

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NORTH PORTWALK & SEAWALL RECONSTRUCTION

300-336 ADMIRAL WAY

EDMONDS, WA 98020

OWNER

PORT EDWARDS
427 ADMIRAL WAY
EDMONDS, WA 98020
CONTACT: ROBERT MACHESNEY
RMA@PORTEDWARDS.ORG

CONSULTANTS

ARCHITECT
MARTINE ARCHITECTURE & URBAN DESIGN
2000 1ST AVE, SUITE 200
SEATTLE, WA 98101
CONTACT: STEVE VAN VLIET

CIVIL ENGINEER
CG ENGINEERING
2000 1ST AVE, SUITE 200
SEATTLE, WA 98101
CONTACT: JESSIE HARTMAN

SOIL/GEOTECH ENGINEER
DHA SURVEYORS
1000 1ST AVE, SUITE 100
WOODVILLE, WA 98027
CONTACT: STEVEN WRIGHT

WATER/SEWER/TORM
CITY OF EDMONDS
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

GAS
PIGLET SOUND ENERGY
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

FIRE
FIRE DISTRICT ONE
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

CABLE & TELEPHONE
CONCAST
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

POWER
HARRIS GROUP
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

STRUCTURAL ENGINEER
CG ENGINEERING
2000 1ST AVE, SUITE 200
SEATTLE, WA 98101
CONTACT: JESSIE HARTMAN

PLUMBING
HARRIS GROUP
1000 1ST AVE, SUITE 100
EDMONDS, WA 98020
CONTACT: JESSIE HARTMAN

GENERAL NOTES
1. ALL MATERIALS AND WORK SHOWN ON THESE PLANS SHALL CONFORM TO THE CITY OF EDMONDS STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

2. STANDARD PLAN AND TYPE NUMBERS INDICATED ON THESE DRAWINGS REFER TO CITY OF EDMONDS STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

3. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOBSITE WHENEVER CONSTRUCTION IS IN PROGRESS.

4. GOVERNING AUTHORITY: PLANS MUST BE APPROVED BY THE ENGINEER OF RECORD AND THE LOCAL GOVERNMENT.

5. CONTRACTOR SHALL RECORD ALL APPROVED DRAWINGS FROM THESE PLANS ON A SET OF "AS-BUILT" DRAWINGS AND SHALL SUBMIT THEM TO THE CITY OF EDMONDS PRIOR TO FINAL APPROVAL OF THE BUILDING OCCUPANCY/PROJECT APPROVAL.

6. ELEVATIONS SHOWN ARE IN FEET. SEE SURVEY FOR BENCHMARK INFORMATION.

7. THE LOCATION OF EXISTING UTILITIES AND SITE FEATURES SHOWN HEREON HAVE BEEN DETERMINED BY OTHER MEANS AND ARE NOT GUARANTEED TO BE ACCURATE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES SHOWN AND TO FURTHER DISCOVER AND RECORD ANY UTILITIES NOT SHOWN ON THESE PLANS.

8. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE BEFORE STARTING WORK.

9. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE BEFORE STARTING WORK.

10. PIPE LENGTHS WHERE SHOWN ARE APPROXIMATE AND MAY CHANGE DUE TO FIELD CONDITIONS.

11. CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT (WHERE APPLICABLE) AND SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES SHOWN AND TO FURTHER DISCOVER AND RECORD ANY UTILITIES NOT SHOWN ON THESE PLANS.

12. STRUCTURAL FILL MATERIAL AND A PLACEMENT SHALL CONFORM TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.

13. SUBGRADE SOILS IN ALL AREAS WHERE BAIN GARDENS, INFILTRATION OR PERVIOUS PAVEMENT IS TO BE INSTALLED SHALL BE PROTECTED AND PROTECTED AT ALL TIMES FROM COMPACTIVE ACTIVITIES (I.E. HEAVY EQUIPMENT, STOCKPIPING).

14. MANHOLES, CATCH BASINS, UTILITIES AND PAVEMENT SHALL BEAR ON BEDROCK OR ON VERY DENSE NATIVE SOIL OR COMPACTED STRUCTURAL FILL. IF SOIL IS DISTURBED, SOFT, LOOSE, WET OR IF ORGANIC MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIATION AND REPAIRS TO MEET THE PROJECT GEOTECHNICAL REPORT.

15. SEE SURVEY AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF BUILDINGS, LANDSCAPED AREAS AND OTHER PROPOSED OR EXISTING SITE FEATURES.

16. SEE ARCHITECTURAL DRAWINGS FOR PERIMETER FOUNDATION DRAINAGE. FOUNDATION DRAINAGE SHALL BE INSTALLED TO THE STORM DRAIN LINES AND SHALL BE TIGHTENED TO THE STORM DRAIN LINES WHERE INDICATED ON THE PLANS.

17. ALL REQUIRED TEMPORARY FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO INSTALLATION OF ANY PERMANENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.

18. ALL ROOF DRAIN, PERIMETER FOUNDATION DRAINAGE, CATCH BASINS AND OTHER EXTERNAL DRAINAGE SHALL BE CONNECTED TO THE STORM DRAINAGE SYSTEM, UNLESS NOTED OTHERWISE.

19. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

20. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

21. A SEPARATE BRIGADIER PERMIT MUST BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO FINAL CONSTRUCTION ACCEPTANCE. PROVIDE TO THE CITY WATER QUALITY TECHNICIAN, A COPY OF THE BRIGADIER PERMIT AND A COPY OF THE BRIGADIER PERMIT TESTING SHALL BE COMPLETED BY THE OWNER ANNUALLY.

22. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

23. ALL DISTURBED SOIL AREAS SHALL BE COMPOST AMENDED AND SEED OR STABILIZED BY OTHER ACCEPTABLE MEANS PRIOR TO FINAL CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION.

24. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING, WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

25. THIS PROJECT IS NOT A BALANCED EARTHWORK PROJECT. BOTH EXPORT AND IMPORT OF SOIL AND ROCK MATERIALS ARE REQUIRED.

26. SLOPE OF FINISHED GRADES SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.

27. FINISHED GRADE SHALL SLOPE AWAY FROM BUILDING WALLS AT MINIMUM 5% SLOPE FOR A MINIMUM DISTANCE OF 10 FEET.

28. CONTRACTOR SHALL BE RESPONSIBLE FOR RAIN, INITIAL AND MAINTAIN GRADING AND BRACING AS NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER EXISTING STRUCTURES. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

29. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY AND SOULON CITY PROCEEDINGS FOR ALL WATER SERVICE INTERUPTIONS, HYDRANT SHUT-OFFS, STREET CLOSURES OR OTHER ACCESS RESTRICTIONS.

30. COORDINATE AND ARRANGE FOR ALL UTILITY CONNECTIONS, UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES. CONNECTIONS TO EXISTING UTILITIES SHALL BE MADE ONLY WITH ADVANCE WRITTEN APPROVAL OF THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES.

31. ALL UTILITIES SHALL BE PLACED UNDERGROUND.

32. EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY CITY OF EDMONDS AND OWNERS REPRESENTATIVE PRIOR TO BACKFILLING.

33. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

34. FIELD STAKE ALL UTILITY TUBES AT THE PROPERTY LINE.

35. TRENCH BACKFILL OF UTILITIES LOCATED WITHIN THE CITY RIGHT-OF-WAY SHALL BE COMPACTED TO 95%.

36. WHERE NEW PIPE CLEANS AN EXISTING OR NEW UTILITY BY 6" OR LARGER, PLACE POLYETHYLENE PLASTIC FOAM AS A CUSHION BETWEEN THE UTILITIES.

37. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

38. SEE ELECTRICAL DRAWINGS (WHERE APPLICABLE) FOR CONTINUATION OF SITE UTILITIES WITHIN THE BUILDINGS.

39. SEE LANDSCAPE DRAWINGS (WHERE APPLICABLE) FOR SITE IRRIGATION SYSTEM.

40. PERMANENT PROTECTION OF EXISTING UTILITIES SHALL BE PROVIDED TO CITY ENGINEERING DIVISION FOR RIGHT-OF-WAY.

41. A SEPARATE RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE CITY RIGHT-OF-WAY.

42. UNDERGROUND WIRING REQUIREMENTS OF EDCS 8.0.5 SHALL BE FOLLOWED. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND.

CONSTRUCTION SEQUENCE NOTES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY ENGINEERING DIVISION AT 425-771-0220, EXT. 1326. TWO DAY (48 HRS) NOTICE IS REQUIRED.

2. REVIEW TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

3. CALL FOR UTILITY LOCATES.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

5. HAVE EROSION CONTROL MEASURES INSPECTED BY CITY OF EDMONDS CITY ENGINEERING DIVISION PRIOR TO ANY CONSTRUCTION OR SITE CLEANING. EROSION AND SEDIMENTATION CONTROL, PRACTICES AND/OR DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

6. ROUGH GRADING OF ADJACENT AMENITY SITE.

7. INSTALL UTILITIES AND OTHER SITE IMPROVEMENTS, INCLUDING PORTAGE IMPROVEMENTS.

8. CONTRACT BUILDING (ANTICIPATED TO BE IN PROGRESS WITH ADJACENT AMENITY SITE).

9. ESTABLISH LANDSCAPING AND PERMANENT VEGETATION. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED AND APPROVAL OF CITY ENGINEERING DIVISION.

10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

11. A SEPARATE BRIGADIER PERMIT MUST BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO FINAL CONSTRUCTION ACCEPTANCE. PROVIDE TO THE CITY WATER QUALITY TECHNICIAN, A COPY OF THE BRIGADIER PERMIT AND A COPY OF THE BRIGADIER PERMIT TESTING SHALL BE COMPLETED BY THE OWNER ANNUALLY.

12. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

13. ALL DISTURBED SOIL AREAS SHALL BE COMPOST AMENDED AND SEED OR STABILIZED BY OTHER ACCEPTABLE MEANS PRIOR TO FINAL CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION.

14. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING, WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

15. THIS PROJECT IS NOT A BALANCED EARTHWORK PROJECT. BOTH EXPORT AND IMPORT OF SOIL AND ROCK MATERIALS ARE REQUIRED.

16. SLOPE OF FINISHED GRADES SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.

17. FINISHED GRADE SHALL SLOPE AWAY FROM BUILDING WALLS AT MINIMUM 5% SLOPE FOR A MINIMUM DISTANCE OF 10 FEET.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR RAIN, INITIAL AND MAINTAIN GRADING AND BRACING AS NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER EXISTING STRUCTURES. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

19. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY AND SOULON CITY PROCEEDINGS FOR ALL WATER SERVICE INTERUPTIONS, HYDRANT SHUT-OFFS, STREET CLOSURES OR OTHER ACCESS RESTRICTIONS.

20. COORDINATE AND ARRANGE FOR ALL UTILITY CONNECTIONS, UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES. CONNECTIONS TO EXISTING UTILITIES SHALL BE MADE ONLY WITH ADVANCE WRITTEN APPROVAL OF THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES.

21. ALL UTILITIES SHALL BE PLACED UNDERGROUND.

22. EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY CITY OF EDMONDS AND OWNERS REPRESENTATIVE PRIOR TO BACKFILLING.

23. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

24. FIELD STAKE ALL UTILITY TUBES AT THE PROPERTY LINE.

25. TRENCH BACKFILL OF UTILITIES LOCATED WITHIN THE CITY RIGHT-OF-WAY SHALL BE COMPACTED TO 95%.

26. WHERE NEW PIPE CLEANS AN EXISTING OR NEW UTILITY BY 6" OR LARGER, PLACE POLYETHYLENE PLASTIC FOAM AS A CUSHION BETWEEN THE UTILITIES.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

28. SEE ELECTRICAL DRAWINGS (WHERE APPLICABLE) FOR CONTINUATION OF SITE UTILITIES WITHIN THE BUILDINGS.

29. SEE LANDSCAPE DRAWINGS (WHERE APPLICABLE) FOR SITE IRRIGATION SYSTEM.

30. PERMANENT PROTECTION OF EXISTING UTILITIES SHALL BE PROVIDED TO CITY ENGINEERING DIVISION FOR RIGHT-OF-WAY.

31. A SEPARATE RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE CITY RIGHT-OF-WAY.

32. UNDERGROUND WIRING REQUIREMENTS OF EDCS 8.0.5 SHALL BE FOLLOWED. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND.

CONSTRUCTION SEQUENCE NOTES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY ENGINEERING DIVISION AT 425-771-0220, EXT. 1326. TWO DAY (48 HRS) NOTICE IS REQUIRED.

2. REVIEW TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

3. CALL FOR UTILITY LOCATES.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

5. HAVE EROSION CONTROL MEASURES INSPECTED BY CITY OF EDMONDS CITY ENGINEERING DIVISION PRIOR TO ANY CONSTRUCTION OR SITE CLEANING. EROSION AND SEDIMENTATION CONTROL, PRACTICES AND/OR DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

6. ROUGH GRADING OF ADJACENT AMENITY SITE.

7. INSTALL UTILITIES AND OTHER SITE IMPROVEMENTS, INCLUDING PORTAGE IMPROVEMENTS.

8. CONTRACT BUILDING (ANTICIPATED TO BE IN PROGRESS WITH ADJACENT AMENITY SITE).

9. ESTABLISH LANDSCAPING AND PERMANENT VEGETATION. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED AND APPROVAL OF CITY ENGINEERING DIVISION.

10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

11. A SEPARATE BRIGADIER PERMIT MUST BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO FINAL CONSTRUCTION ACCEPTANCE. PROVIDE TO THE CITY WATER QUALITY TECHNICIAN, A COPY OF THE BRIGADIER PERMIT AND A COPY OF THE BRIGADIER PERMIT TESTING SHALL BE COMPLETED BY THE OWNER ANNUALLY.

12. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

13. ALL DISTURBED SOIL AREAS SHALL BE COMPOST AMENDED AND SEED OR STABILIZED BY OTHER ACCEPTABLE MEANS PRIOR TO FINAL CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION.

14. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING, WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

15. THIS PROJECT IS NOT A BALANCED EARTHWORK PROJECT. BOTH EXPORT AND IMPORT OF SOIL AND ROCK MATERIALS ARE REQUIRED.

16. SLOPE OF FINISHED GRADES SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.

17. FINISHED GRADE SHALL SLOPE AWAY FROM BUILDING WALLS AT MINIMUM 5% SLOPE FOR A MINIMUM DISTANCE OF 10 FEET.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR RAIN, INITIAL AND MAINTAIN GRADING AND BRACING AS NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER EXISTING STRUCTURES. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

19. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY AND SOULON CITY PROCEEDINGS FOR ALL WATER SERVICE INTERUPTIONS, HYDRANT SHUT-OFFS, STREET CLOSURES OR OTHER ACCESS RESTRICTIONS.

20. COORDINATE AND ARRANGE FOR ALL UTILITY CONNECTIONS, UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES. CONNECTIONS TO EXISTING UTILITIES SHALL BE MADE ONLY WITH ADVANCE WRITTEN APPROVAL OF THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES.

21. ALL UTILITIES SHALL BE PLACED UNDERGROUND.

22. EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY CITY OF EDMONDS AND OWNERS REPRESENTATIVE PRIOR TO BACKFILLING.

23. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

24. FIELD STAKE ALL UTILITY TUBES AT THE PROPERTY LINE.

25. TRENCH BACKFILL OF UTILITIES LOCATED WITHIN THE CITY RIGHT-OF-WAY SHALL BE COMPACTED TO 95%.

26. WHERE NEW PIPE CLEANS AN EXISTING OR NEW UTILITY BY 6" OR LARGER, PLACE POLYETHYLENE PLASTIC FOAM AS A CUSHION BETWEEN THE UTILITIES.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

28. SEE ELECTRICAL DRAWINGS (WHERE APPLICABLE) FOR CONTINUATION OF SITE UTILITIES WITHIN THE BUILDINGS.

29. SEE LANDSCAPE DRAWINGS (WHERE APPLICABLE) FOR SITE IRRIGATION SYSTEM.

30. PERMANENT PROTECTION OF EXISTING UTILITIES SHALL BE PROVIDED TO CITY ENGINEERING DIVISION FOR RIGHT-OF-WAY.

31. A SEPARATE RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE CITY RIGHT-OF-WAY.

32. UNDERGROUND WIRING REQUIREMENTS OF EDCS 8.0.5 SHALL BE FOLLOWED. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND.

CONSTRUCTION SEQUENCE NOTES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY ENGINEERING DIVISION AT 425-771-0220, EXT. 1326. TWO DAY (48 HRS) NOTICE IS REQUIRED.

2. REVIEW TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

3. CALL FOR UTILITY LOCATES.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

5. HAVE EROSION CONTROL MEASURES INSPECTED BY CITY OF EDMONDS CITY ENGINEERING DIVISION PRIOR TO ANY CONSTRUCTION OR SITE CLEANING. EROSION AND SEDIMENTATION CONTROL, PRACTICES AND/OR DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

6. ROUGH GRADING OF ADJACENT AMENITY SITE.

7. INSTALL UTILITIES AND OTHER SITE IMPROVEMENTS, INCLUDING PORTAGE IMPROVEMENTS.

8. CONTRACT BUILDING (ANTICIPATED TO BE IN PROGRESS WITH ADJACENT AMENITY SITE).

9. ESTABLISH LANDSCAPING AND PERMANENT VEGETATION. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED AND APPROVAL OF CITY ENGINEERING DIVISION.

