT DETAILS
- C6.1 PROJECT DETAILS

REVISIONS	BY:

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 email: emc@emcengineers.com http://www.emcengineers.com



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

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:

**C1.0**  
 COVER SHEET

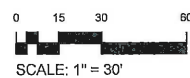




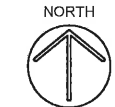
**SURVEY BY**  
 ROBERTS & ASSOCIATES LAND SURVEYING, INC.  
 811 SPRING STREET  
 BROOKINGS, OR 97415  
 (541) 469-6162

**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 <2cm.

**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 - 21.85 FEET

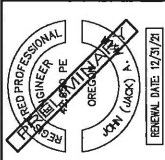


**EXISTING CONDITIONS**  
 SCALE: 1" = 30' (24x36)



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 email: emc@emcengineers.com • http://www.emcengineers.com

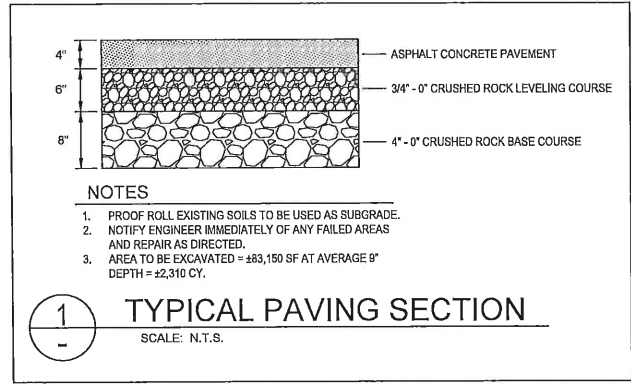


**PORT OF BROOKINGS HARBOR**  
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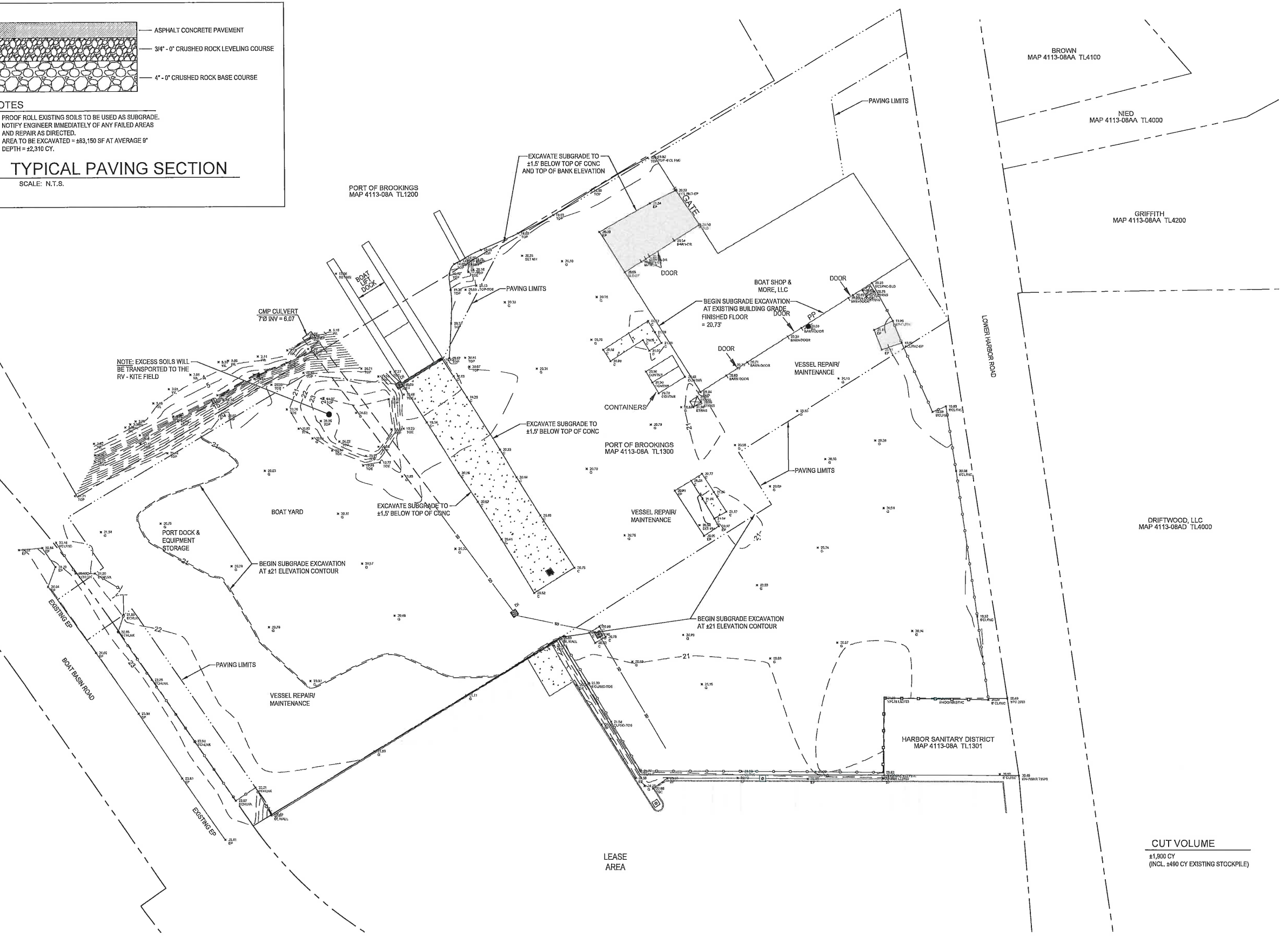
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 JOB No: #  
 SHEET No:

**C2.0**  
 EXISTING  
 CONDITIONS

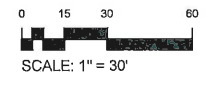




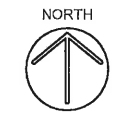
PORT OF BROOKINGS  
MAP 4113-08A TL1500



**CUT VOLUME**  
±1,800 CY  
(INCL. ±480 CY EXISTING STOCKPILE)



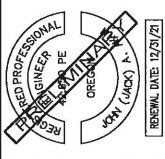
**GRADING PLAN**  
SCALE: 1" = 30' (24x36)



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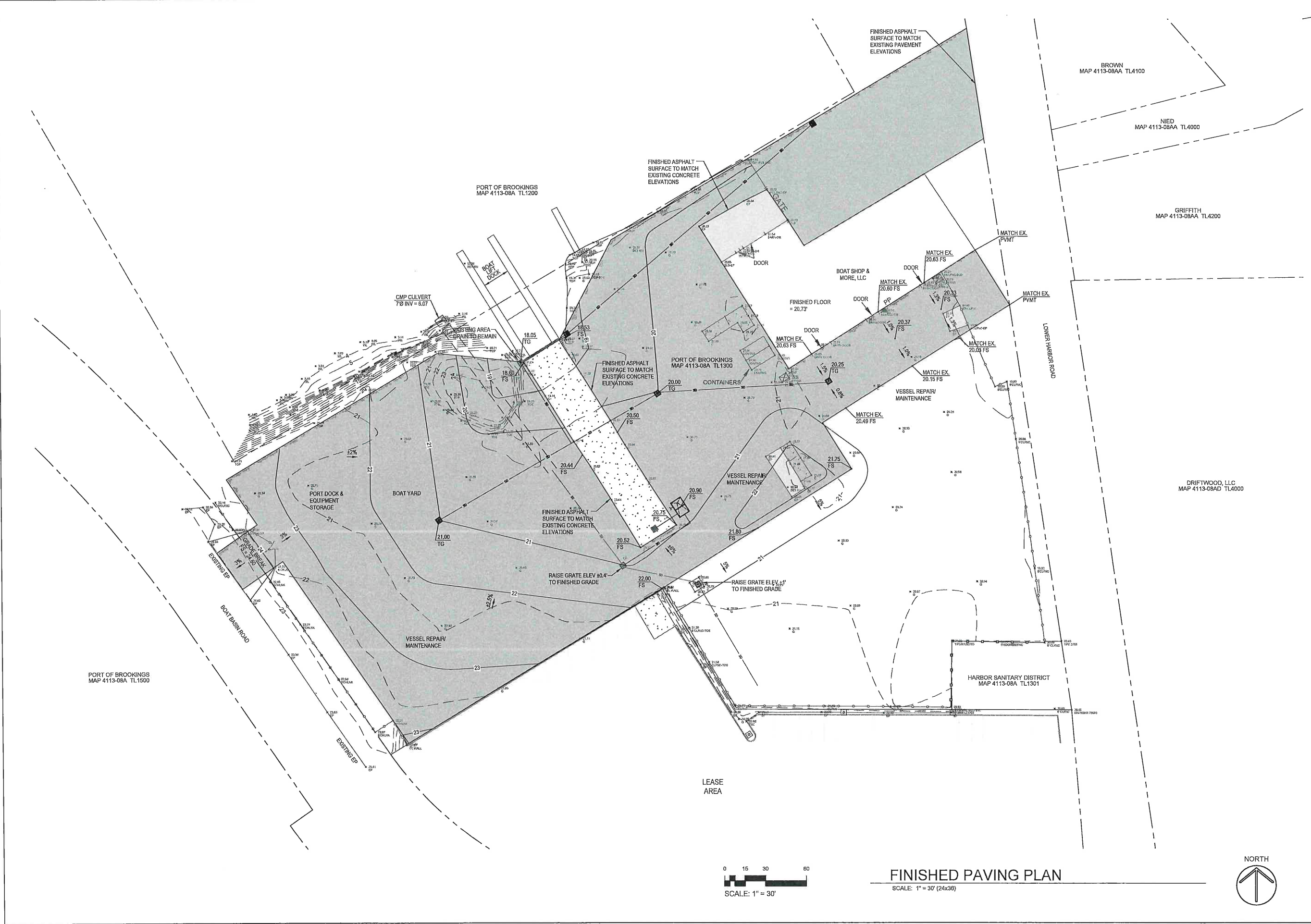
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 Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
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**BOAT YARD PAVING**

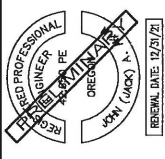
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 JOB No: #  
 SHEET No:  
**C2.1**  
 GRADING PLAN