10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

11. A SEPARATE BRIGADIER PERMIT MUST BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO FINAL CONSTRUCTION ACCEPTANCE. PROVIDE TO THE CITY WATER QUALITY TECHNICIAN, A COPY OF THE BRIGADIER PERMIT AND A COPY OF THE BRIGADIER PERMIT TESTING SHALL BE COMPLETED BY THE OWNER ANNUALLY.

12. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

13. ALL DISTURBED SOIL AREAS SHALL BE COMPOST AMENDED AND SEED OR STABILIZED BY OTHER ACCEPTABLE MEANS PRIOR TO FINAL CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION.

14. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING, WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

15. THIS PROJECT IS NOT A BALANCED EARTHWORK PROJECT. BOTH EXPORT AND IMPORT OF SOIL AND ROCK MATERIALS ARE REQUIRED.

16. SLOPE OF FINISHED GRADES SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.

17. FINISHED GRADE SHALL SLOPE AWAY FROM BUILDING WALLS AT MINIMUM 5% SLOPE FOR A MINIMUM DISTANCE OF 10 FEET.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR RAIN, INITIAL AND MAINTAIN GRADING AND BRACING AS NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER EXISTING STRUCTURES. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

19. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY AND SOULON CITY PROCEEDINGS FOR ALL WATER SERVICE INTERUPTIONS, HYDRANT SHUT-OFFS, STREET CLOSURES OR OTHER ACCESS RESTRICTIONS.

20. COORDINATE AND ARRANGE FOR ALL UTILITY CONNECTIONS, UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES. CONNECTIONS TO EXISTING UTILITIES SHALL BE MADE ONLY WITH ADVANCE WRITTEN APPROVAL OF THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES.

21. ALL UTILITIES SHALL BE PLACED UNDERGROUND.

22. EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY CITY OF EDMONDS AND OWNERS REPRESENTATIVE PRIOR TO BACKFILLING.

23. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

24. FIELD STAKE ALL UTILITY TUBES AT THE PROPERTY LINE.

25. TRENCH BACKFILL OF UTILITIES LOCATED WITHIN THE CITY RIGHT-OF-WAY SHALL BE COMPACTED TO 95%.

26. WHERE NEW PIPE CLEANS AN EXISTING OR NEW UTILITY BY 6" OR LARGER, PLACE POLYETHYLENE PLASTIC FOAM AS A CUSHION BETWEEN THE UTILITIES.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

28. SEE ELECTRICAL DRAWINGS (WHERE APPLICABLE) FOR CONTINUATION OF SITE UTILITIES WITHIN THE BUILDINGS.

29. SEE LANDSCAPE DRAWINGS (WHERE APPLICABLE) FOR SITE IRRIGATION SYSTEM.

30. PERMANENT PROTECTION OF EXISTING UTILITIES SHALL BE PROVIDED TO CITY ENGINEERING DIVISION FOR RIGHT-OF-WAY.

31. A SEPARATE RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE CITY RIGHT-OF-WAY.

32. UNDERGROUND WIRING REQUIREMENTS OF EDCS 8.0.5 SHALL BE FOLLOWED. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND.

CONSTRUCTION SEQUENCE NOTES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY ENGINEERING DIVISION AT 425-771-0220, EXT. 1326. TWO DAY (48 HRS) NOTICE IS REQUIRED.

2. REVIEW TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

3. CALL FOR UTILITY LOCATES.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

5. HAVE EROSION CONTROL MEASURES INSPECTED BY CITY OF EDMONDS CITY ENGINEERING DIVISION PRIOR TO ANY CONSTRUCTION OR SITE CLEANING. EROSION AND SEDIMENTATION CONTROL, PRACTICES AND/OR DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

6. ROUGH GRADING OF ADJACENT AMENITY SITE.

7. INSTALL UTILITIES AND OTHER SITE IMPROVEMENTS, INCLUDING PORTAGE IMPROVEMENTS.

8. CONTRACT BUILDING (ANTICIPATED TO BE IN PROGRESS WITH ADJACENT AMENITY SITE).

9. ESTABLISH LANDSCAPING AND PERMANENT VEGETATION. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED AND APPROVAL OF CITY ENGINEERING DIVISION.

10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

11. A SEPARATE BRIGADIER PERMIT MUST BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO FINAL CONSTRUCTION ACCEPTANCE. PROVIDE TO THE CITY WATER QUALITY TECHNICIAN, A COPY OF THE BRIGADIER PERMIT AND A COPY OF THE BRIGADIER PERMIT TESTING SHALL BE COMPLETED BY THE OWNER ANNUALLY.

12. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF ALL SITE IMPROVEMENTS INDICATED ON THESE DRAWINGS.

13. ALL DISTURBED SOIL AREAS SHALL BE COMPOST AMENDED AND SEED OR STABILIZED BY OTHER ACCEPTABLE MEANS PRIOR TO FINAL CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. SEE EDMONDS CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION.

14. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING, WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

15. THIS PROJECT IS NOT A BALANCED EARTHWORK PROJECT. BOTH EXPORT AND IMPORT OF SOIL AND ROCK MATERIALS ARE REQUIRED.

16. SLOPE OF FINISHED GRADES SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.

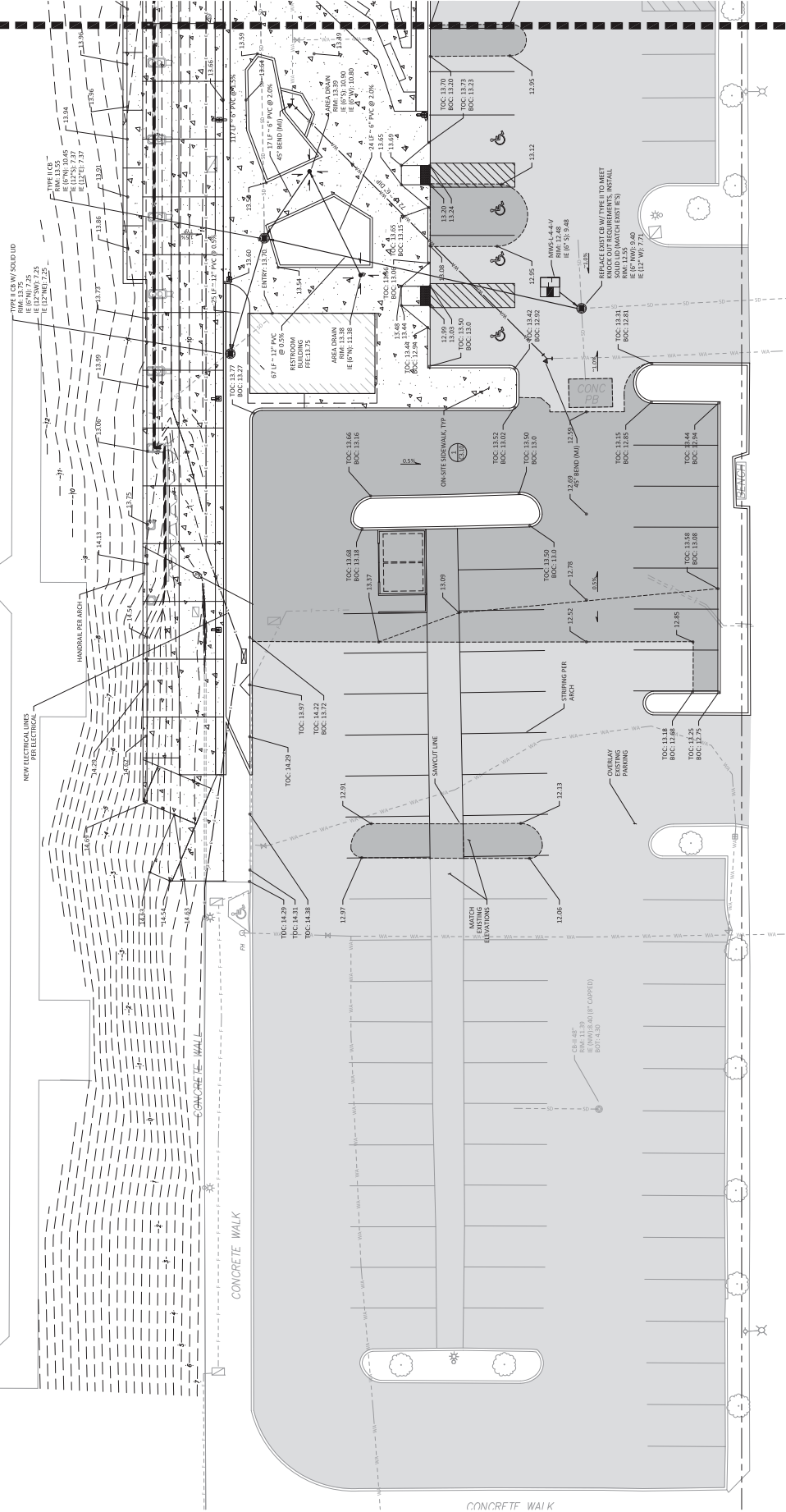
17. FINISHED GRADE SHALL SLOPE AWAY

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

PAVING LEGEND	
	NEW ASPHALT/UTILITY SAWCUT
	OVERLAY EXISTING ASPHALT
	NEW CONCRETE

MATCH LINE 1/C3.2
MATCH LINE 1/C3.3



1 PARTIAL GRADING AND UTILITY PLAN
SCALE: 1"=20'



THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE FORWARDED TO THE CITY ENGINEERING DIVISION FOR REVIEW AND APPROVAL.

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____
CITY ENGINEERING DIVISION

BLDXXXX-XXXX

SHEET:
NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
GRADING AND UTILITY
PLAN AND DETAILS
DATE: 03/31/23
JOB NO: 21060.20
CHECKS: JPU
DRAWN: ATD
TAF

MARK	DATE	DESCRIPTION
03/31/23	DESIGN REVIEW SUBMITTAL	

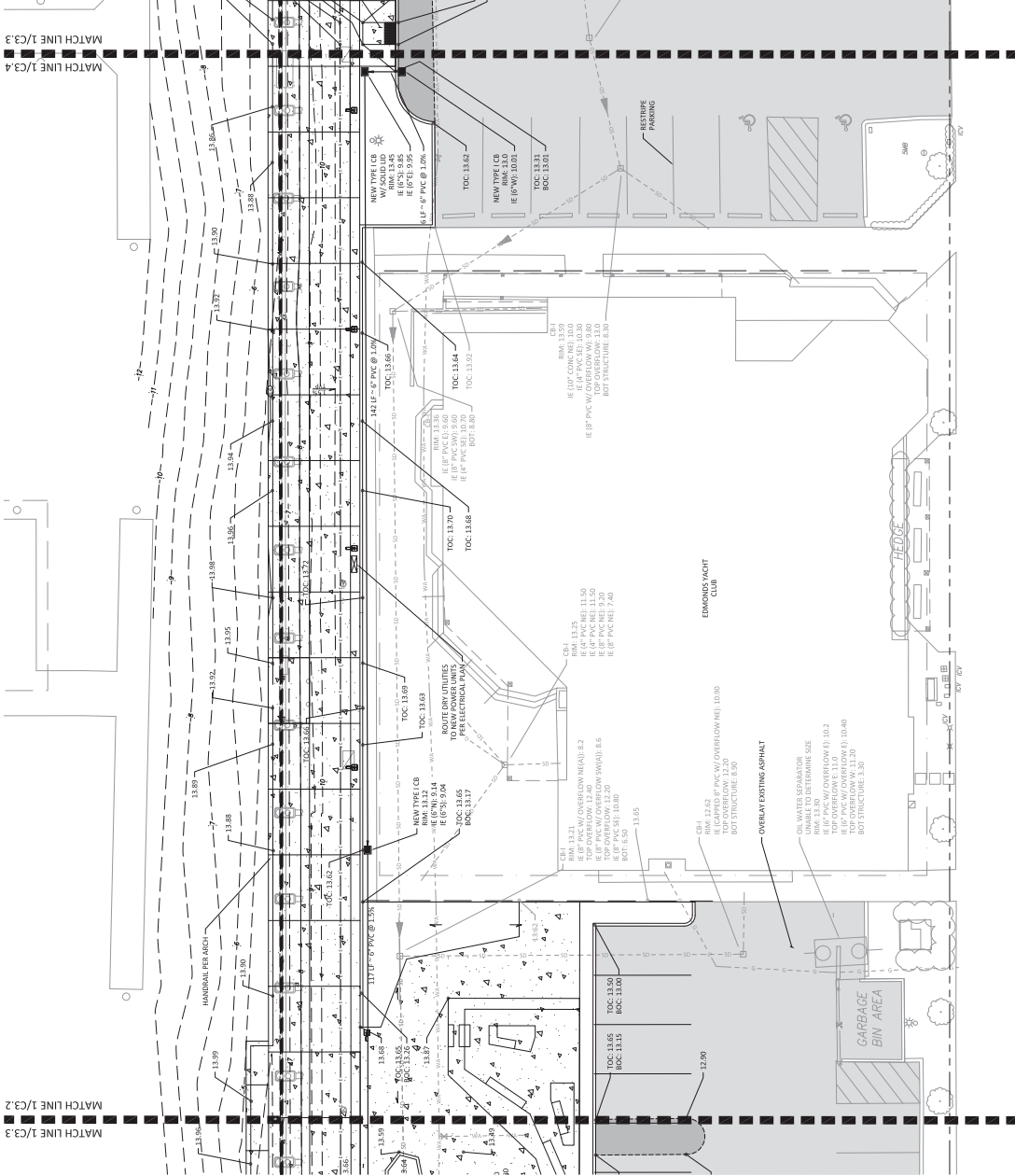


ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-5555
FAX (425) 778-5556

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

PAVING LEGEND	
	NEW ASPHALT/UTILITY SAWCUT
	OVERLAY EXISTING ASPHALT
	NEW CONCRETE



MATCH LINE 1/C3.4

MATCH LINE 1/C3.3

 $\frac{1}{10}$ 

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

BY: _____
CITY ENGINEERING DIVISION

SHEETS

GRADING AND UTILITY PLAN

EDMONDS, WA 98020

NORTH PORTWALK AND SEAWALL RECONSTRUCTION

DESIGN:	TAF
DRAWN:	ATD
CHECK:	JPU
JOB NO:	21060.20
DATE:	03/31/23

[illegible]

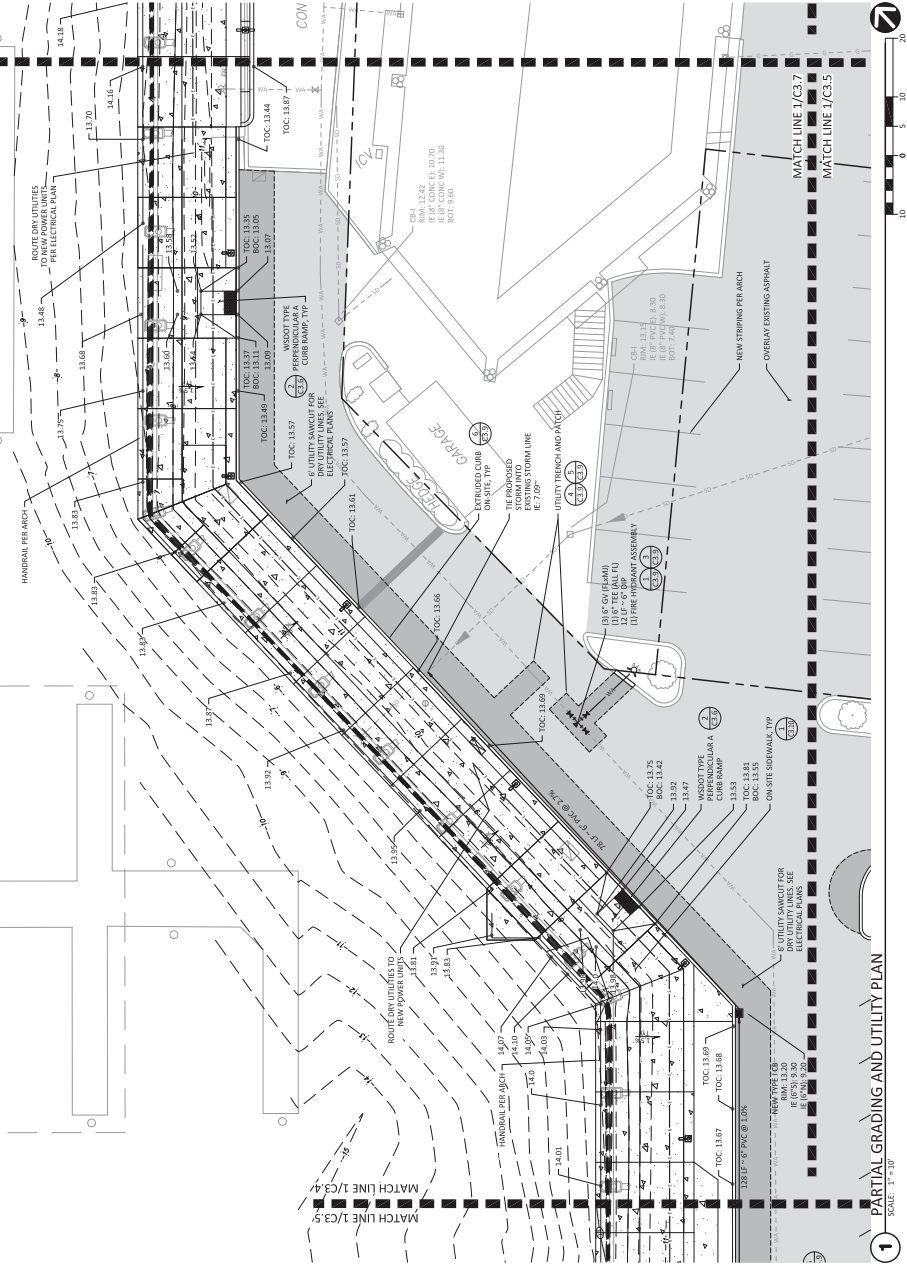
NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

PAVING LEGEND

- NEW ASPHALT/UTILITY SAWCUT
- OVERLAY EXISTING ASPHALT
- NEW CONCRETE



1 PARTIAL GRADING AND UTILITY PLAN
SCALE: 1" = 30'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE RETURNED TO THE CITY OF EDMONDS FOR REVIEW AND COMMENT. THE CITY OF EDMONDS IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THIS PROJECT.

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____ CITY ENGINEERING DIVISION

BLDXXXX-XXXX

SHEET:

C3.5

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020

GRADING AND UTILITY PLAN

DATE: 03/31/23

JOB NO: 21060.20

CHECKS: JPU

DRAWN: ATD

DESIGN: TAF

MARK:

DATE: 03/31/23

DESCRIPTION: DESIGN REVIEW SUBMITTAL

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

DATE: 03/31/23

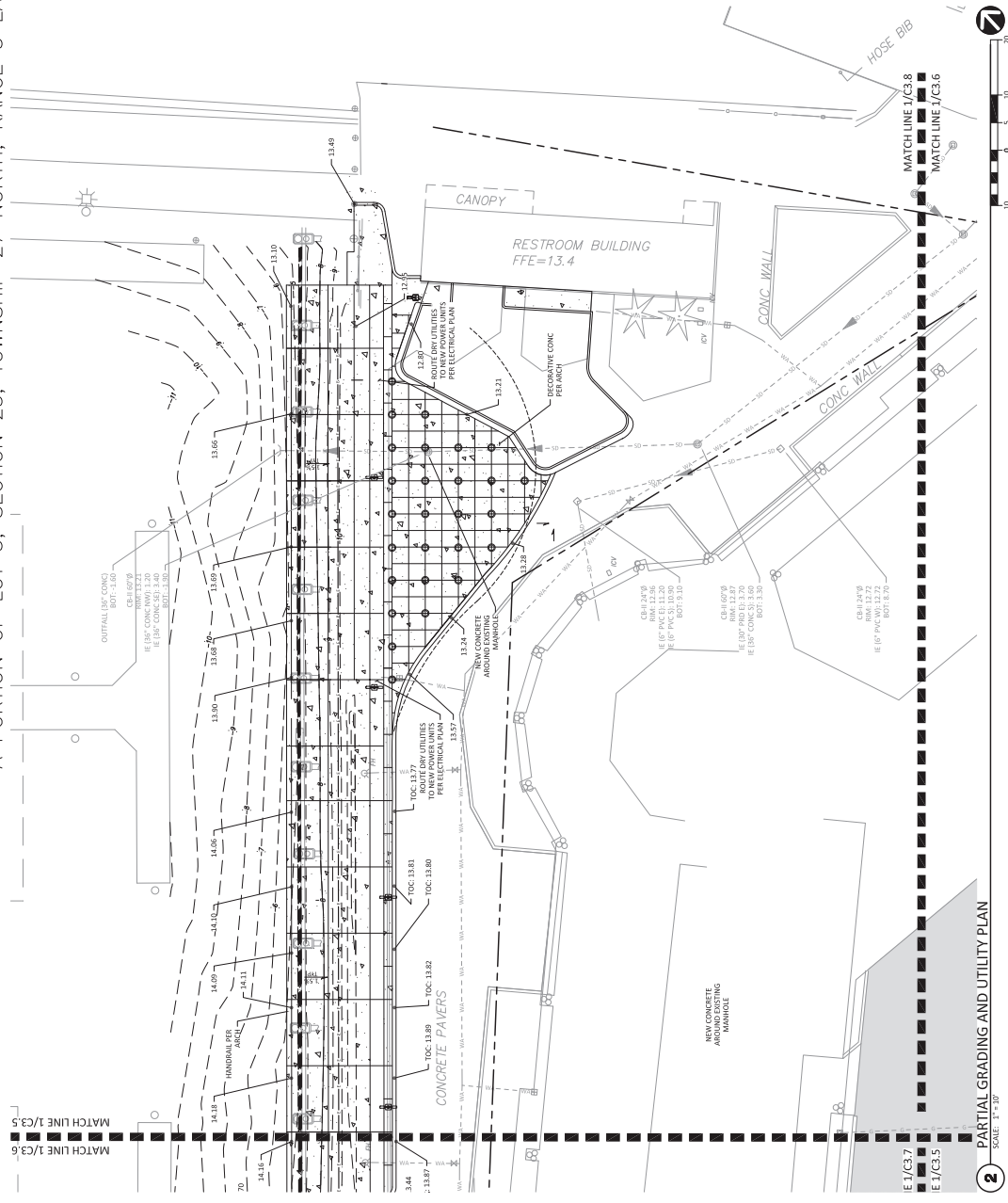
DATE: 03/31/23

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

PAVING LEGEND

- NEW ASPHALT/UTILITY SAWCUT
- OVERLAY EXISTING ASPHALT
- NEW CONCRETE



2 PARTIAL GRADING AND UTILITY PLAN
SCALE: 1"=30'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE RETURNED TO THE CITY OF EDMONDS FOR REVIEW AND COMMENT.
BLDXXXX-XXXX
APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____
CITY ENGINEERING DIVISION

SHEET:
C3.6

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
GRADING AND UTILITY PLAN

DATE:	03/31/23
JOB NO:	21060.20
CHECKS:	ATD
DESIGN:	JPL

MARK:	DATE:	03/31/23
DESCRIPTION:	DESIGN REVIEW SUBMITTAL	



ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE: (425) 771-5555
FAX: (425) 771-5556

BY: _____
CITY ENGINEERING DIVISION

1 PARTIAL GRADING AND UTILITY PLAN
SCALE: 1" = 10'

www.wiley-journals.com

BY: _____
CITY ENGINEERING DIVISION

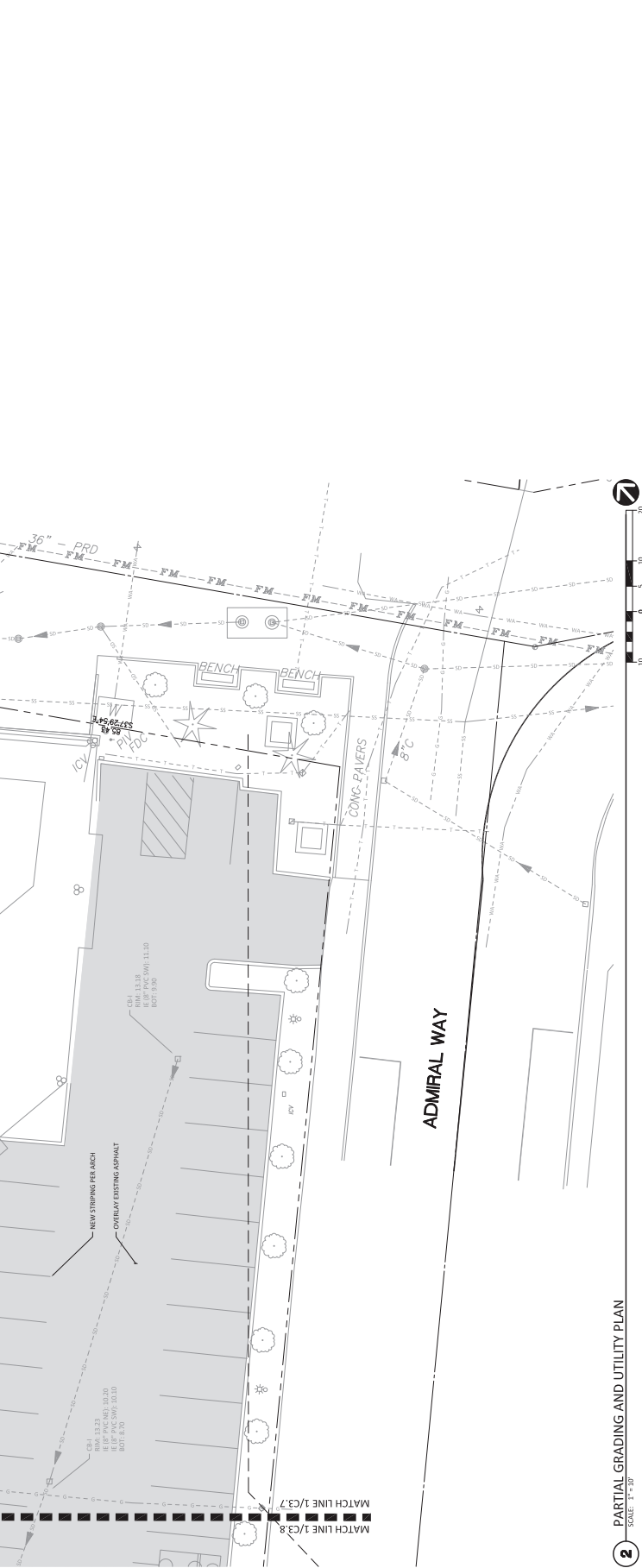
SHEETS:

3.7

05/11/25

[illegible]

DESIGN:	TAF
DRAWN:	ATC
CHECK:	JPL
JOB NO:	21060.200
DATE:	03/31/23



2 PARTIAL GRADING AND UTILITY PLAN
SCALE: 1" = 10'

BLDXXXX-XXXX

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____
CITY ENGINEERING DIVISION

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE
FURTHER DETAILED FOR FUTURE PHASES OF THE PROJECT.

[illegible]

7/12 2006
NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
GRADING AND UTILITY PLAN

SHEET: 3.8

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

[illegible]

The diagram shows a cross-section of a trench. From top to bottom, the layers are:

- Topsoil:** Indicated by diagonal hatching sloping down from left to right.
- Subgrade:** A horizontal layer below the topsoil.
- Pipe Zone:** The area immediately surrounding the pipe, indicated by diagonal hatching sloping up from left to right.
- Backfill:** The main filling material, indicated by diagonal hatching sloping down from left to right.
- Base Course:** A thin layer at the very bottom, indicated by horizontal hatching.

A circular pipe is shown in the center of the trench. Dimensions and labels include:

- PIPE ZONE:** Labeled on both sides of the pipe.
- BASE COURSE:** Labeled at the bottom of the trench.
- REINFORCING MATERIAL (1"-1 1/2" MAXIMUM):** Points to the base course layer.
- CONCRETE OR ASBESTOS CEMENT PIPE (SEE NOTE # 4):** Points to the pipe itself.
- MINIMUM DENSITY PER ASTM D 1587:** Points to the backfill area.
- 6" MIN:** Dimensioned for the pipe zone width and the base course thickness.
- 12" MIN:** Dimensioned for the total trench depth.
- SEE NOTE 1:** Located near the topsoil layer.
- SEE CODE STD. STL. QD-410:** Located near the topsoil layer.
- UNIFORM DENSITY:** Label pointing to the backfill area.

 CITY OF EDMONDS PUBLIC WORKS DEPARTMENT	TYPICAL TRENCH SECTION		REVISION DATE _____ APPROVED BY: R. EDWARDS STANDARD DETAIL GU-410

CITY OF EDMONDS STANDARD DETAIL
 4

[illegible]

NOTES:

1. REVISIONS OF EDMONDS MODIFICATIONS TO SECTION 8 OF THE CURRENT BEST STANDARD SPECIFICATIONS FOR SUBMITTAL AND AGREEMENT.
2. SURFACE FINISH AND SUBGRADE PREPARED BY THE CONTRACTOR. TESTING COMPANIES DOCUMENTING THAT THE MAXIMUM FINISH SHALL BE 1/8\"/>

CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

4/24/2020

APPROVED BY: R. DANIEL

DESIGNED BY APRIL 2021	STANDARD ED-410
GU-410	

5

CITY OF EDMONDS STANDARD DETAIL

POURED THRUST BLOCK
FAT COE STD. DT. WA-150

3.0" O.D. MIN.
MINIMUM TAP DISTANCE TO NEAREST
TAP

COMPLETED READING SIGNAL PIPE
SECTION IN ALL DIRECTIONS OF JOINTS

CONCRETE SUPPORT BRICKS
EXTENDING TO ADEQUATE DEPTH
EXPOSED TO ADEQUATE OF OVER

DUCTILE IRON TAPPING TEE
MECHANICAL JOINT SILENT
PIPE AND DUCTILE IRON PIPE

POURED THRUST BLOCK
FAT COE STD. DT. WA-150

3.0" O.D. MIN.
MINIMUM TAP DISTANCE TO NEAREST
TAP

COMPLETED READING SIGNAL PIPE
SECTION IN ALL DIRECTIONS OF JOINTS

CONCRETE SUPPORT BRICKS
EXTENDING TO ADEQUATE DEPTH
EXPOSED TO ADEQUATE OF OVER

DUCTILE IRON TAPPING TEE
MECHANICAL JOINT SILENT
PIPE AND DUCTILE IRON PIPE

POURED THRUST BLOCK
FAT COE STD. DT. WA-150

3.0" O.D. MIN.
MINIMUM TAP DISTANCE TO NEAREST
TAP

COMPLETED READING SIGNAL PIPE
SECTION IN ALL DIRECTIONS OF JOINTS

CONCRETE SUPPORT BRICKS
EXTENDING TO ADEQUATE DEPTH
EXPOSED TO ADEQUATE OF OVER

DUCTILE IRON TAPPING TEE
MECHANICAL JOINT SILENT
PIPE AND DUCTILE IRON PIPE

STAINLESS STEEL TAPPING TEE
INSTALLED ON CAST IRON PIPE WITH
DUCTILE IRON PIPE

STAINLESS STEEL TAPPING TEE
INSTALLED ON DUCTILE IRON PIPE ONLY

NOTES:

1. STAINLESS STEEL TAPPING TEES SHALL HAVE FULL ORICE SEAL BOLTS AND NUTS SHALL BE STAINLESS STEEL.
2. STEEL TAPPING TEES SHALL BE EPOXY COATED BOLTS AND NUTS SHALL BE COR-TEN, OR STAINLESS STEEL.
3. ALL TEES AND VALVES TO BE WATER TIGHT BEFORE TAP.
4. TAPPING TEE MAY NOT BE SIZE OR IN SIZE. TAP SHALL BE AT LEAST 2" SMALLER DIAMETER THAN THE EXISTING MAIN LINE.

NOTES:

1. NOT TO BE USED IN RIGHT-OF-WAY EXCEPT TO REPAIR EXISTING EXTRUDED CURB, AS APPROVED BY CITY ENGINEER.
2. EXISTING CURB IS THE ONLY ATTACHMENT METHOD TO BE USED BETWEEN HMA AND EXTRUDED CURB.
3. EXTRUDED CURB SHALL BE CONCRETE OR CONCRETE AGGREGATE WITH A MINIMUM OF 5% AIR ENTRAINMENT.
4. CURB AND GRAVEL SURFACING SHALL BE CONNECTED TO A MINIMUM OF 2% BANK SLOPE.

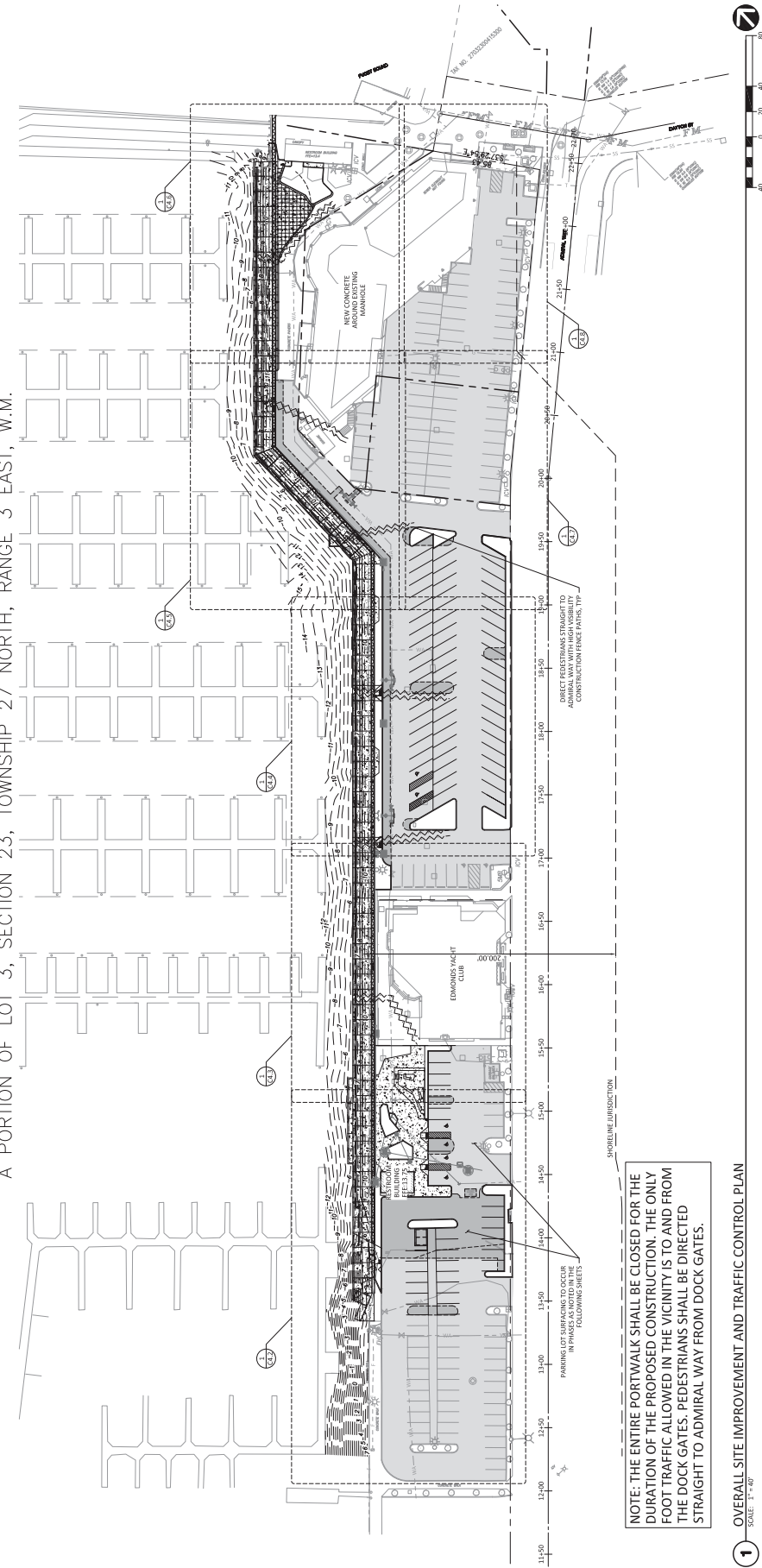
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**CONCRETE
EXTRUDED CURB**

DESIGNED BY: **W. J. DUNHAM**
STANDARD
DETAIL
TR-522

SCALE: 1" = 4'-0"

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

1 OVERALL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN

- SCALE: 1" = 40'
- SITE IMPROVEMENT PLAN NOTES:
1. ALL TRAFFIC CONTROL DEVICES, SIGNAGE, STRIPING AND OTHER PAVEMENT DEMARKATION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 2. REFERENCE DETAIL 2003.2 FOR TYPICAL TRAFFIC CONTROL SYMBOLS, SIGN SPACING, ETC.

ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (206) 771-5555
FAX (206) 771-5556

MARK	DATE	DESCRIPTION
DESIGN	03/31/23	DESIGN REVIEW SUBMITTAL
DRAWN		
CHECKS		
JPLU		
DATE	03/31/23	
JOB NO.	21060.20	
ATD		
TAF		

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
SITE IMPROVEMENT AND TRAFFIC
CONTROL PLAN

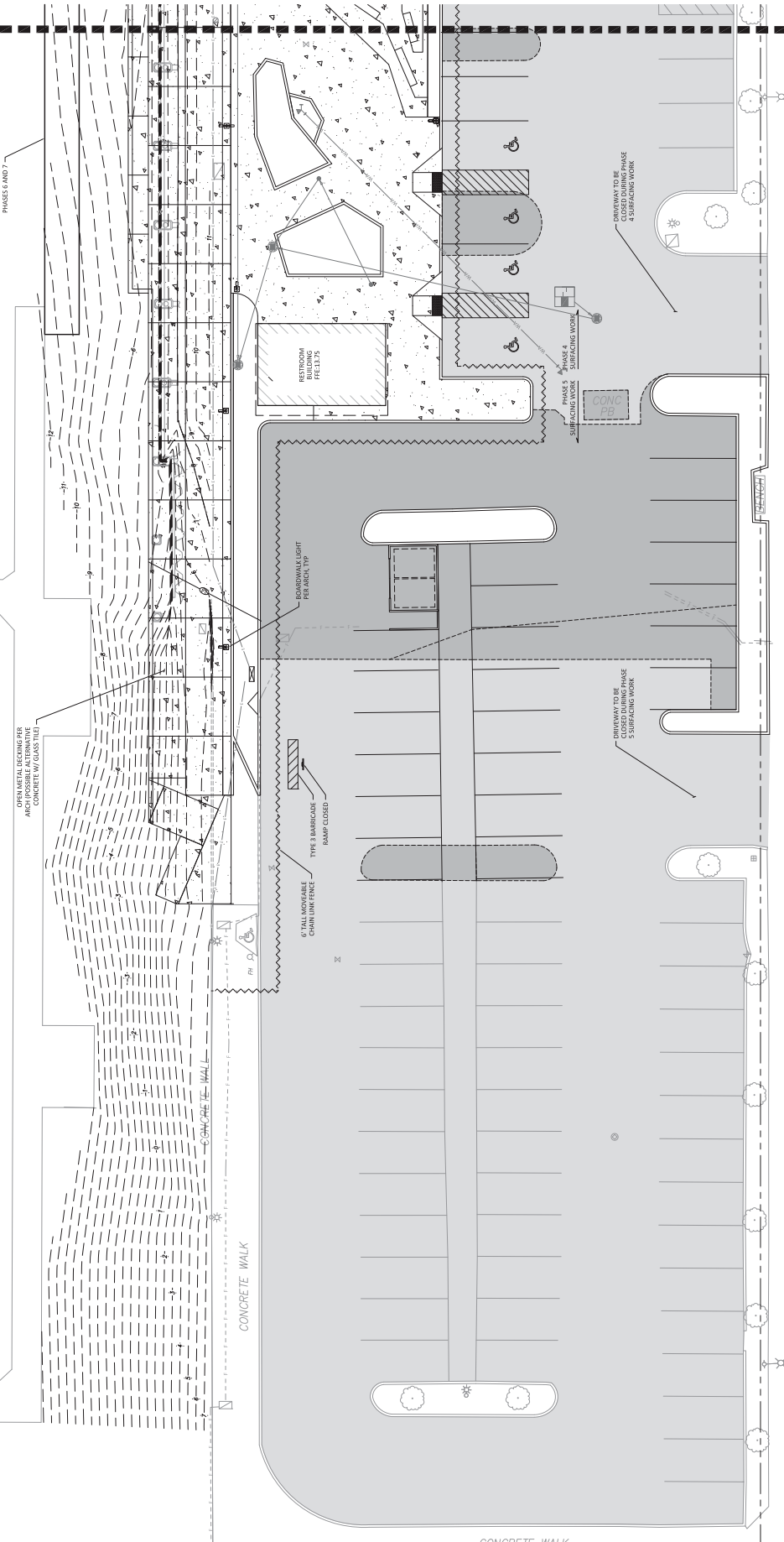
APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____ CITY ENGINEERING DIVISION

BLDXXXX-XXXX

C4.1

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

CONTRACTOR TO PROVIDE
TEMPORARY FLOAT
BETWEEN DOCKS FOR
MATCH LINE 1/C4.3
MATCH LINE 1/C4.2



1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 10'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE
REVISED DETAILED FOR CIVIL ENGINEERING OF THE PROJECT

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

CITY ENGINEERING DIVISION

C4.2

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
SITE IMPROVEMENT AND TRAFFIC
CONTROL PLAN

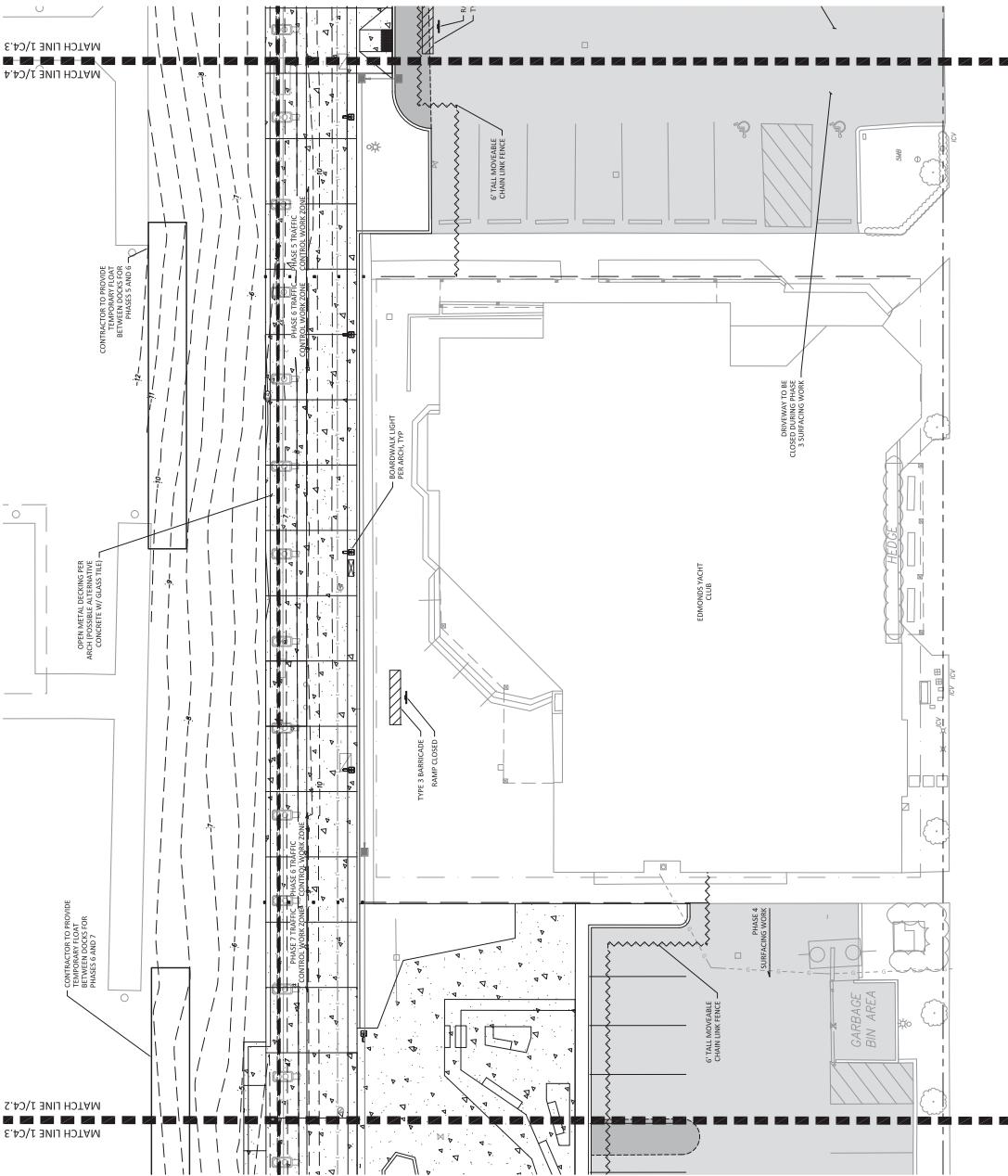
DATE:	03/31/23	DOB NO:	21060.20	CHECK:	JPU	ATD	TAF
DESIGN:	03/31/23	DATE		DESCRIPTION			
DESIGN REVIEW SUBMITTAL							



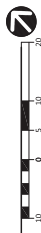
ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.



1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 20'



2 MUTCD STANDARD DETAIL
SCALE: NTS

Table 8H-2. Meaning of Symbols on Typical Application Diagrams

Symbol	Meaning
[Symbol]	Area to be paved
[Symbol]	Area to be resurfaced
[Symbol]	Area to be repaved
[Symbol]	Area to be reconstructed
[Symbol]	Area to be reconstructed with new base
[Symbol]	Area to be reconstructed with new base and subgrade
[Symbol]	Area to be reconstructed with new base, subgrade, and curbs
[Symbol]	Area to be reconstructed with new base, subgrade, curbs, and sidewalks
[Symbol]	Area to be reconstructed with new base, subgrade, curbs, sidewalks, and streetlights
[Symbol]	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, and landscaping
[Symbol]	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, landscaping, and utilities
[Symbol]	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, landscaping, utilities, and other improvements

Table 8H-3. Meaning of Letter Codes on Typical Application Diagrams

Letter Code	Meaning
A	Area to be paved
B	Area to be resurfaced
C	Area to be repaved
D	Area to be reconstructed
E	Area to be reconstructed with new base
F	Area to be reconstructed with new base and subgrade
G	Area to be reconstructed with new base, subgrade, and curbs
H	Area to be reconstructed with new base, subgrade, curbs, and sidewalks
I	Area to be reconstructed with new base, subgrade, curbs, sidewalks, and streetlights
J	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, and landscaping
K	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, landscaping, and utilities
L	Area to be reconstructed with new base, subgrade, curbs, sidewalks, streetlights, landscaping, utilities, and other improvements

Table 8H-4. Formulas for Determining Typical Length

Symbol	Formula
A	$A = \frac{W \times L}{100}$
B	$B = \frac{W \times L}{100}$
C	$C = \frac{W \times L}{100}$
D	$D = \frac{W \times L}{100}$
E	$E = \frac{W \times L}{100}$
F	$F = \frac{W \times L}{100}$
G	$G = \frac{W \times L}{100}$
H	$H = \frac{W \times L}{100}$
I	$I = \frac{W \times L}{100}$
J	$J = \frac{W \times L}{100}$
K	$K = \frac{W \times L}{100}$
L	$L = \frac{W \times L}{100}$

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
EDMONDS, WA 98020
300-336 ADMIRAL WAY
SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN AND DETAILS
DESIGN: JPL
CHECKS: JPL
JOB NO: 21060.20
DATE: 03/31/23

ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (206) 771-8888
FAX (206) 771-8888

C4.3

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____
CITY ENGINEERING DIVISION

MATCH LINE 1/C4.4

OPEN METAL DECKING PER
ARCH (POSSIBLE ALTERNATIVE
CONCRETE W/ GLASS TILE)

CONTRACTOR TO PROVIDE

Technical drawing of a roof section. The roof has a pitch of 1/4.5. A horizontal line is labeled "MATCH LINE 1/C4.4" and a vertical line is labeled "MATCH LINE 1/C4.5".

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

[illegible]

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
SITE IMPROVEMENT AND TRAFFIC
CONTROL PLAN

SHEET:

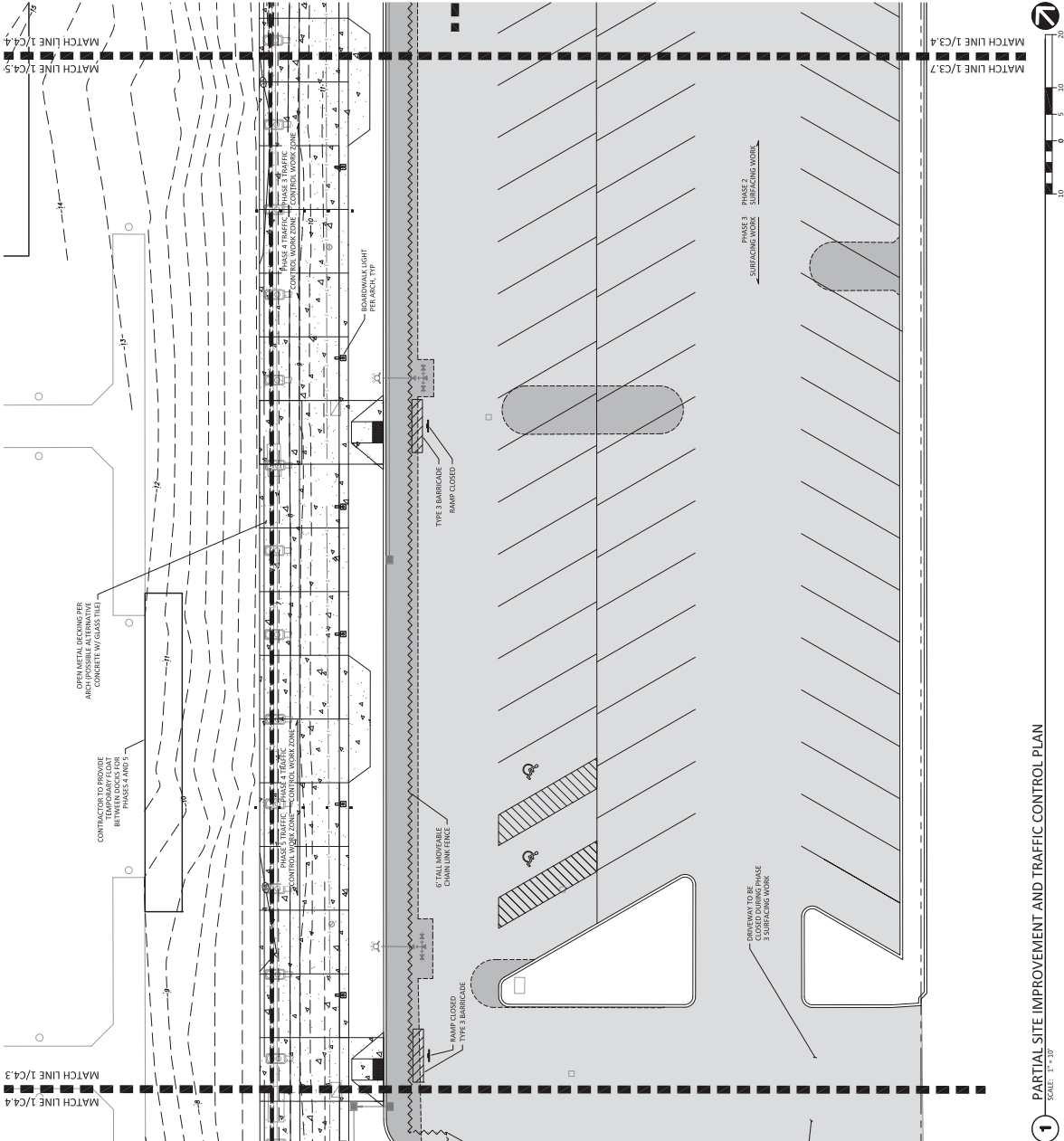
C4.4

1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 10'