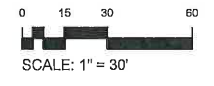
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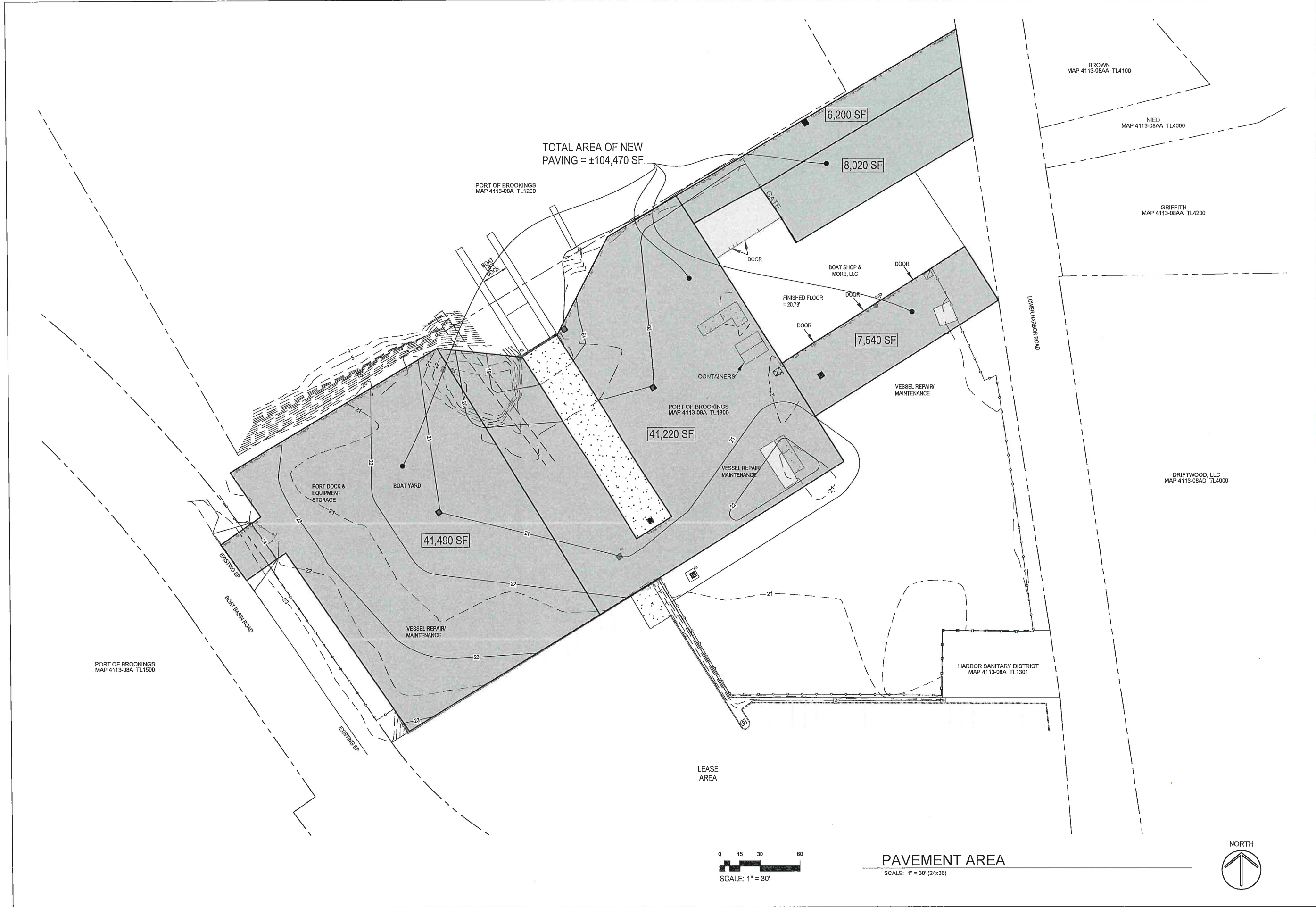
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 JOB No: #  
 SHEET No:  
**C2.2**  
 FINISHED PAVING PLAN



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







TOTAL AREA OF NEW PAVING = ±104,470 SF

PORT OF BROOKINGS  
MAP 4113-08A TL1200

PORT OF BROOKINGS  
MAP 4113-08A TL1900

41,490 SF

41,220 SF

7,540 SF

8,020 SF

6,200 SF

PORT OF BROOKINGS  
MAP 4113-08A TL1500

DRIFTWOOD, LLC  
MAP 4113-08AD TL4000

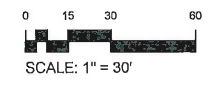
GRIFFITH  
MAP 4113-08AA TL4200

NIED  
MAP 4113-08AA TL4000

BROWN  
MAP 4113-08AA TL4100

HARBOR SANITARY DISTRICT  
MAP 4113-08A TL1301

LEASE AREA

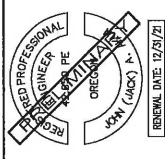


**PAVEMENT AREA**  
SCALE: 1" = 30' (24x36)



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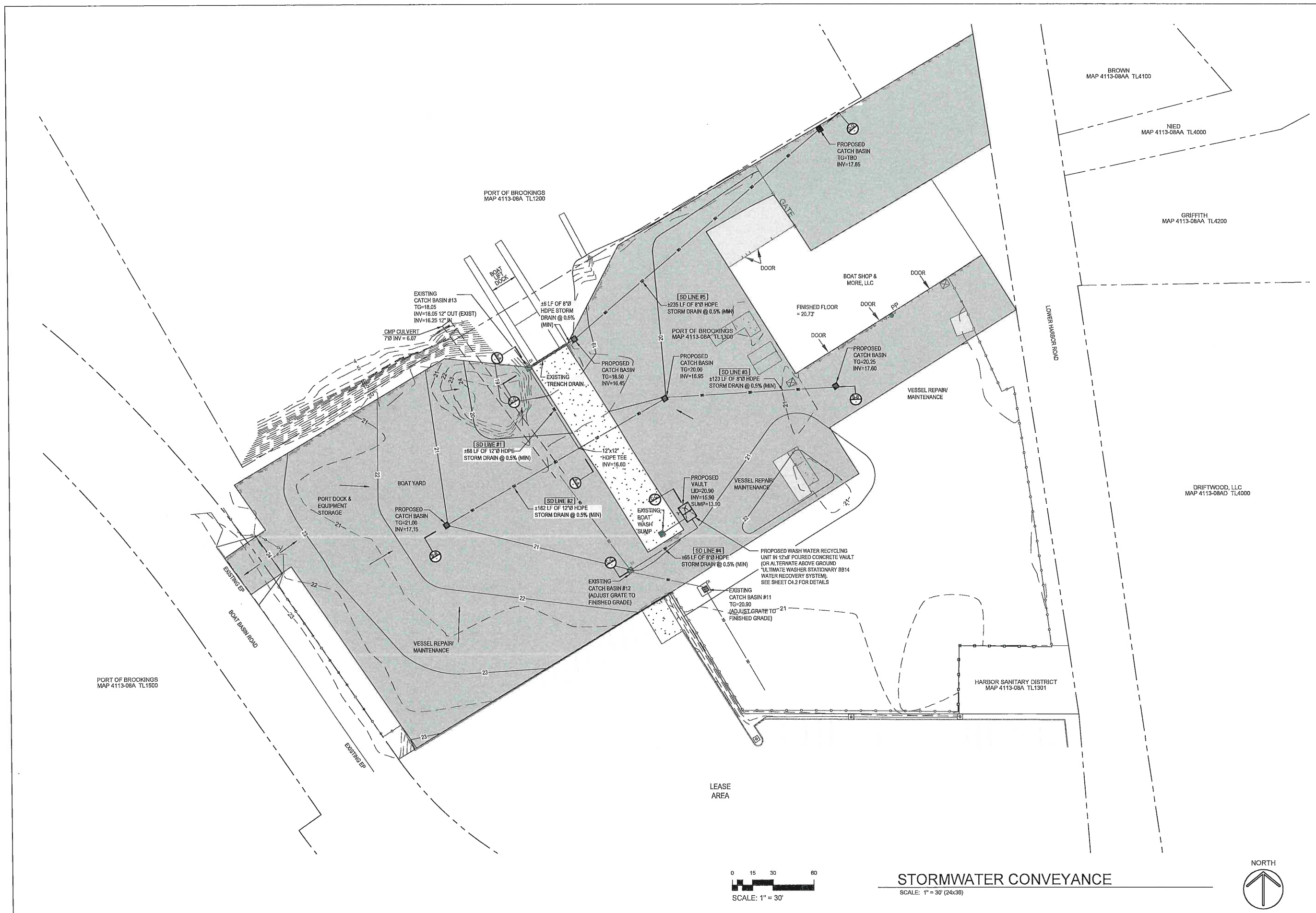


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
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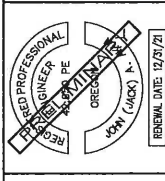
**C3.0**  
 PAVEMENT AREAS





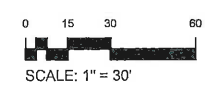
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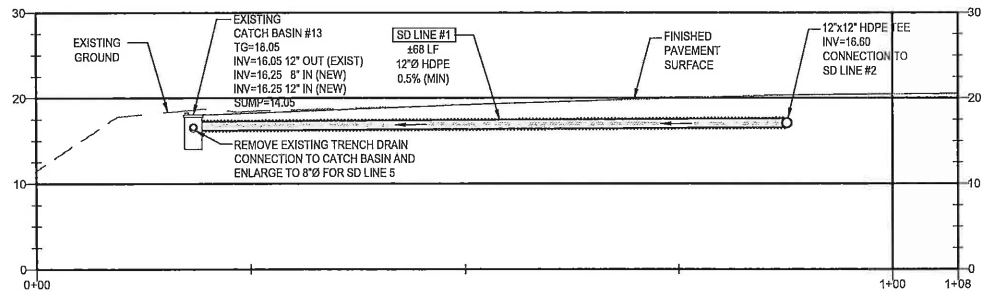
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 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C4.0**  
 STORMWATER CONVEYANCE



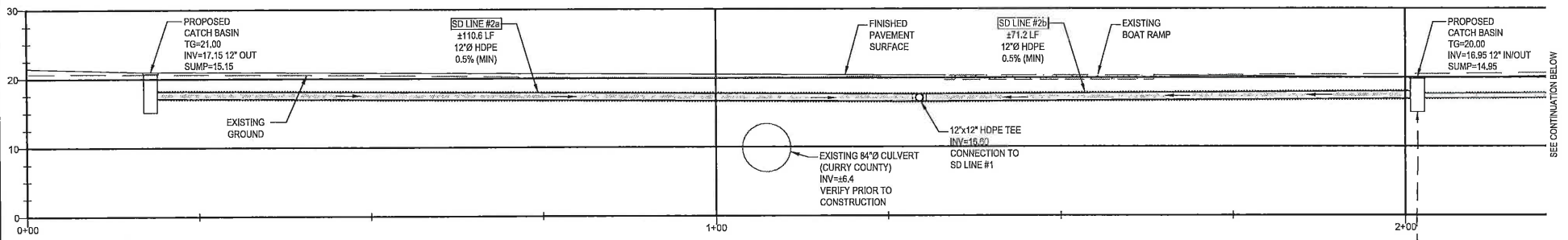
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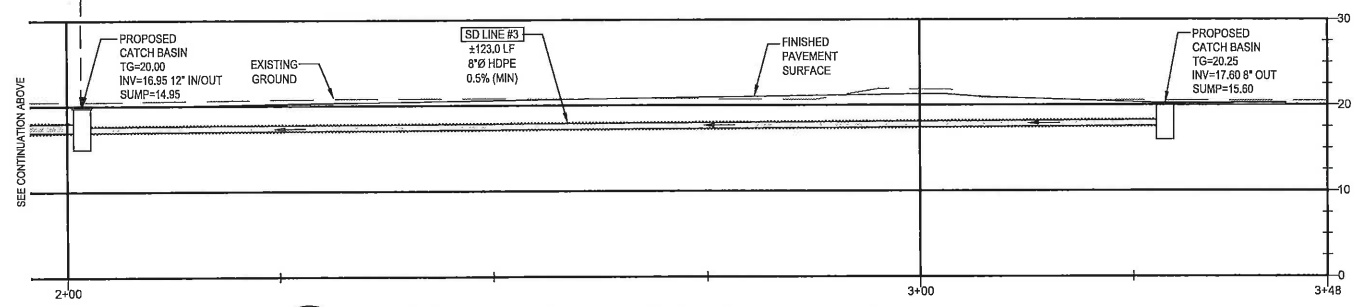




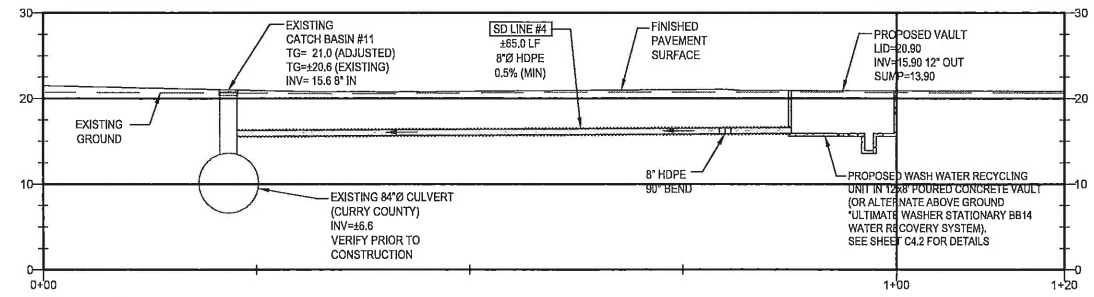
**A-A** STORMDRAIN LINE 1 - PROFILE "A - A"  
SCALE: 1" = 10' (H & V)



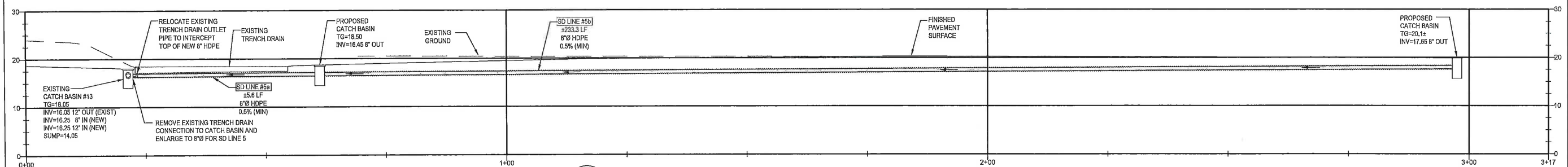
**B-B** STORMDRAIN LINE 2 - PROFILE "B - B"  
SCALE: 1" = 10' (H & V)



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



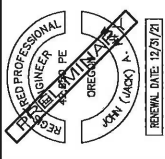
**C-C** STORMDRAIN LINE 4 - PROFILE "C - C"  
SCALE: 1" = 10' (H & V)



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

REVISIONS	BY:

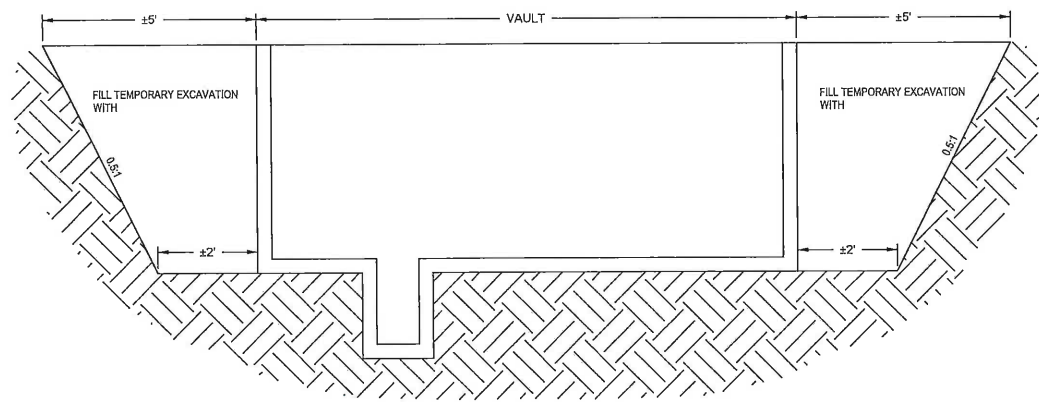
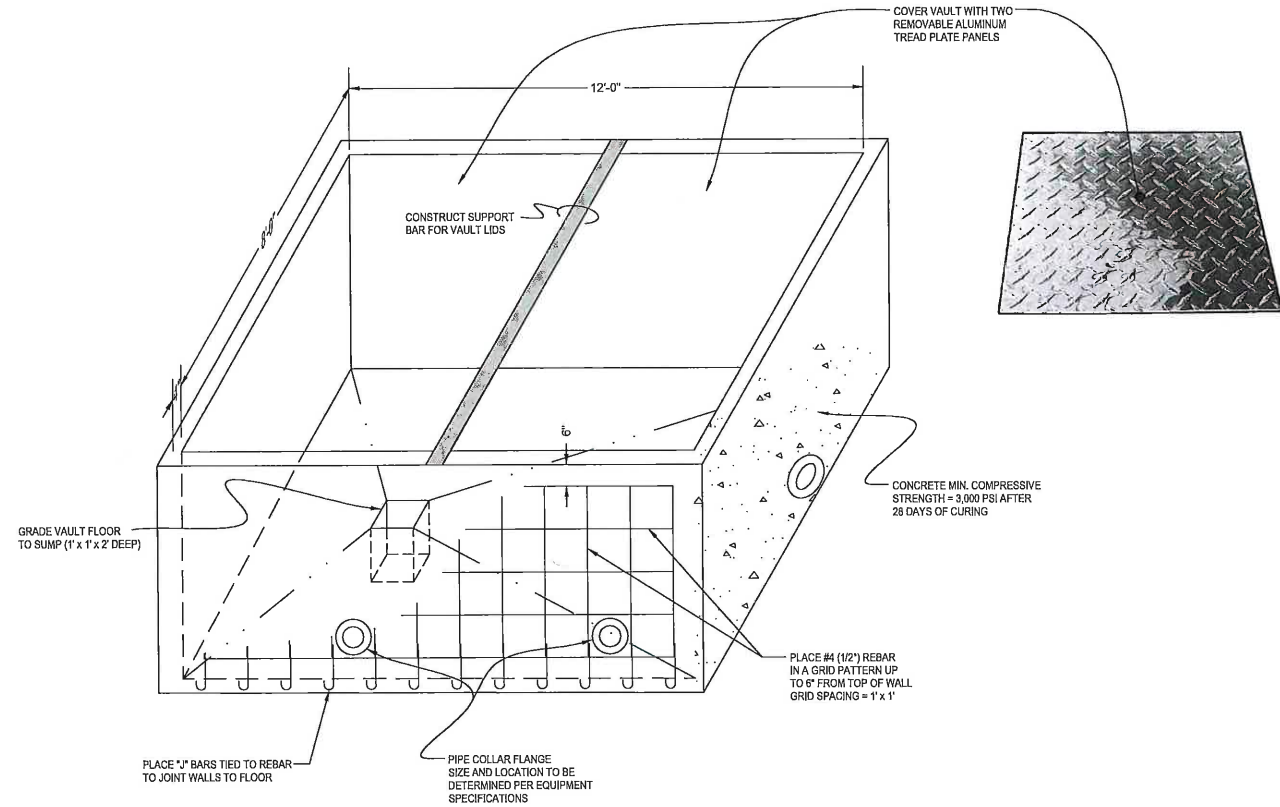
Grants Pass \* Jacksonville \* Medford, OR  
 CP Office: 1807 Williams Hwy., Suite 216, Grants Pass, OR, 97527  
 Jacksonville Office: 450 Conestoga Dr., Jacksonville, OR, 97530  
 Phone: 541-874-9434 • Cell: 541-263-9259 • Fax: 541-272-5468  
<http://www.emcengineers.com> <http://www.emcengineersllc.com>  
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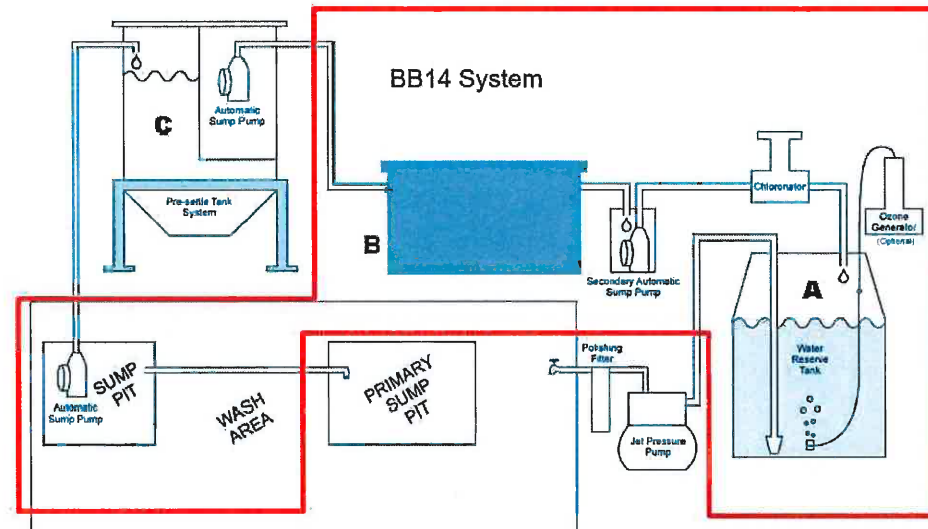
**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 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 8" MANWAY ACCESS AND STAND
  - IN-LINE CHLORINATOR
  - AUTOMATIC OPERATION
  - SUPPLY PUMP W/CHECK VALVE (110V/6A)
  - SAFETY INSTRUCTION AND MAINTENANCE SCHEDULE



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

REVISIONS	BY:

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 Phone: 541-274-9434 • Cell: 541-261-9929 • Fax: 541-272-2488  
 email: emc@emcengineerscientists.com • http://www.emcengineerscientists.com

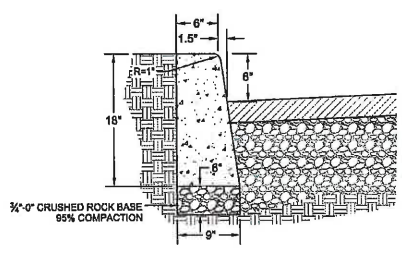
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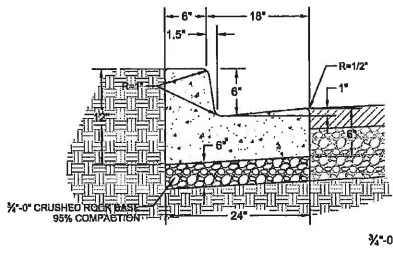
**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C4.2**  
 WASHWATER RECYCLING DETAILS

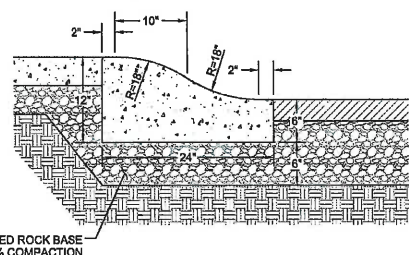




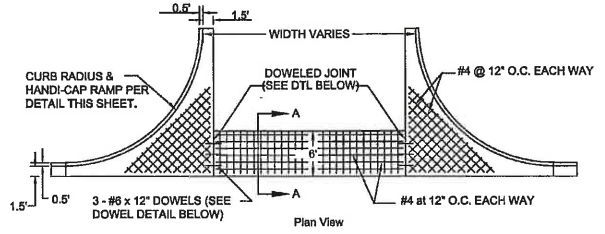
**301 VERTICAL CURB**  
SCALE: NTS



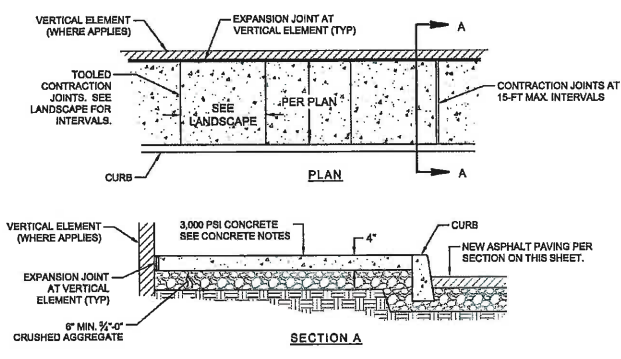
**302 CURB & GUTTER**  
SCALE: NTS



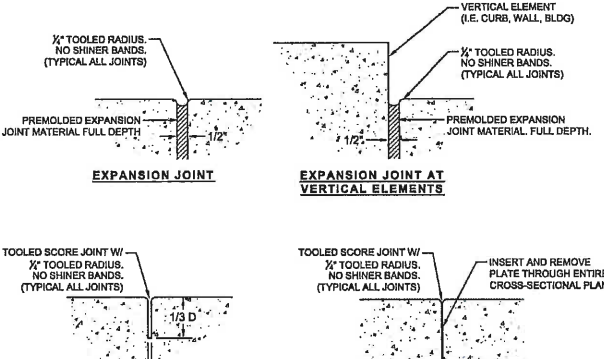
**303 ROLLED CURB**  
SCALE: NTS



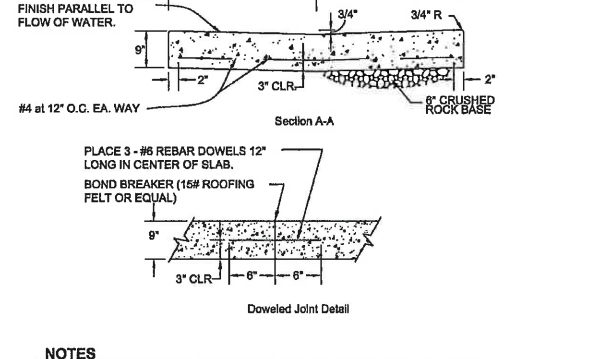
**327 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