BLDXXXX-XXXX

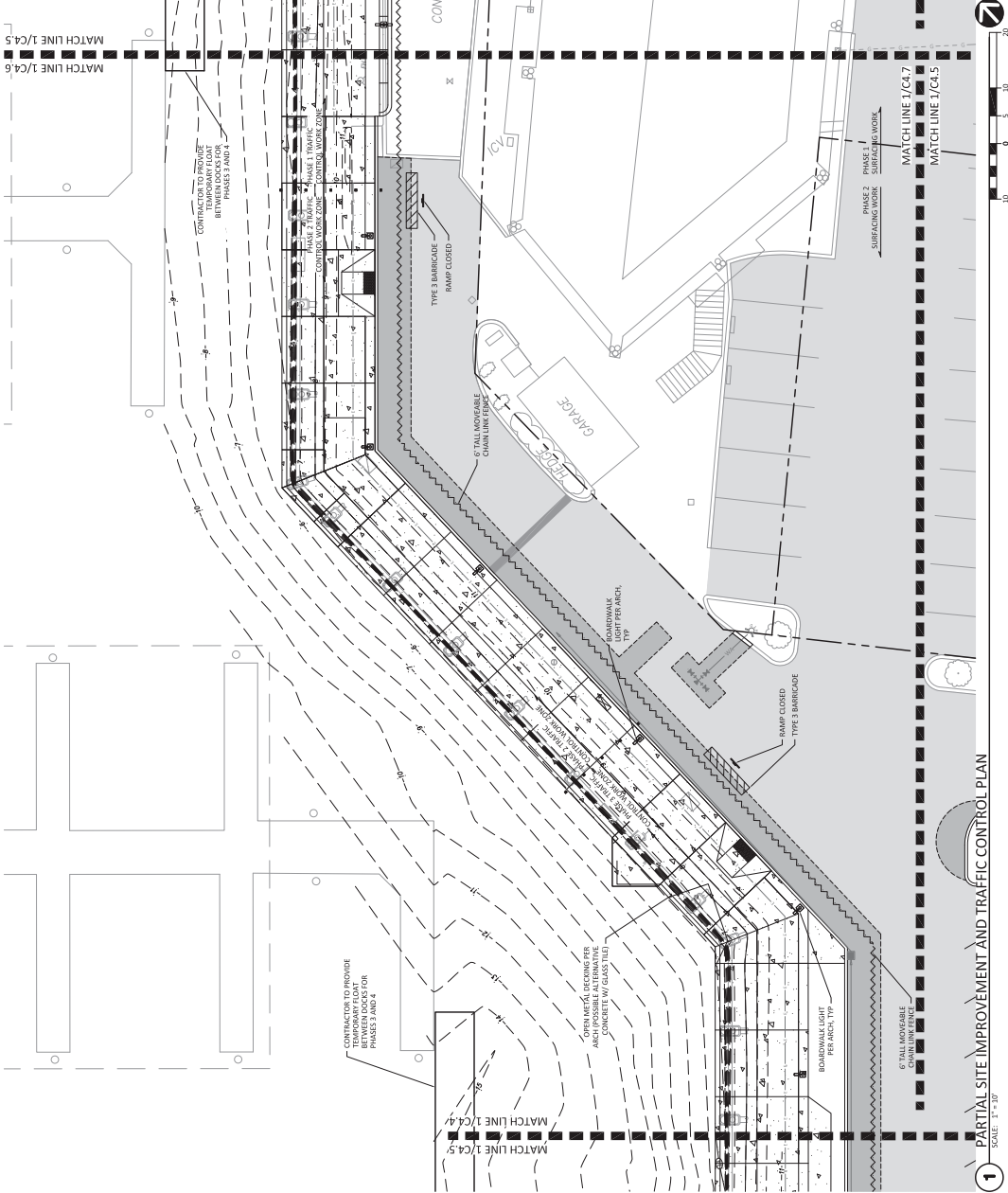
APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

BY: _____
CITY ENGINEERING DIVISION



A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.



1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 30'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE
FURNISHED EXCLUSIVELY TO THE CITY OF EDMONDS.

BLDXXXX-XXXX

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____
CITY ENGINEERING DIVISION

C4.5

SHEET:

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
EDMONDS, WA 98020
300-336 ADMIRAL WAY
SITE IMPROVEMENT AND TRAFFIC
CONTROL PLAN

DATE: 03/31/23

JOB NO: 21060.20

CHECKS: JPU

DRAWN: ATD

DESIGN: TAF

MARK

DATE: 03/31/23

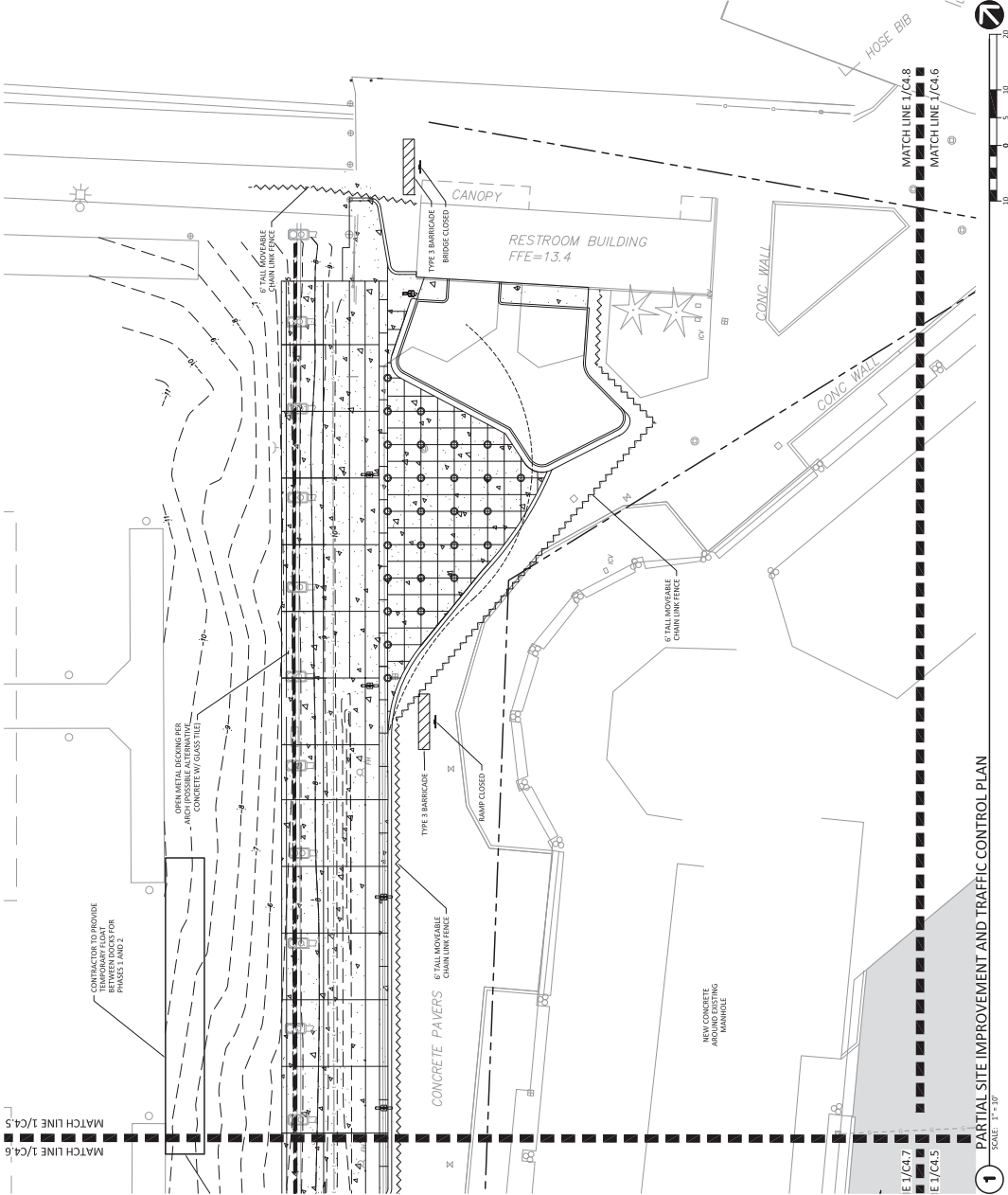
DESCRIPTION

DESIGN REVIEW SUBMITTAL



A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.



MARK	DATE	DESCRIPTION	DESIGN REVIEW SUBMITTAL
	03/31/23		
DESIGN			
DRAWN			
CHECKS			
JPLU			
ATD			
TAF			
JOB NO:	21060.20		
DATE:	03/31/23		

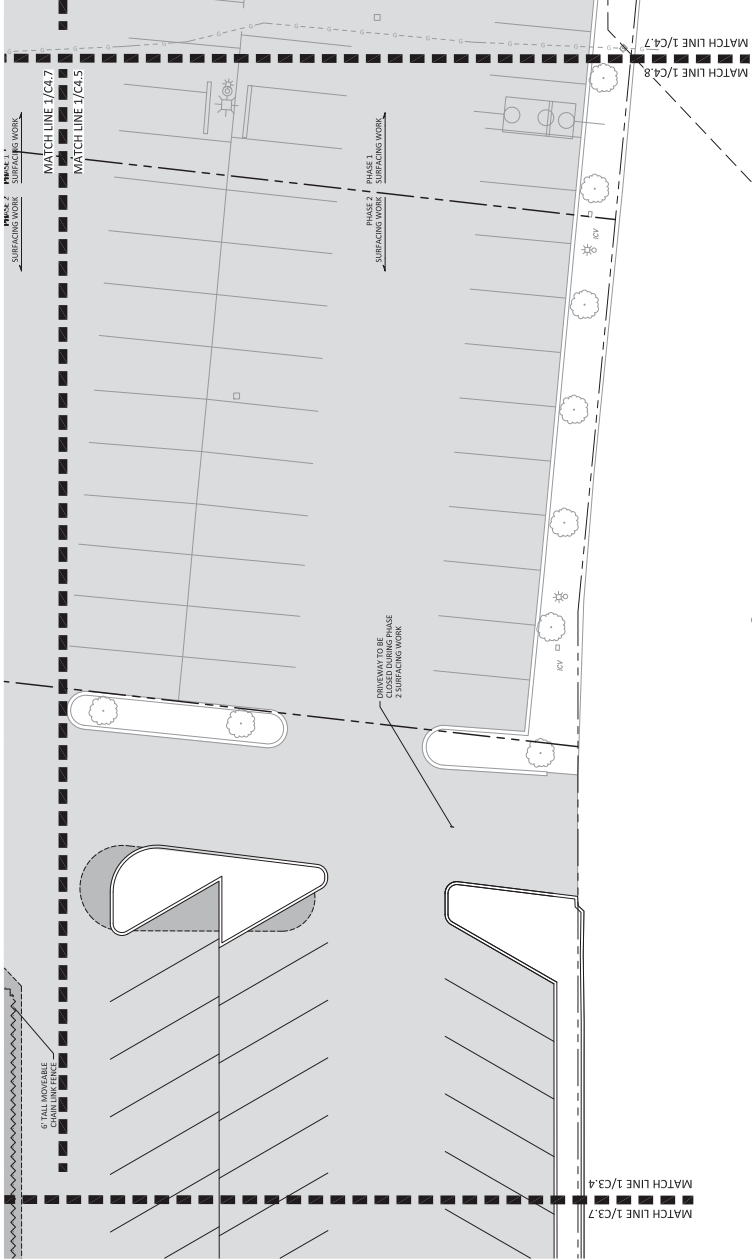
NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SHEET:

C4.6

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____
CITY ENGINEERING DIVISION

BLDXXXX-XXXX
THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE RETURNED TO THE CITY OF EDMONDS FOR REVIEW.

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.



MARK	DATE	DESCRIPTION
	03/31/23	DESIGN REVIEW SUBMITTAL
DESIGN:		
DRAWN:	ATD	TAF
CHECKS:	JPU	
JOB NO:	21060.20	
DATE:	03/31/23	

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
SITE IMPROVEMENT AND TRAFFIC
CONTROL PLAN

1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 30'

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS
DATE: _____
BY: _____ CITY ENGINEERING DIVISION

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE RETURNED TO THE CITY OF EDMONDS FOR REVIEW.

BLDXXXX-XXXX

SHEET:

C4.7



THIS SET IS FOR A DESIGN REVIEW AND WILL BE
 DETAILED FOR FUTURE PHASES OF THE PROJECT.

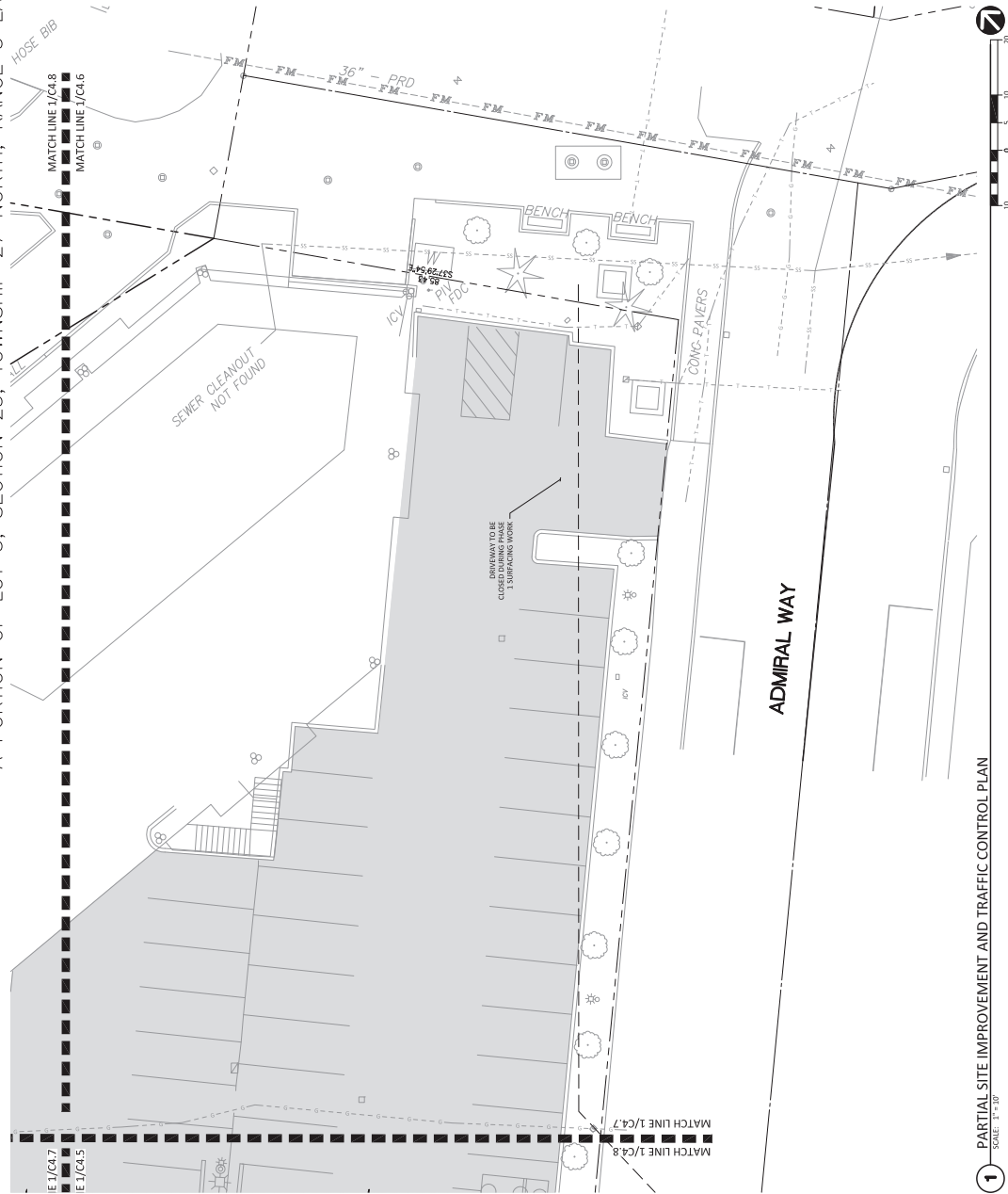
CITY OF EDMOND

CITY ENGINEERING DIVISION

OFFICE OF THE ATTORNEY GENERAL

8.4.0

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.



1 PARTIAL SITE IMPROVEMENT AND TRAFFIC CONTROL PLAN
SCALE: 1" = 10'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE
FURTHER DETAILED FOR FUTURE PHASES OF THE PROJECT.