**311 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



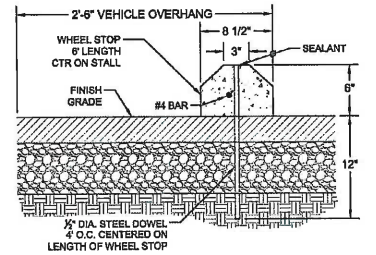
**309 CONCRETE CONTROL JOINTS**  
SCALE: NTS



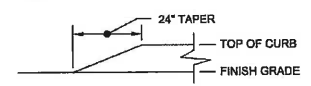
**329 DRIVEWAY APRON WITH VALLEY GUTTER (continued)**  
SCALE: NTS

- NOTES**
1. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY.
  2. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
  3. CROSS SLOPE OF SIDEWALK SHALL BE 2% AWAY FROM THE BUILDING.
  4. SEE CONCRETE CONTROL JOINT DETAIL ON THIS SHEET.

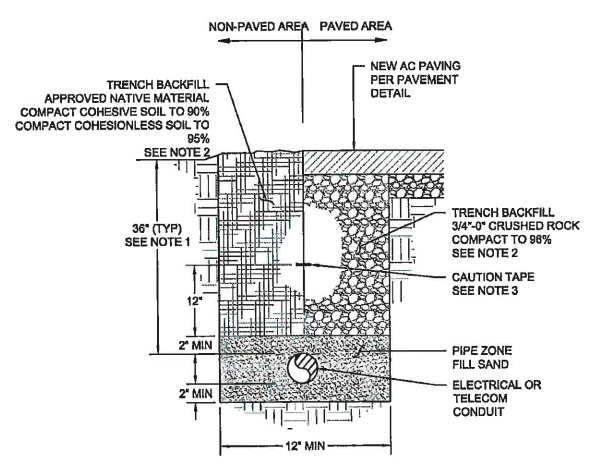
- NOTES**
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
  2. SUBGRADE AND BASE SHALL BE UNYIELDING AND FIRMLY COMPACTED.
  3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.



**391 WHEEL STOP**  
SCALE: NTS

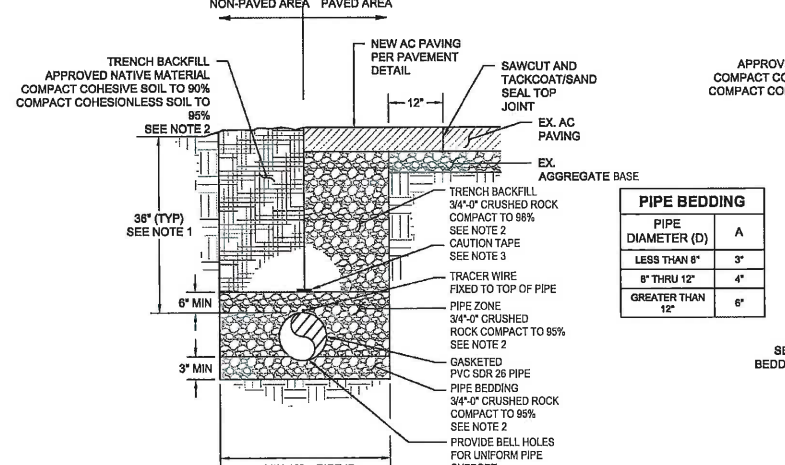


**305 CURB TAPER**  
SCALE: NTS



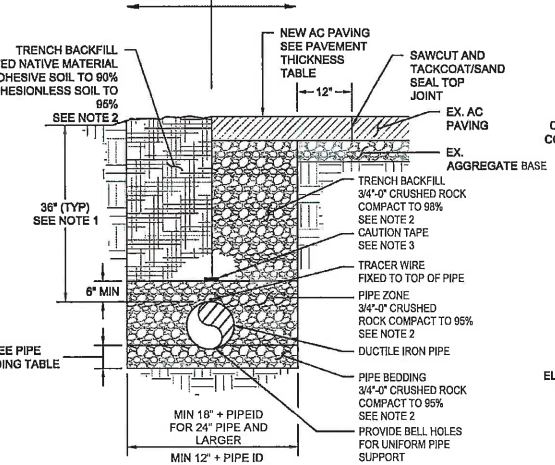
- NOTES**
1. COVER OVER PIPE MAY VARY FROM 24" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC: 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC BELOW"
  - TELECOM: 3" WIDE ORANGE POLYETHYLENE TAPE IMPRINTED "CAUTION: COMMUNICATIONS LINE BURIED BELOW"

**583 CONDUIT TRENCH DETAIL**  
SCALE: NTS



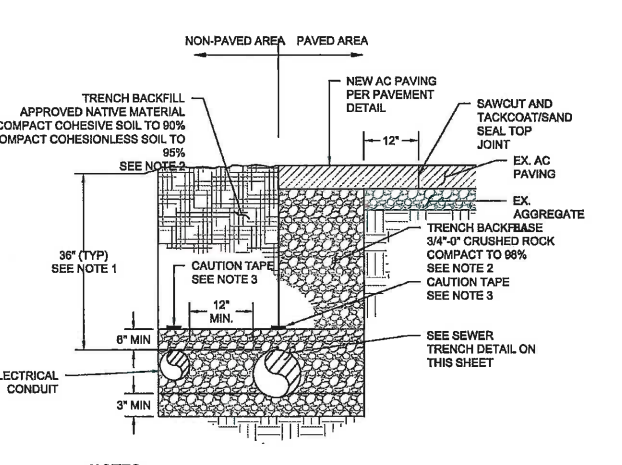
- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. SEWER: 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE BELOW"

**581 SEWER TRENCH DETAIL**  
SCALE: NTS



- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. 3" WIDE BLUE POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED WATER LINE BELOW"

**580 WATER TRENCH DETAIL**  
SCALE: NTS

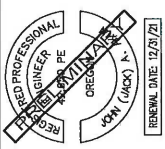


- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC: 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC BELOW"
  - SEWER: 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE BELOW"

**584 JOINT TRENCH DETAIL**  
SCALE: NTS

REVISIONS	BY:

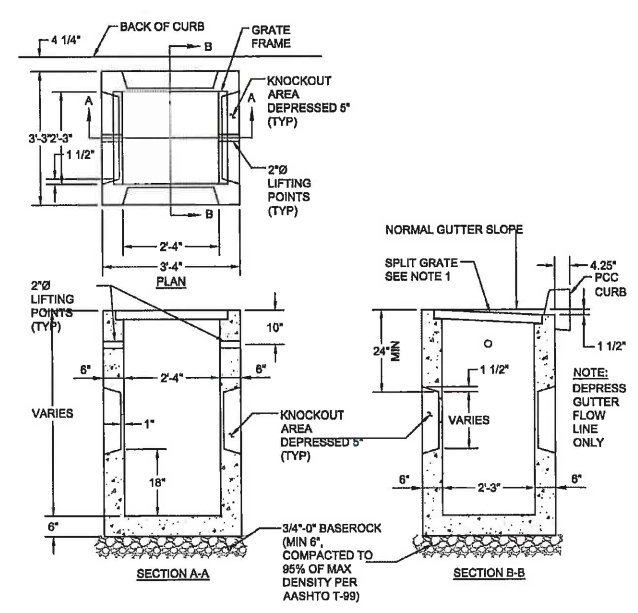
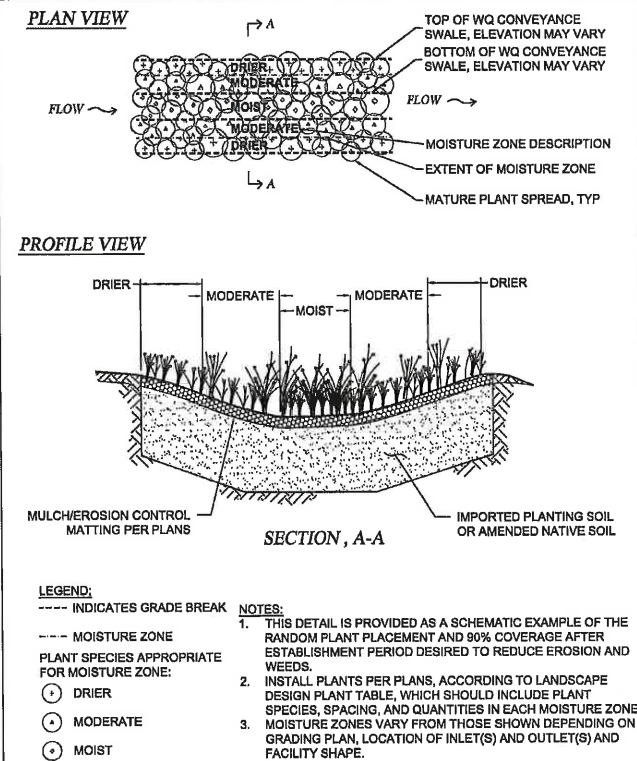
Grants Pass \* Jacksonville \* Medford, OR  
 CP Office: 1867 Williams Hwy., Suite 216, Grants Pass, OR, 97527  
 Jacksonville Office: 480 Commerce Dr., Jacksonville, OR, 97501  
 Medford Office: 1000 S. Commercial St., Medford, OR, 97504  
 Tel: 541-864-4488 Fax: 541-864-4489  
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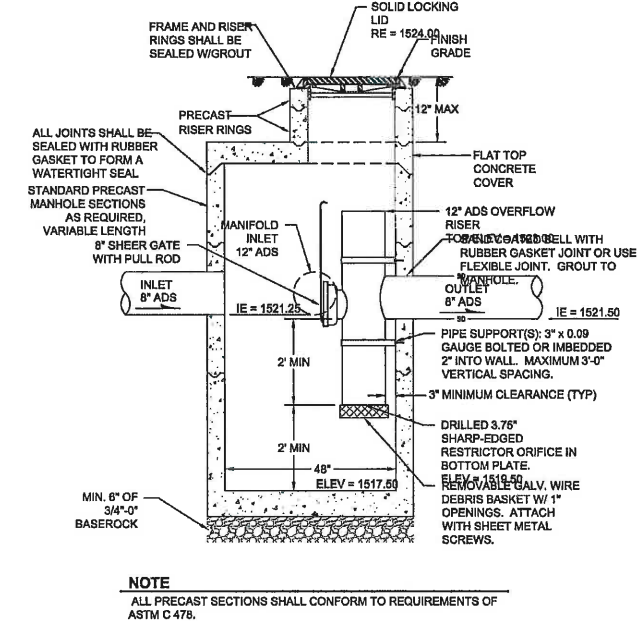
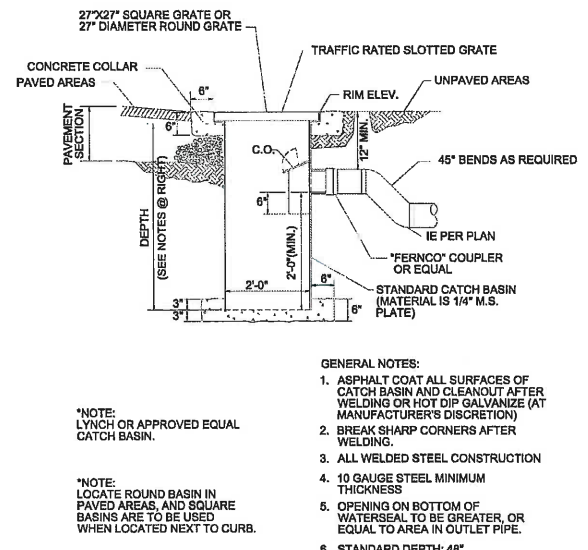
PORT OF BROOKINGS HARBOR  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C6.0**  
 PROJECT  
 DETAILS





- NOTES**
1. GRATE AND FRAME MAY EACH BE 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.
  4. CATCH BASIN AND GRATE SHALL MEET H520 LOADING.
  5. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
  6. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.



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

- General Notes for Vegetated BMPs**
1. Excluding construction of the facility itself, exposed treatment area subgrade shall be fenced to prohibit impacts from construction (including materials and equipment storage).
  2. Bulk and vegetative swale as early as possible to establish plantings before directing stormwater runoff to it or divert stormwater around facility. Preferably, vegetation will be given a minimum of 3 months to become established, or per landscape architectural guidelines.
  3. 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.
  4. Over-excavate within the swale to allow for placement of amended or imported soil up to final grade.
  5. Placement of amended native or imported soil mix shall occur as follows:  
 a. Place soil in 9 inch maximum lifts (i.e. depths).  
 b. Do not place if soil is saturated.  
 c. Lightly compact each lift, (e.g. a water filled landscape roller) to achieve 85% compaction. Do not compact with heavy machinery or vibratory compaction.
  6. Install energy dissipation below all outlets per approved plans.
  7. If unprotected soil has been exposed to rainfall, scarify the surface to a depth of 4 inches to restore filtration capacity.
  8. Install ODOT Type E erosion control matting, if specified in approved plans.
  9. Landscaping plan shall 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.
  10. 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.
  11. Side slopes outside of flow area must be permanently stabilized with mulch and vegetation.

**AMENDED PLANTING SOIL MIX SPECIFICATIONS**

1. Planting soil may be either amended native or imported soil mix with the following characteristics:  
 A. Infiltrate between 0.5 and 12 inches/hour.  
 B. Be free of weed seeds, contaminants, and hazardous materials.  
 C. Organic content matter from 6-10% by weight  
 D. Cation exchange capacity (CEC) greater than or equal to 5 milliequivalents/100 grams of dry soil  
 E. 2-5% clayey fines content  
 F. pH between 6.5 and 8.0  
 G. Conform to the following gradation for the mix:

US Standard Sieve Size	Percent Passing
3/8"	100
#1	95-100
#10	75-95
#20	50-80
#100	4-10
#200	2-5

2. Imported soil shall be roughly 1/3 plant derived compost, 1/3 topsoil and 1/3 gravelly sand.
3. 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.
4. Amended native or imported soil mix shall be uniformly mixed.

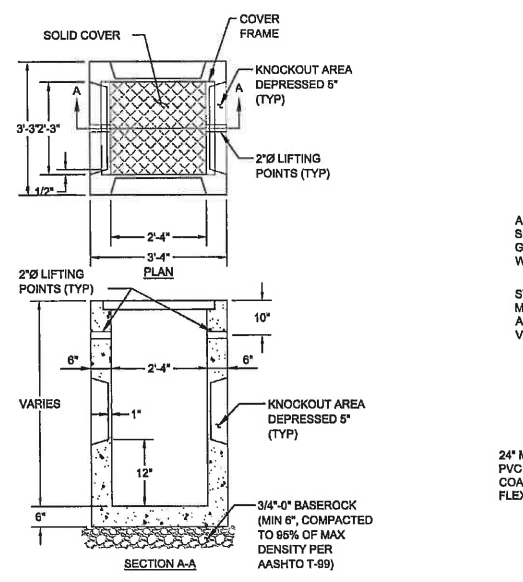
**Compost specifications**  
 Must be derived from plant material and fully composted. Must be certified weed seed free. A Technical Data Sheet from the US Composting Council Seal of Testing Assurance must be provided to the approving jurisdiction. The Data Sheet must show that the compost meets the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

- Organic matter content between 40 and 60 percent.
- pH between 6.5 and 8.0. If the pH isn't quite right, it may be lowered by adding iron sulfide 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 salt content shall be less than 5.0mmhos/cm.
- 100% 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.

2 CATCH BASIN  
 C6.1 SCALE: NTS

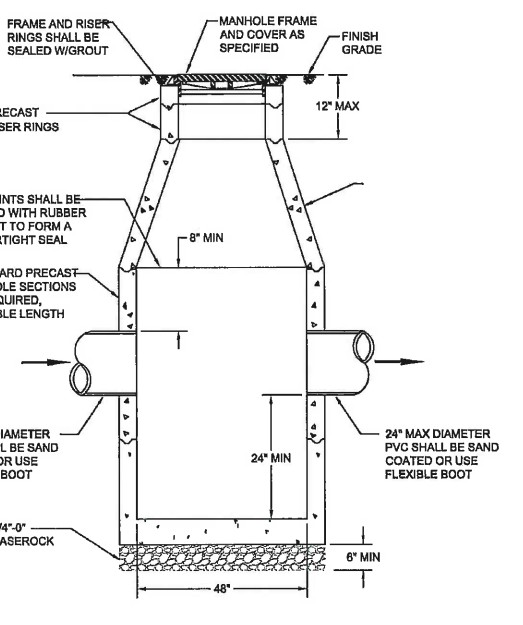
3 LYNCH STYLE CATCH BASIN  
 C6.1 SCALE: NTS

4 CONTROL STRUCTURE MANHOLE  
 C6.1 SCALE: NTS (PONDS 2 & 3)



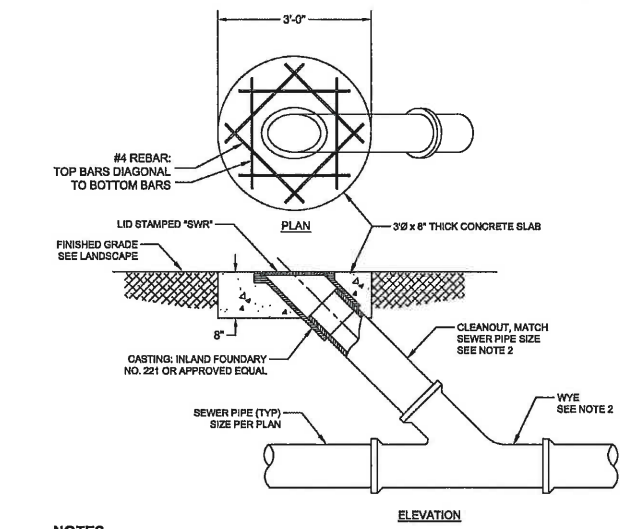
- CONSTRUCTION NOTES:**
1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
  2. CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
  3. JUNCTION BASIN AND GRATE SHALL MEET H520 LOADING.
  4. A MINIMUM SUMP DEPTH OF 18" IS REQUIRED.
  5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

6 JUNCTION BASIN  
 C6.1 SCALE: NTS



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

7 48" STORM MANHOLE  
 C6.1 SCALE: NTS



- NOTES**
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2015 ODOT STANDARD SPECIFICATIONS SECTION 00440. MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
  2. FITTINGS AND PIPE TO BE GASKETED PVC SDR 26.

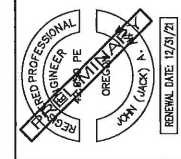
5 TYPICAL CLEANOUT  
 C6.1 SCALE: NTS

REVISIONS

NO.	DATE	BY

**EMC** Engineers/Scientists, LLC

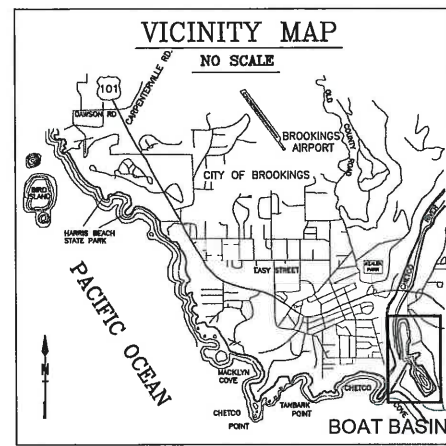
Grants Pass • Jacksonville • Medford, OR  
 216 Grants Pass, OR 97527  
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**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C6.1**  
 PROJECT DETAILS





PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

PROPOSED ROAD

**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**

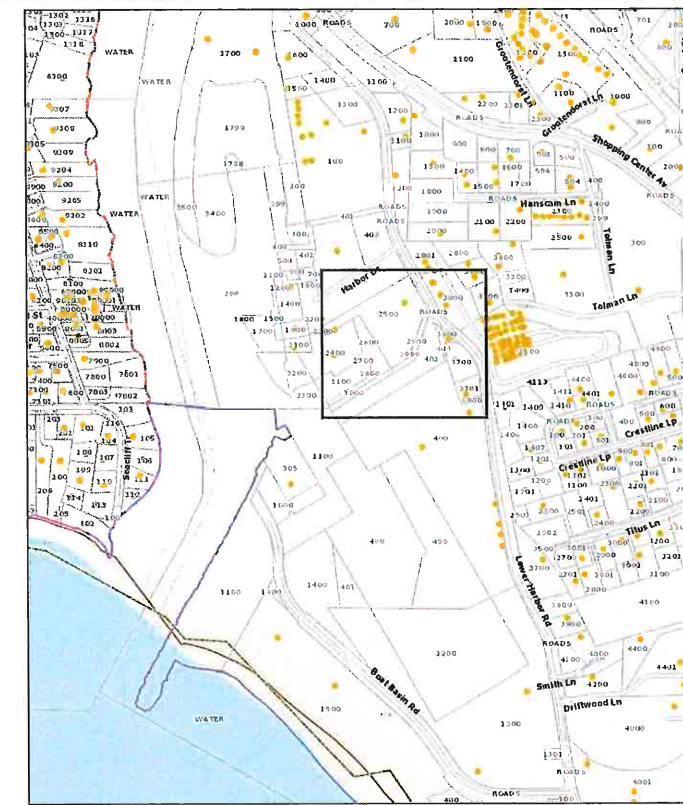
**TITLE:** PROPOSED ROAD  
**REFERENCE:** 140  
**LOCATION:** HARBOR ST  
**TAX LOT(S):** 2500, 2600, 2700, 2800  
2900, 2999, 402

**DRAWING REGISTER**

140-CV	COVER SHEET
140-C100	NOTES
140-C101	EXISTING CONDITIONS
140-C102	PROPOSED GRADING
140-C103	PROPOSED PAVING
140-C104	PROPOSED DRAINAGE
140-C105	DETAILS
140-C106	DETAILS



PROJECT OVERVIEW  
SCALE 1":200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**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.