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____

CITY ENGINEERING DIVISION

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



civil & structural
engineering & planning

DRAINAGE REPORT

North Portwalk Seawall Reconstruction

300-336 Admiral Way
Edmonds, WA 98020



03/31/2023

CG Project No.: 21060.20

250 4th Ave S Ste 200
Edmonds, WA 98020
Phone: (425) 778-8500
Fax: (425) 778-5536

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Table of Contents

Section I – Project Overview

Section II – Off-Site Analysis

Section III – Permanent Stormwater Control Plan

Section IV – Construction Stormwater Pollution Prevention Plan

Section V – Special Reports and/or Studies

Section VI – Other Permits

Section VII – Bond Quantities & Operation and Maintenance Manual

Section I – Project Overview

Section I Summary

Overview

Existing Condition

Developed Condition

Minimum Requirements

Overview

This drainage report has been written for the reconstruction of an existing wood-framed, wooden deck boardwalk at the Edmonds Marina from the Arnie's Restaurant building (300 Admiral Way) to the west/southwest to the Port of Edmonds building (336 Admiral Way). Additional improvements include the demolition of the Port of Edmonds building at the south end of the site, reconfiguration of parking areas, and the addition of a restroom building and concrete walkways. The area to be replaced includes 950 lineal feet of boardwalk which was found to have structural deficiencies after a structural inspection was completed. The total new/replaced impervious area for the project is 29,408 sf (0.6 ac)

The project must meet minimum requirements 1 through 9 of the 2019 Department of Ecology Stormwater Management Manual for Western Washington (herein referred to as the DOE Manual) and comply with those requirements as modified in the Edmonds Community Development Code Chapter 18.30 (herein referred to as ECDC 18.30) and the December 2016 Addendum to ECDC 18.30 (herein referred to as the Edmonds Stormwater Addendum).

Existing Condition

The site is part of a 14.22 acre parcel that is owned by the Port of Edmonds with a "744 Marinas" use code per Snohomish County Parcel Data. The boardwalk abuts asphalt parking lots and buildings. The area of work is located in the northern half of the parcel. The site soils primarily consist of very loose to medium dense, moist fill soils extending to about 15'-25' below grade. The top of the groundwater table was located at 9' below grade during the time of the testing in early June. More about site soils can be found in the Geotechnical Engineering Report by Landau Associates in Section V. The site is located in a seismic hazard area and floodplain. The site is bordered by parking lots/Admiral Way east and south and the marina/Puget Sound to the west and north. There are existing fire hydrants located along the boardwalk that must be relocated for the reconstruction (see civil plans). There are several catch basins and conveyance pipes throughout the site and some off-site that are conveyed to four different outfalls into Puget Sound.

Developed Condition

The project consists of the reconstruction of approximately 950 lf of an existing boardwalk that was found to have structural deficiencies after an inspection. The total new plus replaced impervious area (including ROW) is 29,408 sf (0.68 ac). Disturbance will affect 2.70 ac of the project parcel. Site roof runoff will be

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

routed to an existing storm main in the project parking area. Runoff from other impervious site areas will be directly conveyed to the storm main via catch basins and conveyance pipes.

The proposed impervious areas (including ROW) are as follows:

Roof:	501 sf (0.01 ac)
Concrete Walkways:	21,388 sf (0.49 ac)
<u>Asphalt Driveway/Utility Sawcuts:</u>	<u>7,529 sf (0.17 ac)</u>
Total:	29,408 sf (0.68 ac)

The new and replaced pollution-generating impervious areas are as follows:

<u>Asphalt Driveway/Utility Sawcuts:</u>	<u>7,529 sf (0.17 ac)</u>
Total:	7,529 sf (0.17 ac)

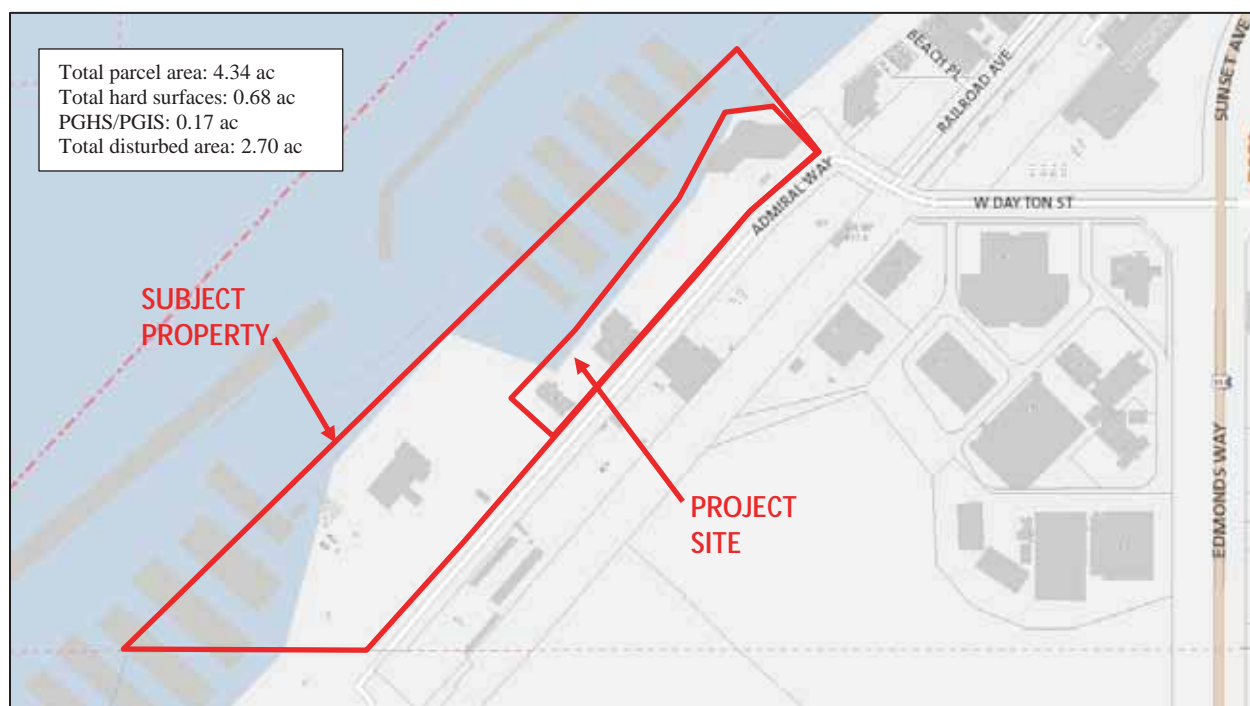


Figure I-1: Vicinity map (from Edmonds GIS)

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

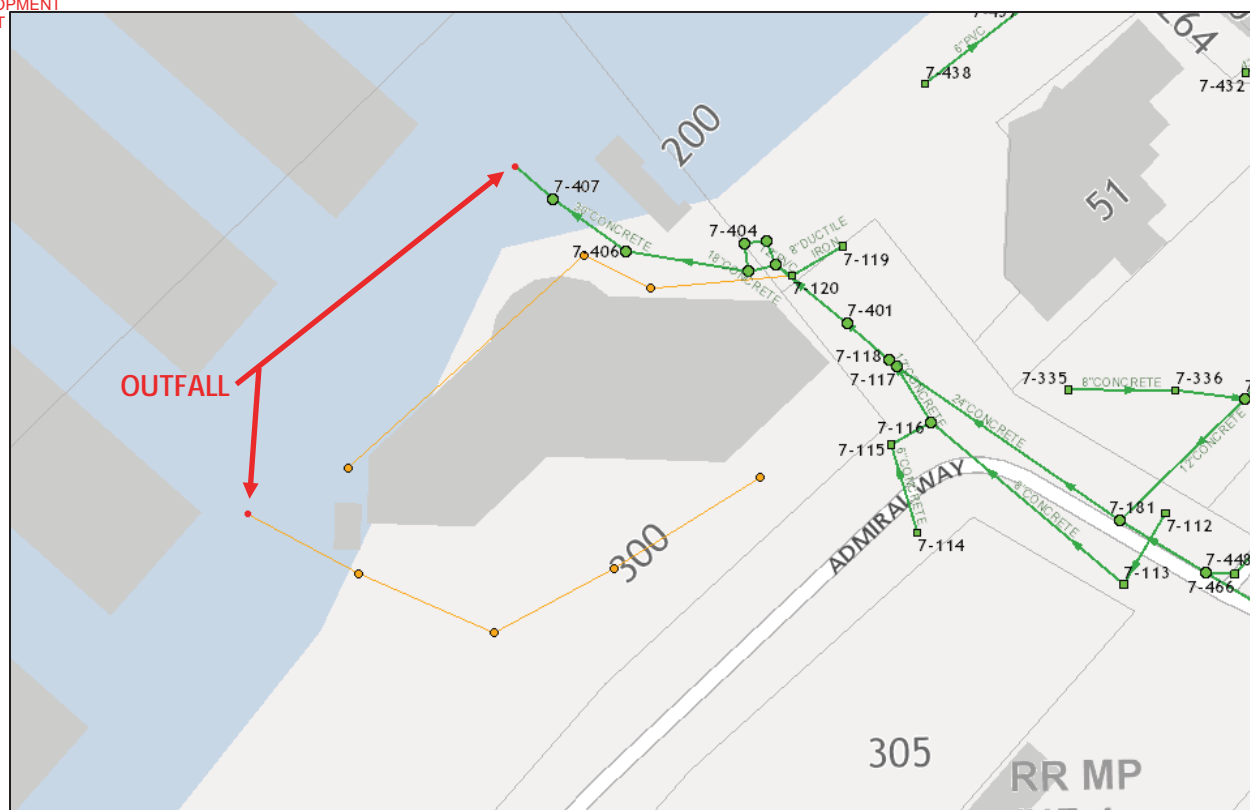


Figure I-2: Map with storm pipe material, north end of project site (from Edmonds GIS)

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

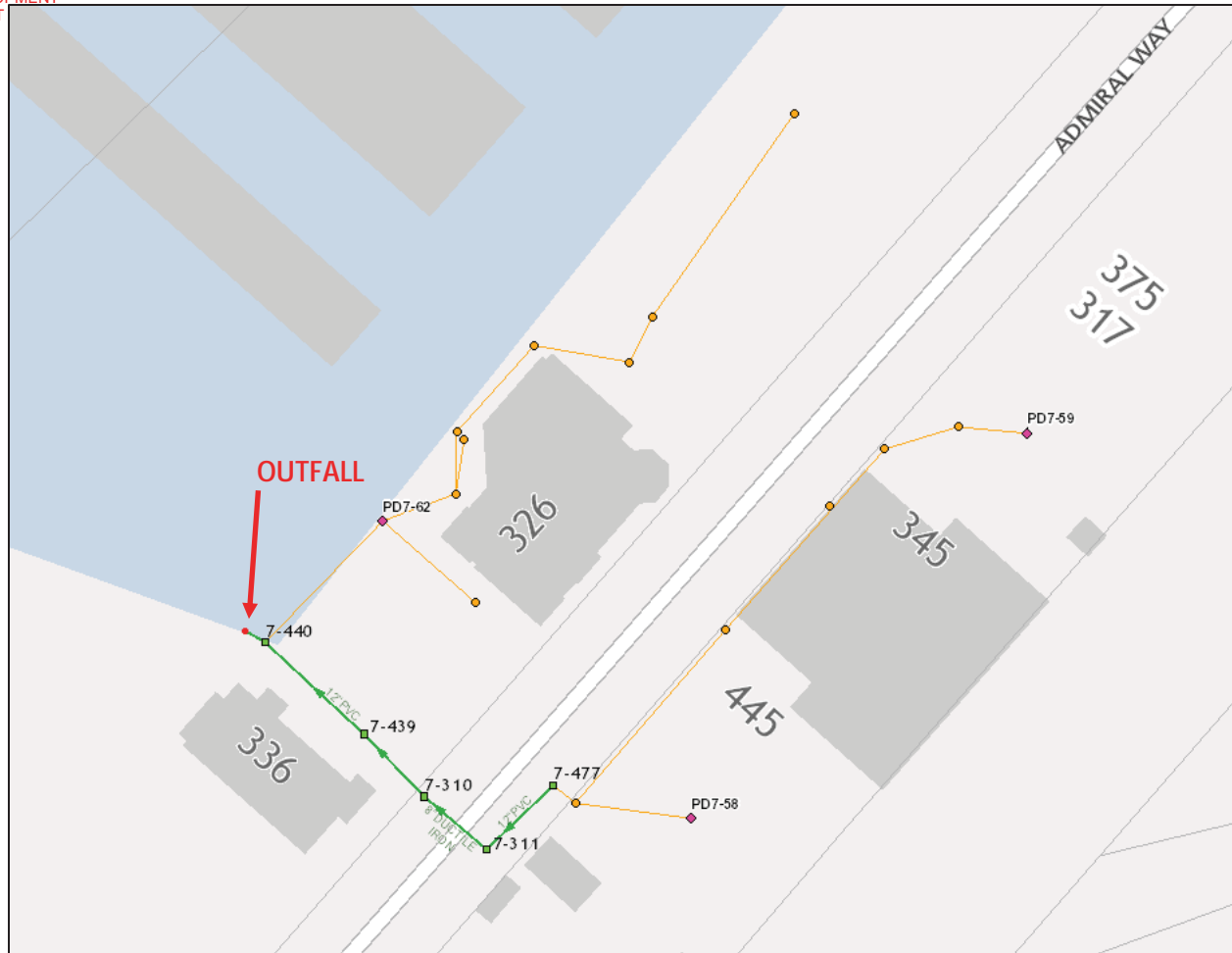


Figure I-3: Map with storm pipe material, south end of project site (from Edmonds GIS)



Figure I-4: Aerial image (from Edmonds GIS)

Minimum Requirements

Stormwater requirements were determined per the Edmonds Stormwater Addendum, ECDC 18.30, and the DOE Manual. This report is based on the steps recommended in Chapter 7 of the Edmonds Stormwater Addendum and Section 3.1.7 of the DOE Manual. The project is classified as a Category 2 because it will result in more than 5,000 sf of new plus replaced hard surfaces. Following the flow chart in Figure I-4, Minimum Requirements #1-9 will apply to all new and replaced hard surfaces.

Minimum Requirement #1: Preparation of Stormwater Site Plans: The stormwater site plan consists of this report and the civil drawings and is prepared in accordance with Chapter 3 of Volume 1 of the DOE Manual and the requirements in the Edmonds Stormwater Addendum.

Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP): The SWPPP shall include a narrative and drawings. The SWPPP narrative shall include documentation that addresses the 13 elements of Construction Stormwater Pollution Prevention. See Section IV and the civil drawings.

Minimum Requirement #3: Source Control of Pollution: All known, available and reasonable source control BMPs must be required for all projects approved by the City. Mandatory Operational Source Control BMPs must be implemented by forming a pollution prevention team, good housekeeping practices, preventive maintenance, spill prevention and cleanup, employee training, inspections, and record keeping. See Section IV for a source control discussion and Section VII for source control guide sheets from the DOE Manual.

Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls: Natural drainage patterns shall be maintained, and discharges from the project site shall occur at the natural location, to the maximum extent practicable. The manner by which runoff is discharged from the project site must not cause a significant adverse impact to downstream receiving waters and down-gradient properties. All projects shall submit an off-site qualitative analysis. A qualitative analysis of the upstream and downstream system entering the site is presented in Section II.

Minimum Requirement #5: On-Site Stormwater Management: The proposed project is classified as a Category 2 per the Edmonds Stormwater Addendum. However, since the site is located in a Puget Sound direct discharge area (per ECDC 18.30.060.D.5.b.iv), the project does not have to achieve the LID Performance Standard, nor consider bioretention, rain gardens, permeable pavement, or full dispersion. The project must evaluate an alternative list of BMPs. This is discussed in Section III.

Minimum Requirement #6: Runoff Treatment: This requirement applies to the new plus replaced hard surfaces and the converted vegetated areas that will generate pollutants and be conveyed to the public storm system through stormwater runoff. Runoff treatment required because the project will result in greater than 5,000 sf of pollution-generating hard surfaces in a threshold discharge area. This is discussed in Section III.

Minimum Requirement #7: Flow Control: Projects must provide flow control to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions. However, flow control is not required for projects that discharge directly to, or indirectly through the City's MS4 to Puget Sound (ECDC 18.30.060.D.7 a). The project site will discharge to the Puget Sound, and Flow Control is not required.

Minimum Requirement #8: Wetlands Protection: Not applicable. There are no wetlands located in the immediate downstream vicinity of the site or the outfall into Puget Sound.

Minimum Requirement #9: Operation and Maintenance: An operation and maintenance manual that is consistent with the provisions in Volume I and Volume V of the SWMMWW is required for proposed Stormwater Treatment and On-Site Stormwater Management facilities. The party (or parties) responsible for maintenance and operation shall be identified in the operation and maintenance manual. For private facilities approved by the City, a copy of the operation and maintenance manual shall be retained on-site or within reasonable access to the site and shall be transferred with the property to the owner. For public facilities, a copy of the operation and maintenance manual shall be retained in the appropriate

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

department. A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection. See Section VII for O&M Manual.