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



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 16330 Lower Harbor Rd, Brookings, OR 97415  
 Phone: (503) 338-1111  
 Fax: (503) 338-1112  
 Email: info@emc-engineers.com

NO.	DATE	REVISION	BY

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

Date	04/04/2021
Drawn By	INFRADRAFT
Sheet No.	CV
File No.	140



**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 SHELL 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 OD 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 ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
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.

GENERAL NOTES  
NO SCALE



No.	DATE	REVISION	BY

PREPARED FOR: (LOT 2900, MAP '360522DB')

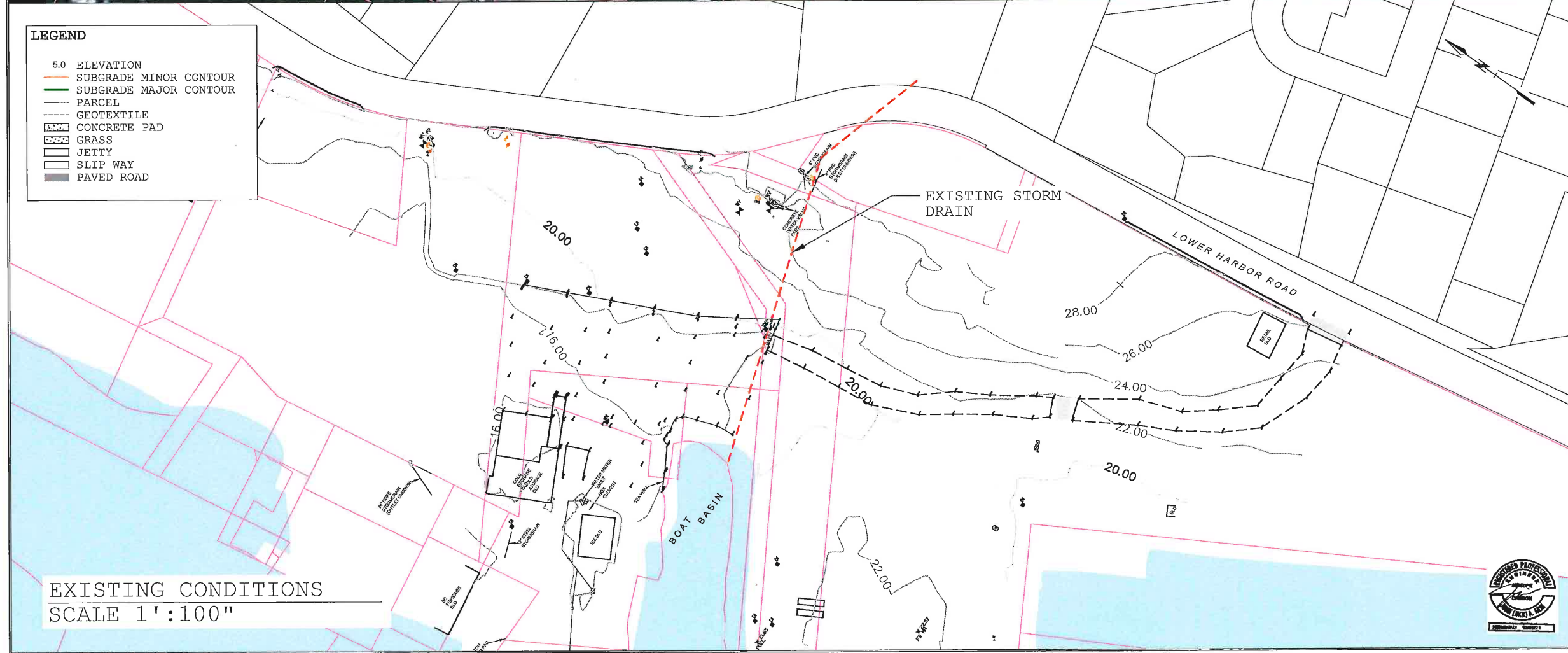
**PORT OF BROOKINGS**

16390 Lower Harbor Rd, Brookings, OR 97415

PORT OF BROOKINGS HARBOR

Date 04/04/2021  
 Drawn By INFRADRAFT  
 Sheet No. C-100  
 File No. 140





EXISTING CONDITIONS  
SCALE 1":100"

ENGINEER:  
**EMC**  
Engineers/Scientists, LLC

No.	DATE	REVISION	BY

PREPARED FOR:  
**PORT OF BROOKINGS**  
16390 Lower Harbor Rd, Brookings, OR 97415

Date  
04/04/2021  
Drawn By  
INFRADRAFT  
Sheet No.  
C-101  
File No.  
140







**LEGEND**

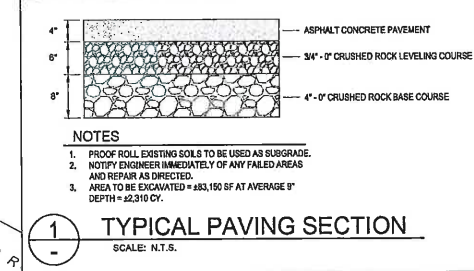
5.0	ELEVATION
—	SUBGRADE MINOR CONTOUR
—	SUBGRADE MAJOR CONTOUR
—	PARCEL
---	GEOTEXTILE
▢	CONCRETE PAD
▨	GRASS
▤	JETTY
▥	SLIP WAY
▧	PAVED ROAD

EXCAVATE SUBGRADE TO 1.5' BELOW EXISTING ROAD

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

PROPOSED SEDIMENT STOCKPILE AREA



**GRADING PLAN**  
SCALE 1' : 100"

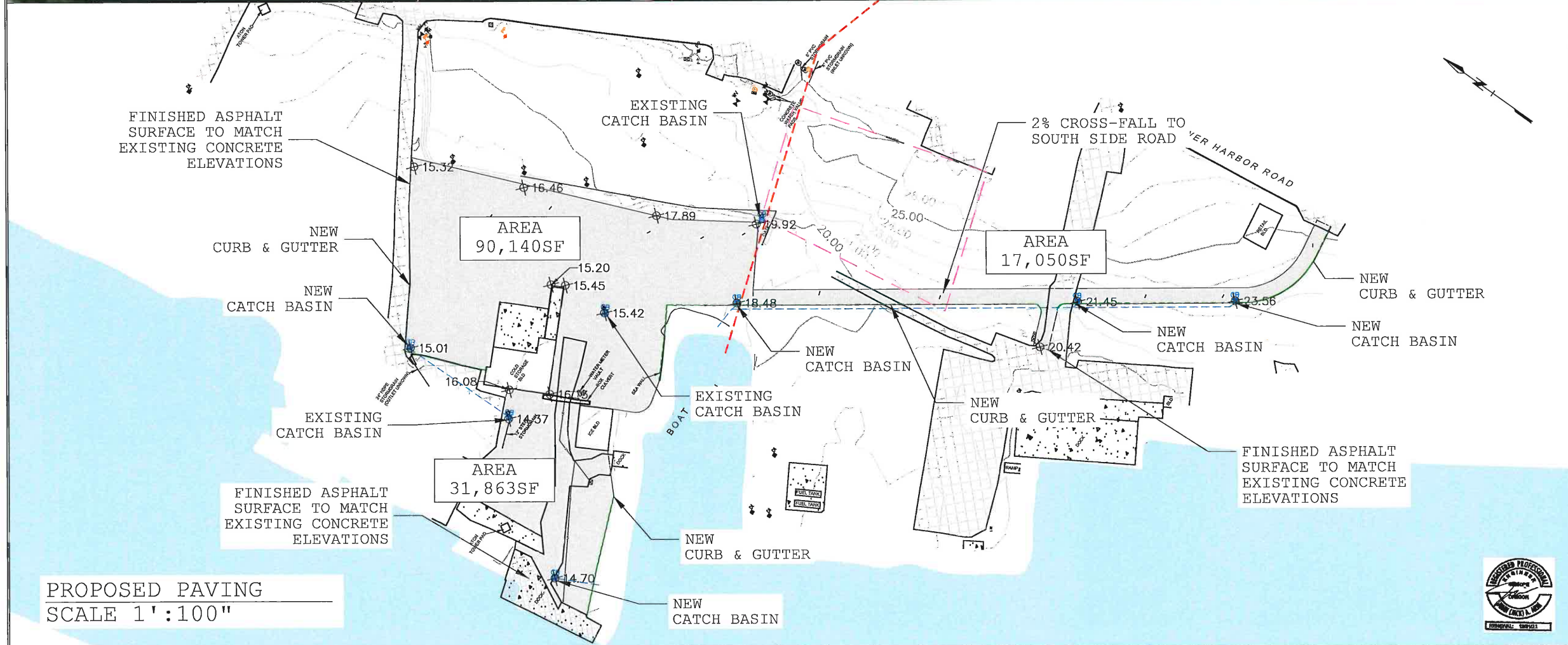


ENGINEER:  
**EMC**  
Engineers/Scientists, LLC  
16330 Lower Harbor Rd, Brookings, OR 97415  
Phone: 541.338.1234  
Fax: 541.338.5678  
www.emc-engineers.com

NO.	DATE	REVISION	BY

PREPARED FOR:  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415  
(LOT 2900, MAP 360522DB)  
Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No.: C-102  
File No.: 140





PROPOSED PAVING  
SCALE 1" : 100"

ENGINEER:  
**EMC**  
Engineers/Scientists, LLC  
Grant Park • Jacksonville • Portland, OR  
1000 NE Oregon Street, Suite 200  
Portland, OR 97232  
Phone: 503.253.1234  
Fax: 503.253.1235  
www.emc-engineers.com

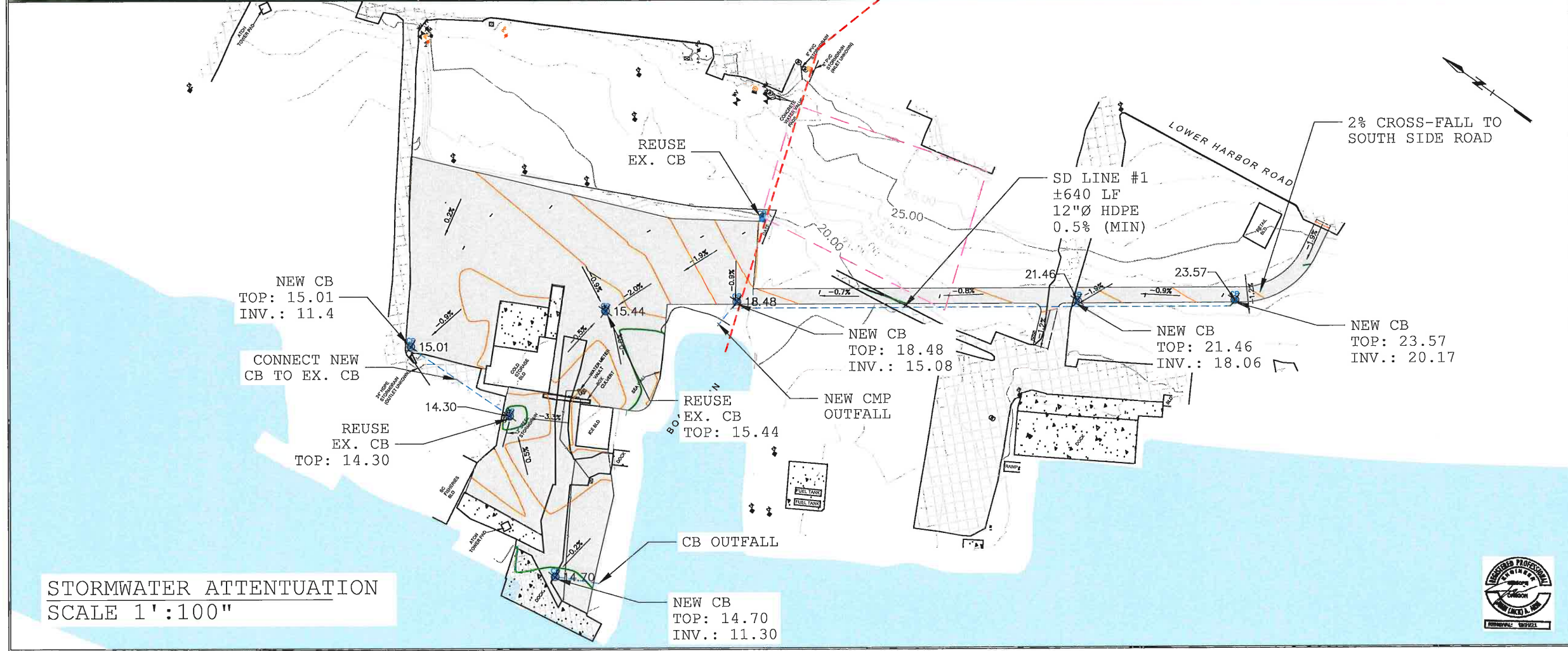
No.	DATE	REVISION	BY

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

Date 04/04/2021  
Drawn By INFRA DRAFT  
Sheet No. C-103  
File No. 140







ENGINEER:  
  
 EMC  
 Engineers/Scientists, LLC

No.	DATE	REVISION	BY

PREPARED FOR:  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415

(LOT 2900, MAP '360522DB')

PORT OF BROOKINGS HARBOR

Date  
04/04/2021

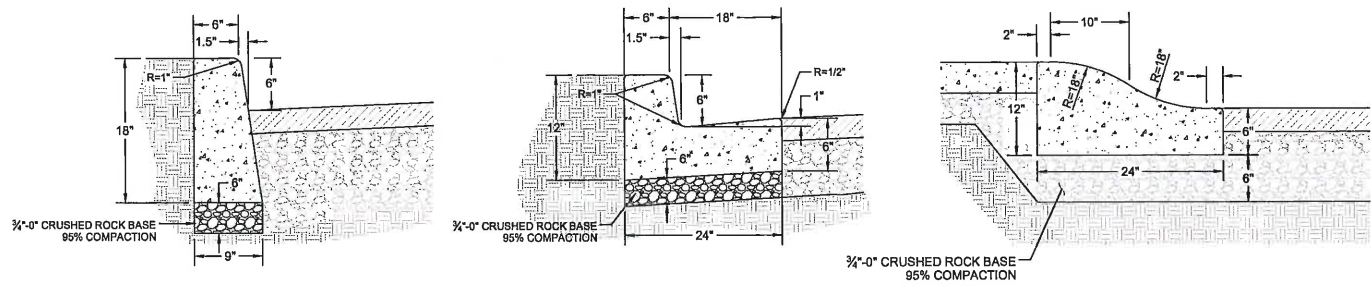
Drawn By  
INFRADRAFT

Sheet No.  
C-104

File No.  
140



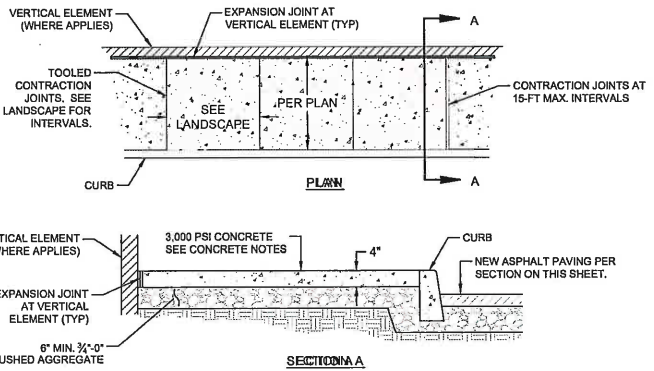




301 VERTICAL CURB SCALE: NTS

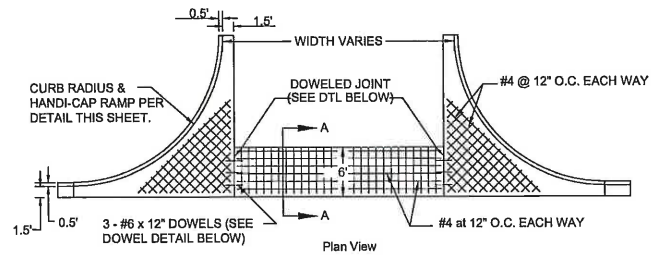
302 CURB & GUTTER SCALE: NTS

303 ROLLED CURB SCALE: NTS

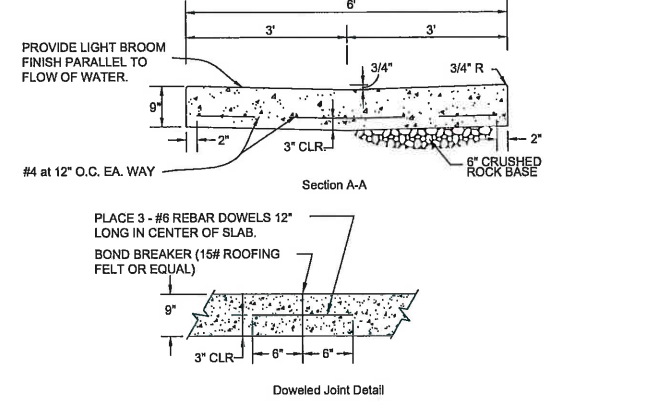


311 CURB LINE CONCRETE SIDEWALK SCALE: NTS

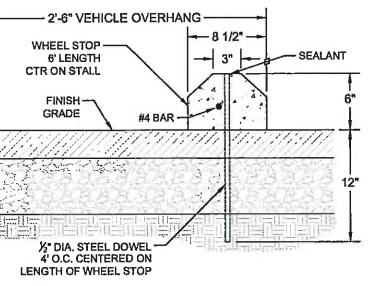
309 CONCRETE CONTROL JOINTS SCALE: NTS



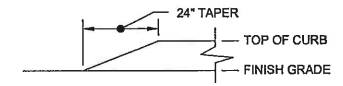
327 DRIVEWAY APRON WITH VALLEY GUTTER SCALE: NTS



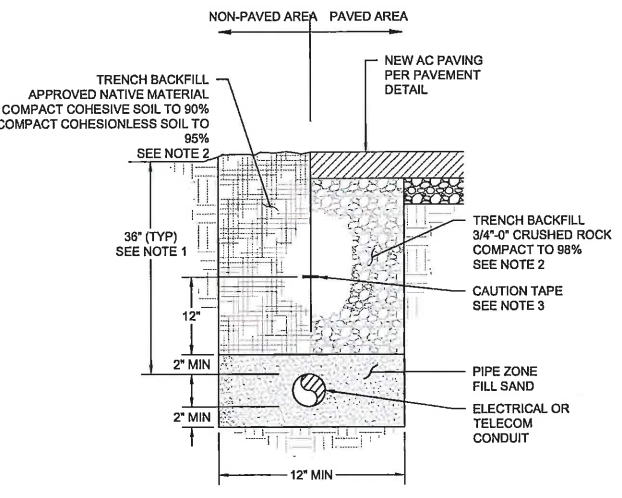
- NOTES**
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
  2. SUBGRADE AND BASE SHALL BE UNYIELDING AND FIRMLY COMPACTED.
  3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.



391 WHEEL STOP SCALE: NTS

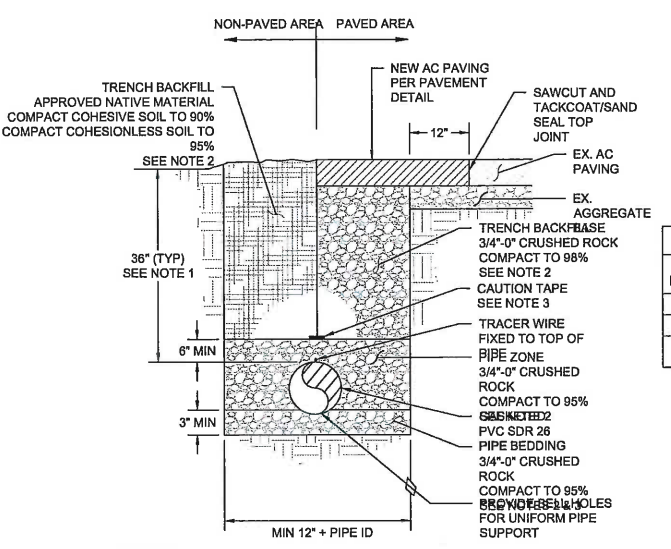


305 CURB TAPER SCALE: NTS



- NOTES**
1. COVER OVER PIPE MAY VARY FROM 24" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC: 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC BELOW"
  - TELECOM: 3" WIDE ORANGE POLYETHYLENE TAPE IMPRINTED "CAUTION: COMMUNICATIONS LINE BURIED BELOW"

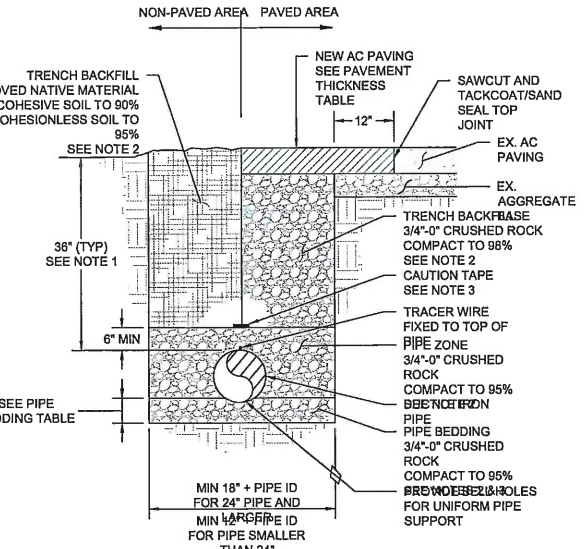
583 CONDUIT TRENCH DETAIL SCALE: NTS



- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. SEWER: 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE BELOW"

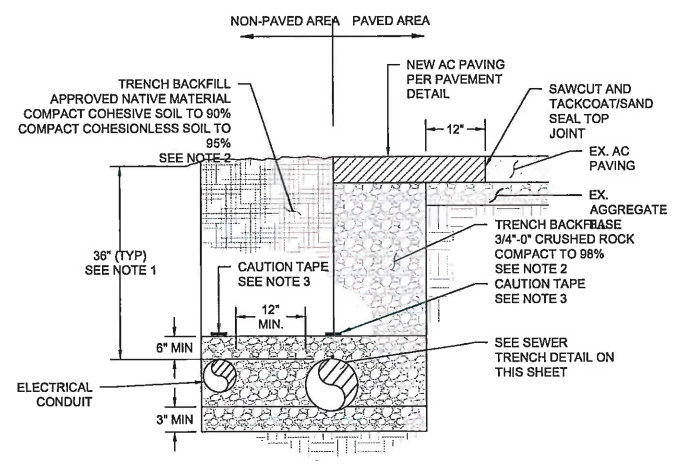
581 SEWER TRENCH DETAIL SCALE: NTS

PIPE BEDDING	
PIPE DIAMETER (D)	A
LESS THAN 8"	3"
8" THRU 12"	4"
GREATER THAN 12"	6"



- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. 3" WIDE BLUE POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED WATER LINE BELOW"

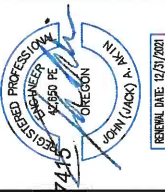
580 WATER TRENCH DETAIL SCALE: NTS



- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRED COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC: 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC BELOW"
  - SEWER: 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE BELOW"