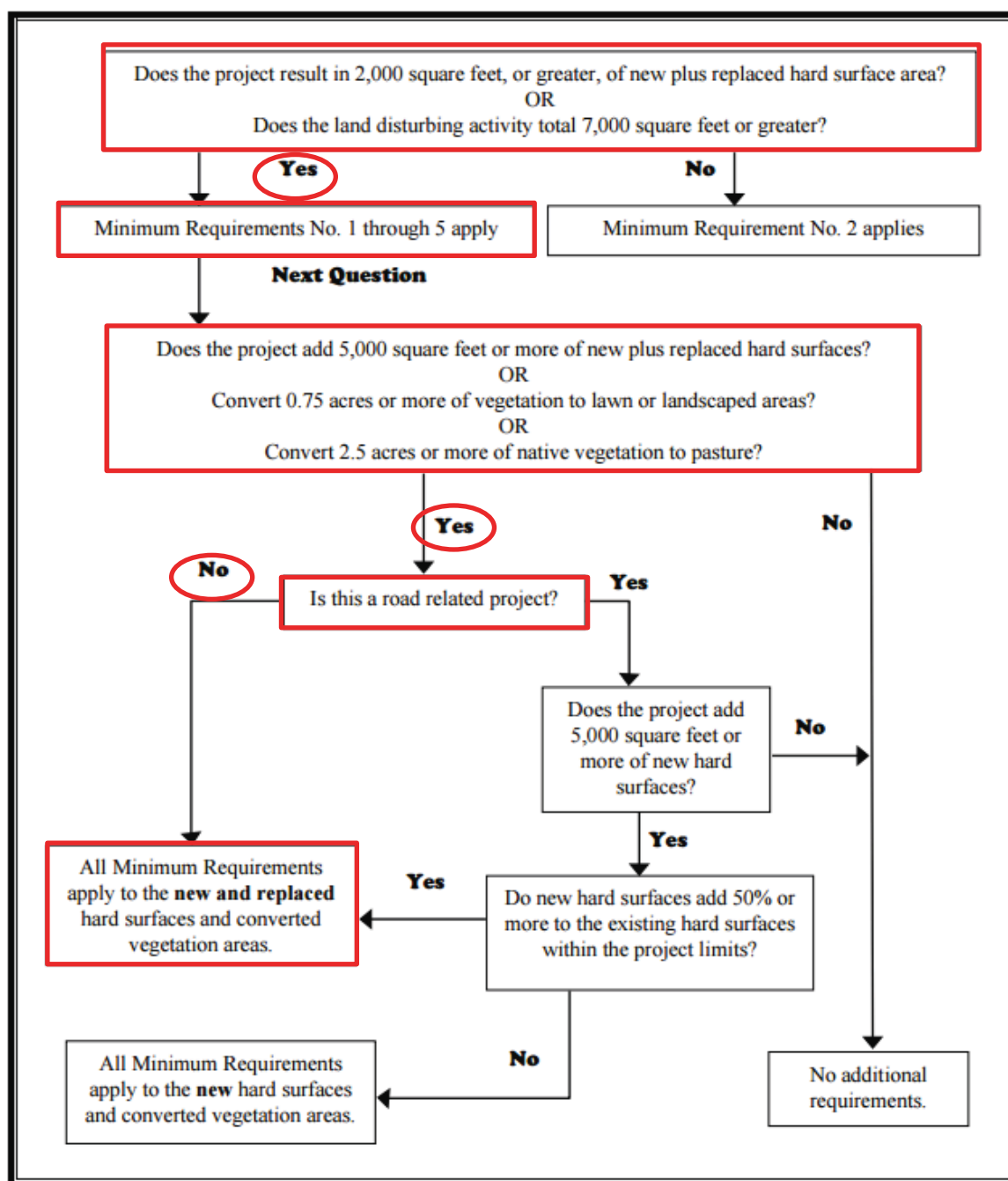


Figure I-5: Flow chart for determining requirements for development (Figure 3.1 in the Edmonds Stormwater Addendum)

Section II – Off-Site Analysis

Section II Summary

Task 1 – Define and map the study area

Task 2 – Review all available information of the study area

Task 3 – Field inspect the area

Task 4 – Describe the drainage system, and its existing and predicted problems

Task 1 – Define and map the study area

An initial qualitative analysis shall document potential off-site impacts of stormwater discharges for each upstream drainage system entering a site, and each downstream drainage system leaving a site according to Section 6.2 of the Edmonds Stormwater Addendum. The downstream analysis shall extend from the project site to the receiving water, or up to one-quarter mile, whichever is less.

Runoff from the site will be conveyed to the existing stormwater infrastructure throughout the parking lots abutting the proposed development. There are several catch basins located throughout the existing parking lots that will collect runoff from the proposed boardwalk improvements and convey stormwater through conveyance pipes to their outfalls in Puget Sound. See Figures I-1 through I-4 (Section I) for project site and stormwater pipes information. The site is located in the Puget Sound Piped Watershed.

Task 2 – Review all available information on the study area

Existing stormwater improvements were determined from the survey, the site visit, and the City GIS map. Runoff from the site will be conveyed to Puget Sound through three different outfalls along the proposed development (see Figures I-2 and I-3).

The existing conveyance pipes are generally made up of 8" to 12" PVC and concrete pipes sloping to their respective outfalls. The longest stretch of conveyance pipes that runoff from the proposed development would flow into is near the south end of the development. From CB-2540 (Edmonds GIS), it is approximately 440 lineal feet of pipe to the outfall that is just north of the Port of Edmonds building (336 Admiral Way). The other flowpaths through the conveyance systems are much shorter, being only about 150 lineal feet or less.

Task 3 – Field inspect the study area

A site visit was done on the morning of June 3, 2021. The weather was partly cloudy. The existing boardwalk is open-grid decking and, therefore, does not contribute runoff to the existing storm infrastructure in the parking areas that abut the boardwalk. The project proposes to replace the boardwalk with a solid surface boardwalk that will be sloped towards the existing parking lot and contribute runoff to the existing storm infrastructure throughout the site. It was observed that there were low points in the existing parking areas where the proposed boardwalk will be sloped to. In order to prevent pooling water, catch basins and conveyance pipes are proposed at the low points. There was

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

conflicting information between the topographic survey and the Edmonds GIS Map, so it was deemed to be necessary to remove some catch basin lids to verify IE's and observe existing pipes.

Figures II-1 through II-3 show two existing storm structures that have conflicting information between the survey and Edmonds GIS. The survey does not show an outlet from CB 3473, Edmonds GIS shows an outlet to CB 7-120, and there are utility locate paint marks on the ground (Figure II-3) that suggest an outlet from CB 3473 towards MH 7-405.



Figure II-1: From the north side of Arnie's, facing N/NE



Figure II-2: CB 3473 was full of mud, leaves, and water and it needs to be cleaned. Utility locate paint suggests there is an outlet from the CB. After reaching in CB with tool, there was no outlet found.



Figure II-3: From MH 7-405, facing W/SW. No inlet pipe from CB 3473 was observed.

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



Figure II-4: Existing boardwalk, facing SW



Figure II-5: Existing boardwalk, facing south

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENTTask 4 – Describe the drainage system, and its existing and predicted problems

The site is in the Puget Sound Piped Watershed. The existing boardwalk is open-grid, wooden boards, so runoff simply falls through the boardwalk into Puget Sound. The proposed boardwalk will be an impervious surface comprised of glass block and concrete pavers that will be sloped back toward the existing driveways and parking lots. Therefore, a new drainage pattern is proposed and runoff will flow into the existing driveways/parking lots and enter catch basins and be conveyed to the existing discharge locations into Puget Sound shortly thereafter.

There are no predicted problems with the drainage system so long as the installation and maintenance of drainage facilities are done properly.

Section III – Permanent Stormwater Control Plan

Section III Summary

Narrative

Feasibility Review

Runoff Treatment

WWHM Report (Runoff Treatment)

WWHM Report (Outfall #1)

WWHM Report (Outfall #2)

WWHM Report (Outfall #3)

StormShed3G Report (Outfall #1)

StormShed3G Report (Outfall #2)

StormShed3G Report (Outfall #3)

Narrative

This project is classified as a Category 2 per the Edmonds Stormwater Addendum because it results in more than 5,000 sf of new plus replaced hard surfaces. However, since the project is in a Puget Sound direct discharge area, per ECDC 18.30.060.D.5.b.iv, the project does not have to achieve the LID Performance Standard, nor consider bioretention, rain gardens, permeable pavement, or full dispersion.

Runoff treatment is required for this project since the project proposes greater than 5,000 sf of new and replaced Pollution Generating Hard Surfaces (PGHS).

Flow control is not required for projects that discharge directly to, or indirectly through the City's MS4 to Puget Sound (ECDC 18.30.060.D.7 a). The project site will discharge to Puget Sound, and Flow Control is not required.

Feasibility Review

The project must implement on-site stormwater management BMPs to the maximum extent feasible per Minimum Requirement #5. The following BMPs were evaluated per ECDC 18.30.060.D.5.b.iv.A for all new plus replaced hard surfaces and land disturbed:

Lawn and landscaped areas:

1. Post-construction soil quality and depth in accordance with BMP T5.13 in Chapter 5 of Volume V of the SWMMWW will be used for all disturbed pervious areas.

Roofs:

1. Downspout Infiltration in accordance with BMP T5.10A is **infeasible** because the site does not have outwash or loam soils.
2. Downspout Dispersion in accordance with BMP T5.10B is **infeasible** as site constraints do not allow for the 25-foot vegetated flowpath required.

3. Perforated Stub-out Connections in accordance with BMP T5.10C are **feasible** and provided. See C3.1 of the plan sheets.

Other Hard Surfaces:

1. Sheet Flow Dispersion in accordance with BMP T5.12 is **infeasible** since there is no room on-site to allow for a vegetated buffer and transition zone to disperse the runoff.
2. Concentrated Flow Dispersion in accordance with BMP T5.11 is **infeasible** since there is no room on-site to allow for a vegetated buffer and transition zone to disperse the runoff.
3. Detention Vaults and Pipes are **infeasible** because the project will discharge directly to the Puget Sound, and controlling flows is not beneficial.

The boardwalk is proposed to have a cross-slope towards the existing parking lot areas and stormwater infrastructure. Runoff will sheet flow into the existing catch basins and conveyance pipes and be conveyed to the outfalls into Puget Sound. WWHM and Stormshed 3G were used to model the developed flow rates from the addition of the reconstructed boardwalk and the existing conveyance system to check that it has sufficient capacity to convey the existing and developed flows. The reports are included at the end of this Section.

Runoff Treatment

The project is required to provide runoff treatment for all site Pollution Generating Hard Surfaces (PGHS) per Minimum Requirement #6 of the SWMMWW. The site is commercial and is therefore required to meet the enhanced treatment standard. A Contech Modular Wetland Vault will be installed in the existing parking lot. 4,176 sf of new PGHS and an equivalent area of 3,038 sf of existing PGHS will be routed to the system to meet the required treatment area. Refer to the WWHM Report below for the water quality design flow calculations. The water quality basin map below shows the different areas which flow to the runoff treatment BMP.

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

WWHM2012
PROJECT REPORT
15-MINUTE TIME STEPS

Project Name: Portwalk Reconstruction Outfall 1 Basin Flows
Site Name: North Portwalk and Seawall Reconstruction
Site Address: 300-336 Admiral Way
City : Edmonds
Report Date: 5/11/2021
MGS Regoin : Puget East (36)
Data Start : 1901/10/1
Data End : 2058/09/30
DOT Data Number: 03
Version Date: 2019/09/13
Version : 4.2.17

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

High Flow Threshold for POC 1: 50 year

Low Flow Threshold for POC 2 : 50 Percent of the 2 Year

High Flow Threshold for POC 2: 50 year

Low Flow Threshold for POC 3 : 50 Percent of the 2 Year

High Flow Threshold for POC 3: 50 year

Low Flow Threshold for POC 4 : 50 Percent of the 2 Year

High Flow Threshold for POC 4: 50 year

Low Flow Threshold for POC 5 : 50 Percent of the 2 Year

High Flow Threshold for POC 5: 50 year

Low Flow Threshold for POC 6 : 50 Percent of the 2 Year

High Flow Threshold for POC 6: 50 year

Low Flow Threshold for POC 7 : 50 Percent of the 2 Year

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

High Flow Threshold for POC 7: 50 year

Low Flow Threshold for POC 8 : 50 Percent of the 2 Year

High Flow Threshold for POC 8: 50 year

Low Flow Threshold for POC 9 : 50 Percent of the 2 Year

High Flow Threshold for POC 9: 50 year

Low Flow Threshold for POC 10 : 50 Percent of the 2 Year

High Flow Threshold for POC 10: 50 year

Low Flow Threshold for POC 11 : 50 Percent of the 2 Year

High Flow Threshold for POC 11: 50 year

MITIGATED LAND USE

Name : Basin 1
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.48
Impervious Total	0.48
Basin Total	0.48

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 2
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.17
Impervious Total	0.17
Basin Total	0.17

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 3
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.14
Impervious Total	0.14
Basin Total	0.14

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 4
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.03
Impervious Total	0.03
Basin Total	0.03

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 5
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.1
Impervious Total	0.1
Basin Total	0.1

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 6
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.12
Impervious Total	0.12
Basin Total	0.12

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 7
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.22
Impervious Total	0.22
Basin Total	0.22

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 8
Bypass: No

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.07
Impervious Total	0.07
Basin Total	0.07

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 9
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	2.3
Impervious Total	2.3
Basin Total	2.3

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 10
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.09
Impervious Total	0.09
Basin Total	0.09

Element Flows To:		
Surface	Interflow	Groundwater

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Name : Basin 11
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.12
Impervious Total	0.12
Basin Total	0.12

Element Flows To:		
Surface	Interflow	Groundwater

ANALYSIS RESULTS

Stream Protection Duration

Predeveloped Landuse Totals for POC #1
Total Pervious Area:0.48
Total Impervious Area:0

Mitigated Landuse Totals for POC #1
Total Pervious Area:0
Total Impervious Area:0.48

Flow Frequency Return Periods for Predeveloped. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.007991
5 year	0.013131
10 year	0.016028
25 year	0.019037
50 year	0.020852
100 year	0.022357

Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.11936
5 year	0.1574
10 year	0.18467
25 year	0.221585
50 year	0.250925
100 year	0.281888

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Stream Protection Duration

Predeveloped Landuse Totals for POC #2

Total Pervious Area:0.17

Total Impervious Area:0

Mitigated Landuse Totals for POC #2

Total Pervious Area:0

Total Impervious Area:0.17

Flow Frequency Return Periods for Predeveloped. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.00283
5 year	0.004651
10 year	0.005677
25 year	0.006742
50 year	0.007385
100 year	0.007918

Flow Frequency Return Periods for Mitigated. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.042273
5 year	0.055746
10 year	0.065404
25 year	0.078478
50 year	0.088869
100 year	0.099835

Stream Protection Duration

Predeveloped Landuse Totals for POC #3

Total Pervious Area:0.14

Total Impervious Area:0

Mitigated Landuse Totals for POC #3

Total Pervious Area:0

Total Impervious Area:0.14

Flow Frequency Return Periods for Predeveloped. POC #3

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.002331
5 year	0.00383
10 year	0.004675
25 year	0.005553
50 year	0.006082
100 year	0.006521

Flow Frequency Return Periods for Mitigated. POC #3

<u>Return Period</u>	<u>Flow(cfs)</u>
----------------------	------------------

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

2 year	0.034813
5 year	0.045908
10 year	0.053862
25 year	0.064629
50 year	0.073186
100 year	0.082217

Stream Protection Duration

Predeveloped Landuse Totals for POC #4

Total Pervious Area:0.03

Total Impervious Area:0

Mitigated Landuse Totals for POC #4

Total Pervious Area:0

Total Impervious Area:0.03

Flow Frequency Return Periods for Predeveloped. POC #4

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.000499
5 year	0.000821
10 year	0.001002
25 year	0.00119
50 year	0.001303
100 year	0.001397

Flow Frequency Return Periods for Mitigated. POC #4

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.00746
5 year	0.009837
10 year	0.011542
25 year	0.013849
50 year	0.015683
100 year	0.017618

Stream Protection Duration

Predeveloped Landuse Totals for POC #5

Total Pervious Area:0.1

Total Impervious Area:0

Mitigated Landuse Totals for POC #5

Total Pervious Area:0

Total Impervious Area:0.1

Flow Frequency Return Periods for Predeveloped. POC #5

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.001665
5 year	0.002736

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

10 year	0.003339
25 year	0.003966
50 year	0.004344
100 year	0.004658

Flow Frequency Return Periods for Mitigated. POC #5

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.024867
5 year	0.032792
10 year	0.038473
25 year	0.046164
50 year	0.052276
100 year	0.058727

Stream Protection Duration

Predeveloped Landuse Totals for POC #6

Total Pervious Area:0.12

Total Impervious Area:0

Mitigated Landuse Totals for POC #6

Total Pervious Area:0

Total Impervious Area:0.12

Flow Frequency Return Periods for Predeveloped. POC #6

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.001998
5 year	0.003283
10 year	0.004007
25 year	0.004759
50 year	0.005213
100 year	0.005589

Flow Frequency Return Periods for Mitigated. POC #6

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.02984
5 year	0.03935
10 year	0.046168
25 year	0.055396
50 year	0.062731
100 year	0.070472

Stream Protection Duration

Predeveloped Landuse Totals for POC #7

Total Pervious Area:0.22

Total Impervious Area:0

Mitigated Landuse Totals for POC #7

Total Pervious Area:0

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Total Impervious Area:0.22

Flow Frequency Return Periods for Predeveloped. POC #7

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.003663
5 year	0.006019
10 year	0.007346
25 year	0.008725
50 year	0.009557
100 year	0.010247

Flow Frequency Return Periods for Mitigated. POC #7

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.054706
5 year	0.072141
10 year	0.084641
25 year	0.10156
50 year	0.115007
100 year	0.129199

Stream Protection Duration

Predeveloped Landuse Totals for POC #8

Total Pervious Area:0.07

Total Impervious Area:0

Mitigated Landuse Totals for POC #8

Total Pervious Area:0

Total Impervious Area:0.07

Flow Frequency Return Periods for Predeveloped. POC #8

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.001165
5 year	0.001915
10 year	0.002337
25 year	0.002776
50 year	0.003041
100 year	0.00326

Flow Frequency Return Periods for Mitigated. POC #8

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.017407
5 year	0.022954
10 year	0.026931
25 year	0.032315
50 year	0.036593
100 year	0.041109

Stream Protection Duration

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Predeveloped Landuse Totals for POC #9

Total Pervious Area:2.3

Total Impervious Area:0

Mitigated Landuse Totals for POC #9

Total Pervious Area:0

Total Impervious Area:2.3

Flow Frequency Return Periods for Predeveloped. POC #9

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.038292
5 year	0.062921
10 year	0.076802
25 year	0.091221
50 year	0.099914
100 year	0.107126

Flow Frequency Return Periods for Mitigated. POC #9

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.571931
5 year	0.754206
10 year	0.884879
25 year	1.061763
50 year	1.202348
100 year	1.350713

Stream Protection Duration

Predeveloped Landuse Totals for POC #10

Total Pervious Area:0.09

Total Impervious Area:0

Mitigated Landuse Totals for POC #10

Total Pervious Area:0

Total Impervious Area:0.09

Flow Frequency Return Periods for Predeveloped. POC #10

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.001498
5 year	0.002462
10 year	0.003005
25 year	0.00357
50 year	0.00391
100 year	0.004192

Flow Frequency Return Periods for Mitigated. POC #10

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.02238
5 year	0.029512
10 year	0.034626
25 year	0.041547

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

50 year	0.047048
100 year	0.052854

Stream Protection Duration

Predeveloped Landuse Totals for POC #11

Total Pervious Area:0.12

Total Impervious Area:0

Mitigated Landuse Totals for POC #11

Total Pervious Area:0

Total Impervious Area:0.12

Flow Frequency Return Periods for Predeveloped. POC #11

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.001998
5 year	0.003283
10 year	0.004007
25 year	0.004759
50 year	0.005213
100 year	0.005589

Flow Frequency Return Periods for Mitigated. POC #11

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.02984
5 year	0.03935
10 year	0.046168
25 year	0.055396
50 year	0.062731
100 year	0.070472

PerlnD and ImplnD Changes

No changes have been made.