584 JOINT TRENCH DETAIL SCALE: NTS

Grants Pass • Jacksonville • Medford, OR  
 1000 NE Oregon Street, Grants Pass, OR 97141  
 Phone: 541-474-4444, Fax: 541-477-4488  
 Email: info@emc-engineers.com, sales@emc-engineers.com  
 Website: www.emc-engineers.com

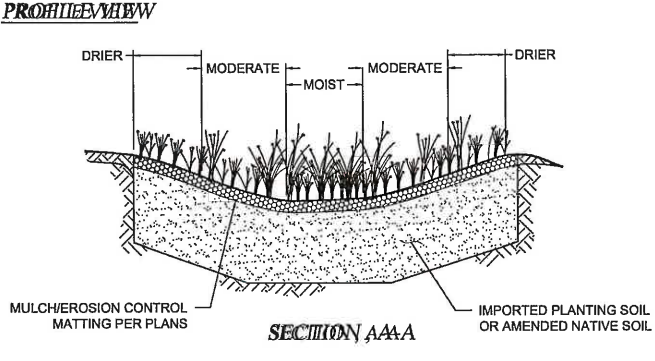
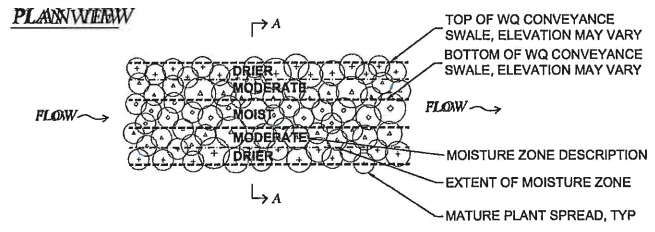


PORT OF BIRKENHEAD HARBOR  
 16380 LOMAX ROAD, BIRKENHEAD, OREGON 97143  
 HINGED DRAW 4662  
 2020 IMPROVEMENTS

DRAWN BY: TAM  
 DATE: 09/01/20  
 JOB NO: 20-XXX

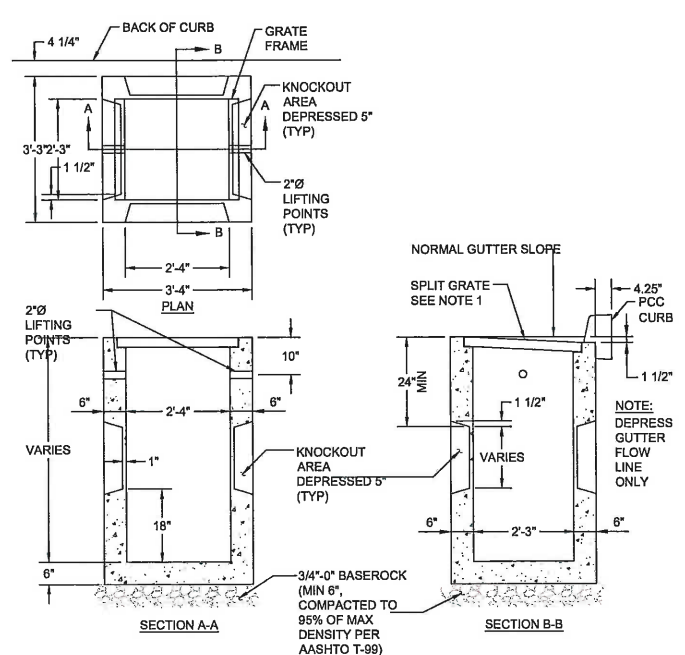
**C105**  
 PROJECT DETAILS



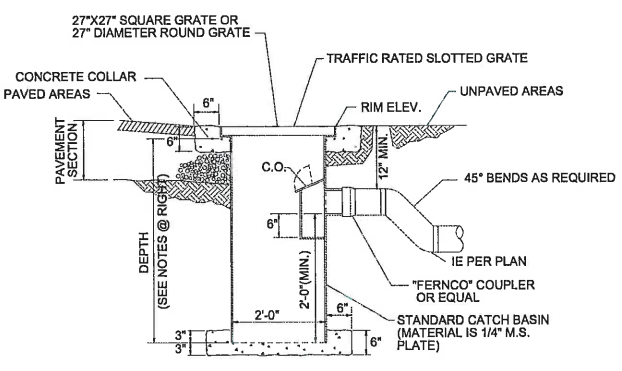


**LEGEND:**  
 ---- INDICATES GRADE BREAK  
 - - - MOISTURE ZONE  
 PLANT SPECIES APPROPRIATE FOR MOISTURE ZONE:  
 ○ DRIER  
 ● MODERATE  
 ⊙ MOIST

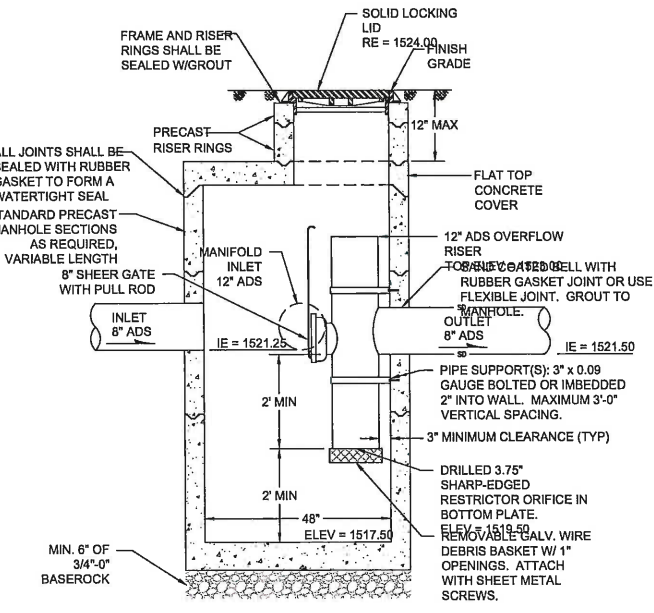
**NOTES:**  
 1. THIS DETAIL IS PROVIDED AS A SCHEMATIC EXAMPLE OF THE RANDOM PLANT PLACEMENT AND 90% COVERAGE AFTER ESTABLISHMENT PERIOD DESIRED TO REDUCE EROSION AND WEEDS.  
 2. INSTALL PLANTS PER PLANS, ACCORDING TO LANDSCAPE DESIGN PLANT TABLE, WHICH SHOULD INCLUDE PLANT SPECIES, SPACING, AND QUANTITIES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



**NOTES:**  
 1. COVER 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 6000 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.



**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"



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

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 vegetate swale as early as possible to establish plantings before directing stormwater runoff to it or divert stormwater around facility. Preferably, 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. depths).
  - 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 energy dissipation below all outfalls per approved plans.
- If unprotected 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 dye, 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.
- Side 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:

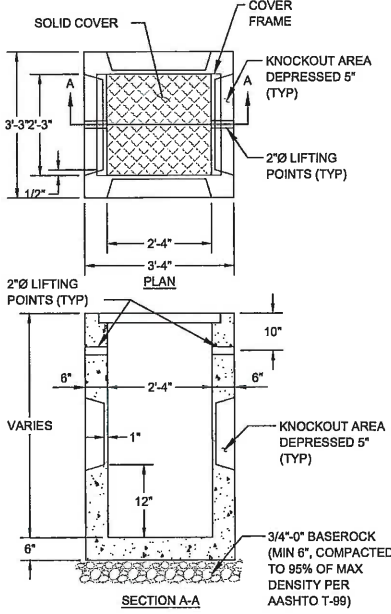
US Standard Sieve Size	Percent Passing
3/8"	100
#4	95-100
#10	75-90
#20	45-65
#40	15-35
#60	5-15
#200	2-5

- 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 imported 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 salt content shall be less than 6.0mmhos/cm.
  - 100% 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.

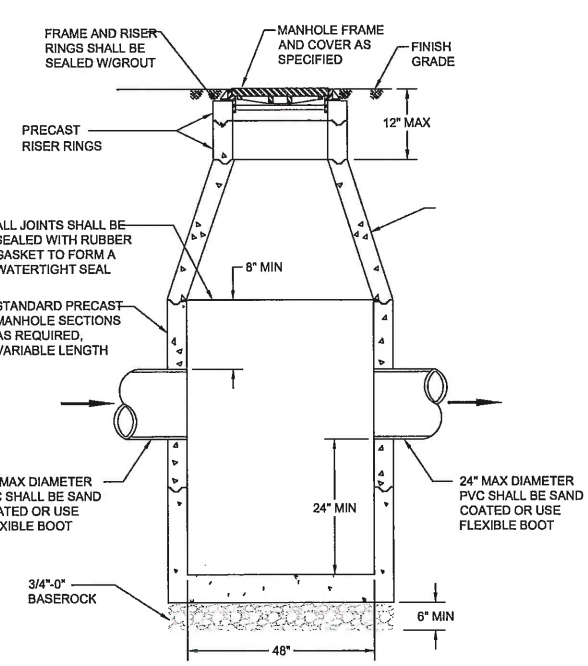
**2 CATCH BASIN**  
 C6.1 SCALE: NTS



**CONSTRUCTION NOTES:**  
 1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.  
 2. CONCRETE STRENGTH SHALL BE 6000 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**  
 C6.1 SCALE: NTS

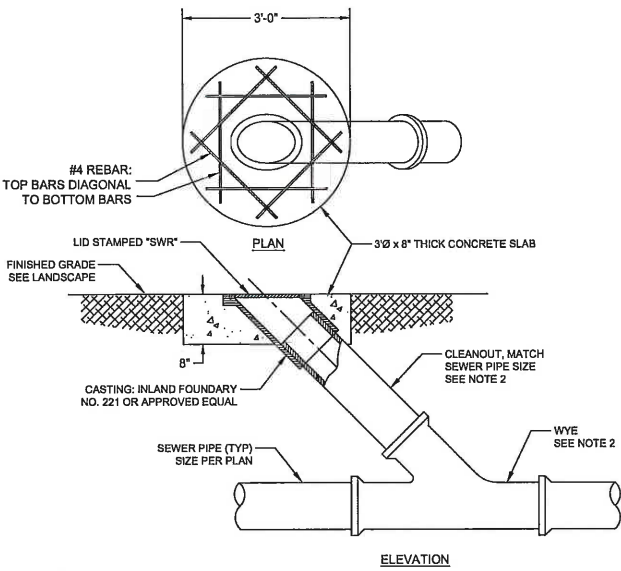
**3 LYNCH STYLE CATCH BASIN**  
 C6.1 SCALE: NTS



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

**7 48" STORM MANHOLE**  
 C6.1 SCALE: NTS

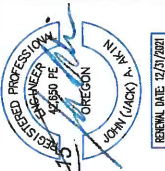
**4 CONTROL STRUCTURE MANHOLE**  
 C6.1 SCALE: NTS (PONDS 2 & 3)



**NOTES:**  
 1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2015 ODOT STANDARD SPECIFICATIONS SECTION 00440. MINIMUM 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.  
 2. FITTINGS AND PIPE TO BE GASKETED PVC SDR 26.

**5 TYPICAL CLEANOUT**  
 C6.1 SCALE: NTS

Grants Pass • Jacksonville • Medford, OR  
 503-753-7727  
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 503-753-7800



**PORT OF BBOCKING & BARBOR**  
 16533 DOLAN AVE (RIVERBORO RD) BBOCKING, OREGON 97143  
**HINSEP DBR 46322**  
**2020 IMPROVEMENTS**

DRAWN BY: TAM  
 DATE: 09/01/20  
 JOB NO: 20-XXX

**C106**  
 PROJECT DETAILS