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages. Software Copyright © by : Clear Creek Solutions, Inc. 2005-2021; All Rights Reserved.

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

WWHM2012
PROJECT REPORT
15-MINUTE TIME STEPS

Project Name: Portwalk Reconstruction Outfall 2 Basin Flows
Site Name: North Portwalk and Seawall Reconstruction
Site Address: 300-336 Admiral Way
City : Edmonds
Report Date: 6/1/2021
MGS Regoin : Puget East (36)
Data Start : 1901/10/1
Data End : 2058/09/30
DOT Data Number: 03
Version Date: 2019/09/13
Version : 4.2.17

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

High Flow Threshold for POC 1: 50 year

Low Flow Threshold for POC 2 : 50 Percent of the 2 Year

High Flow Threshold for POC 2: 50 year

Low Flow Threshold for POC 3 : 50 Percent of the 2 Year

High Flow Threshold for POC 3: 50 year

Low Flow Threshold for POC 4 : 50 Percent of the 2 Year

High Flow Threshold for POC 4: 50 year

PREDEVELOPED LAND USE

Name : Basin 1
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.13
Impervious Total	0.13

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Basin Total 0.13

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 2
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.15
Impervious Total	0.15
Basin Total	0.15

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 3
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.2
Impervious Total	0.2
Basin Total	0.2

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 4
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.2

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Impervious Total	0.2
------------------	-----

Basin Total	0.2
-------------	-----

Element Flows To:		
Surface	Interflow	Groundwater

MITIGATED LAND USE

Name : Basin 1

Bypass: No

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

Pervious Total	0
----------------	---

<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.13

Impervious Total	0.13
------------------	------

Basin Total	0.13
-------------	------

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 2

Bypass: No

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

Pervious Total	0
----------------	---

<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.15

Impervious Total	0.15
------------------	------

Basin Total	0.15
-------------	------

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 3

Bypass: No

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.2
Impervious Total	0.2
Basin Total	0.2

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 4
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
PARKING FLAT	0.26
Impervious Total	0.26
Basin Total	0.26

Element Flows To:		
Surface	Interflow	Groundwater

ANALYSIS RESULTS

Stream Protection Duration

Predeveloped Landuse Totals for POC #1
Total Pervious Area:0
Total Impervious Area:0.13

Mitigated Landuse Totals for POC #1
Total Pervious Area:0
Total Impervious Area:0.13

Flow Frequency Return Periods for Predeveloped.	POC #1
<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.032206
5 year	0.042471
10 year	0.049829
25 year	0.059791
50 year	0.067708
100 year	0.076063

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.032206
5 year	0.042471
10 year	0.049829
25 year	0.059791
50 year	0.067708
100 year	0.076063

Stream Protection Duration

Predeveloped Landuse Totals for POC #2

Total Pervious Area:0

Total Impervious Area:0.15

Mitigated Landuse Totals for POC #2

Total Pervious Area:0

Total Impervious Area:0.15

Flow Frequency Return Periods for Predeveloped. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.037161
5 year	0.049005
10 year	0.057495
25 year	0.068989
50 year	0.078124
100 year	0.087765

Flow Frequency Return Periods for Mitigated. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.037161
5 year	0.049005
10 year	0.057495
25 year	0.068989
50 year	0.078124
100 year	0.087765

Stream Protection Duration

Predeveloped Landuse Totals for POC #3

Total Pervious Area:0

Total Impervious Area:0.2

Mitigated Landuse Totals for POC #3

Total Pervious Area:0

Total Impervious Area:0.2

Flow Frequency Return Periods for Predeveloped. POC #3

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.049548
5 year	0.065339
10 year	0.076661
25 year	0.091985
50 year	0.104166
100 year	0.11702

Flow Frequency Return Periods for Mitigated. POC #3

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.049548
5 year	0.065339
10 year	0.076661
25 year	0.091985
50 year	0.104166
100 year	0.11702

Stream Protection Duration

Predeveloped Landuse Totals for POC #4

Total Pervious Area:0

Total Impervious Area:0.2

Mitigated Landuse Totals for POC #4

Total Pervious Area:0

Total Impervious Area:0.26

Flow Frequency Return Periods for Predeveloped. POC #4

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.049548
5 year	0.065339
10 year	0.076661
25 year	0.091985
50 year	0.104166
100 year	0.11702

Flow Frequency Return Periods for Mitigated. POC #4

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.064412
5 year	0.084941
10 year	0.099659
25 year	0.119581
50 year	0.135415
100 year	0.152126

PerlnD and Implnd Changes

No changes have been made.

This program and accompanying documentation is provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by the user. Clear Creek Solutions, Inc. disclaims all warranties, either expressed or implied, including but not limited to implied

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

warranties of program and accompanying documentation. In no event shall Clear Creek Solutions, Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions, Inc. has been advised of the possibility of such damages.

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

WWHM2012
PROJECT REPORT
15-MINUTE TIME STEPS

Project Name: Portwalk Reconstruction Outfall 3
Site Name: North Portwalk and Seawall Reconstruction
Site Address: 300-336 Admiral Way
City : Edmonds
Report Date: 6/1/2021
MGS Regoin : Puget East (36)
Data Start : 1901/10/1
Data End : 2058/09/30
DOT Data Number: 02
Version Date: 2019/09/13
Version : 4.2.17

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

High Flow Threshold for POC 1: 50 year

Low Flow Threshold for POC 2 : 50 Percent of the 2 Year

High Flow Threshold for POC 2: 50 year

PREDEVELOPED LAND USE

Name : Basin 1
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
Pervious Total	0
<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.13
PARKING FLAT	0.09
Impervious Total	0.22
Basin Total	0.22

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 2
Bypass: No
GroundWater: No

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

Pervious Total	0
----------------	---

<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.22
PARKING FLAT	0.13

Impervious Total	0.35
------------------	------

Basin Total	0.35
-------------	------

Element Flows To:		
Surface	Interflow	Groundwater

MITIGATED LAND USE

Name : Basin 1
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

Pervious Total	0
----------------	---

<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.13
PARKING FLAT	0.15

Impervious Total	0.28
------------------	------

Basin Total	0.28
-------------	------

Element Flows To:		
Surface	Interflow	Groundwater

Name : Basin 2
Bypass: No
GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
--------------------------	-------------

Pervious Total	0
----------------	---

<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.22
PARKING FLAT	0.16

Impervious Total	0.38
------------------	------

Basin Total	0.38
-------------	------

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Element Flows To:

Surface

Interflow

Groundwater

ANALYSIS RESULTS Stream Protection Duration

Predeveloped Landuse Totals for POC #1

Total Pervious Area:0

Total Impervious Area:0.22

Mitigated Landuse Totals for POC #1

Total Pervious Area:0

Total Impervious Area:0.28

Flow Frequency Return Periods for Predeveloped. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.054706
5 year	0.072141
10 year	0.084641
25 year	0.10156
50 year	0.115007
100 year	0.129199

Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.069626
5 year	0.091816
10 year	0.107724
25 year	0.129258
50 year	0.146373
100 year	0.164435

Stream Protection Duration

Predeveloped Landuse Totals for POC #2

Total Pervious Area:0

Total Impervious Area:0.35

Mitigated Landuse Totals for POC #2

Total Pervious Area:0

Total Impervious Area:0.38

Flow Frequency Return Periods for Predeveloped. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.087033
5 year	0.114771
10 year	0.134656
25 year	0.161573
50 year	0.182966

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT 100 year

0.205543

Flow Frequency Return Periods for Mitigated. POC #2

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.094493
5 year	0.124608
10 year	0.146197
25 year	0.175422
50 year	0.198649
100 year	0.223161

Perlnnd and Implnd Changes

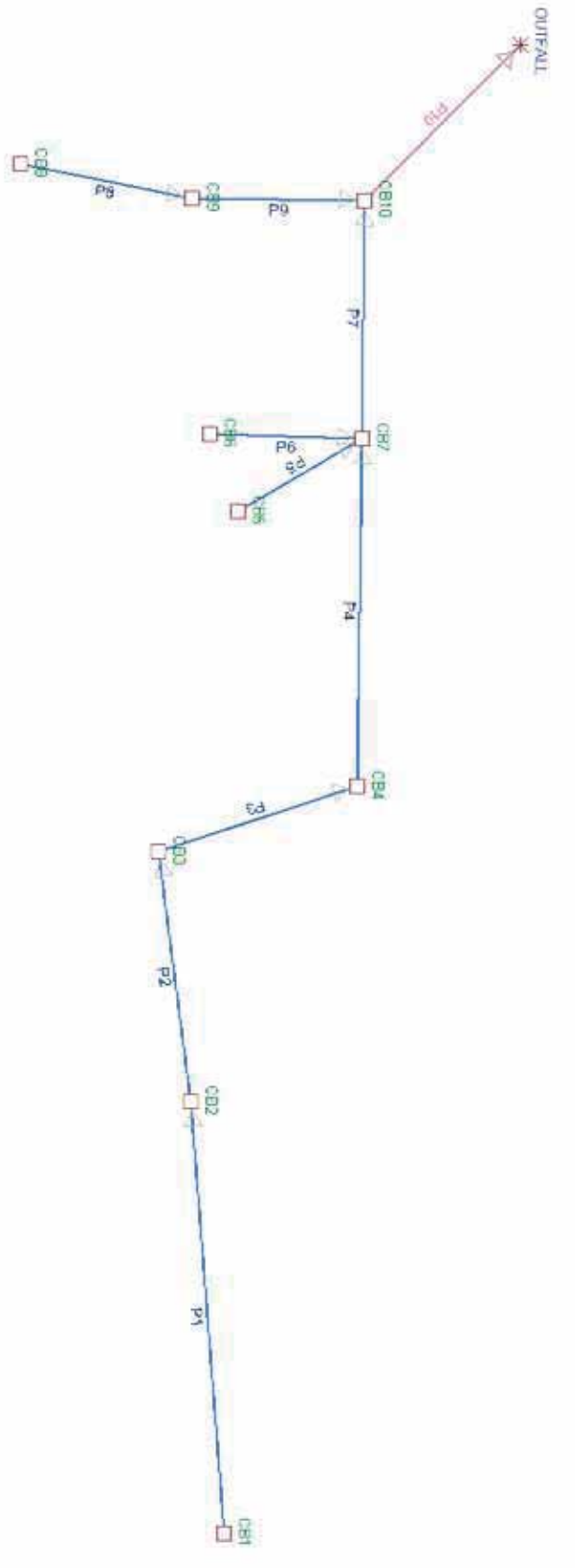
No changes have been made.

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages. Software Copyright © by : Clear Creek Solutions, Inc. 2005-2021; All Rights Reserved.

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Appended on: Friday, December 9, 2022 3:42:53 PM

Layout Report: Portwalk Fixed Flows:

Outfall 1

Event	Precip (in)
other	1.50
2 yr 24 hr	2.00
5 year	2.50
10 year	3.00
25 year	3.50
100 year	4.00

Reach Records

Record Id: P1

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB2	UpNode	CB1
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	124.00 ft	Slope	0.08%
Up Invert	10.70 ft	Dn Invert	10.60 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		Ex/Infil Rate	0.00 in/hr

Record Id: P10

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	OUTFALL	UpNode	CB10
Material	unspecified	Size	12 in Diam
Ent Losses	Groove End w/Headwall		
Length	31.00 ft	Slope	3.87%
Up Invert	7.60 ft	Dn Invert	6.40 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover			
3.00 ft			
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P2

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB3	UpNode	CB2
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	24.50 ft	Slope	2.45%
Up Invert	10.60 ft	Dn Invert	10.00 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover			
3.00 ft			
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P3

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB4	UpNode	CB3
Material	unspecified	Size	8 in Diam

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Ent Losses		Groove End w/Headwall	
Length	49.00 ft	Slope	0.41%
Up Invert	9.80 ft	Dn Invert	9.60 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover		3.00 ft	
Drop across MH		0.00 ft	Ex/Infil Rate 0.00 in/hr

Record Id: P4

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB7	UpNode	CB4
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	118.00 ft	Slope	1.19%
Up Invert	9.60 ft	Dn Invert	8.20 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover		3.00 ft	
Drop across MH		0.00 ft	Ex/Infil Rate 0.00 in/hr

Record Id: P5

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB7	UpNode	CB5
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	40.00 ft	Slope	2.50%
Up Invert	9.20 ft	Dn Invert	8.20 ft

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Conduit Constraints				
Min Vel	Max Vel	Min Slope	Max Slope	Min Cover
2.00 ft/s	15.00 ft/s	0.50%	2.00%	3.00 ft
Drop across MH		0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P6

Section Shape:		Circular			
Uniform Flow Method:		Manning's		Coefficient:	0.009
Routing Method:		Travel Time Shift		Contributing Hyd	
DnNode		CB7		UpNode	CB6
Material		unspecified		Size	8 in Diam
Ent Losses		Groove End w/Headwall			
Length		63.00 ft		Slope	0.16%
Up Invert		10.90 ft		Dn Invert	10.80 ft
Conduit Constraints					
Min Vel	Max Vel	Min Slope	Max Slope	Min Cover	
2.00 ft/s	15.00 ft/s	0.50%	2.00%	3.00 ft	
Drop across MH		0.00 ft		Ex/Infil Rate	0.00 in/hr

Record Id: P7

Section Shape:		Circular			
Uniform Flow Method:		Manning's		Coefficient:	0.009
Routing Method:		Travel Time Shift		Contributing Hyd	
DnNode		CB10		UpNode	CB7
Material		unspecified		Size	8 in Diam
Ent Losses		Groove End w/Headwall			
Length		91.00 ft		Slope	0.44%
Up Invert		8.60 ft		Dn Invert	8.20 ft
Conduit Constraints					
Min Vel	Max Vel	Min Slope	Max Slope	Min Cover	
2.00 ft/s	15.00 ft/s	0.50%	2.00%	3.00 ft	

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr
-----------------------	---------	----------------------	------------

Record Id: P8

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB9	UpNode	CB8
Material	unspecified	Size	12 in Diam
Ent Losses	Groove End w/Headwall		
Length	52.00 ft	Slope	0.96%
Up Invert	8.30 ft	Dn Invert	7.80 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
			Min Cover
			3.00 ft
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P9

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB10	UpNode	CB9
Material	unspecified	Size	12 in Diam
Ent Losses	Groove End w/Headwall		
Length	66.00 ft	Slope	0.76%
Up Invert	7.70 ft	Dn Invert	7.20 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
			Min Cover
			3.00 ft
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Node Records

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Record Id: CB1

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	10.70 ft	Max El.	12.62 ft
Void Ratio	100.00		
Dummy Type Node			

Record Id: CB10

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	7.60 ft	Max El.	12.80 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB2

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	10.60 ft	Max El.	12.56 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: CB3

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	9.80 ft	Max El.	13.59 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB4

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	9.60 ft	Max El.	13.36 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB5

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	9.20 ft	Max El.	13.25 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB6

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	10.90 ft	Max El.	12.62 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: CB7

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	8.60 ft	Max El.	13.21 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB8

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	8.30 ft	Max El.	12.60 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB9

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	7.70 ft	Max El.	12.48 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: OUTFALL

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	6.40 ft	Max El.	10.00 ft
Void Ratio	100.00		

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Dummy Type Node

Appended on: Friday, December 9, 2022 3:45:36 PM

ROUTEHYD [] THRU [Portwalk Fixed Flows] USING [25 year] AND [] NOTZERO RELATIVE Fixed Flow

Gravity Analysis using fixed flowrates

Reach ID	Flow (cfs)	Full Q (cfs)	Full ratio	nDepth (ft)	Size	nVel (ft/s)	fVel (ft/s)	CFlow
P1	0.30	0.4967	0.6039	0.3738	8 in Diam	1.4892	1.4234	0.30
P2	0.36	2.7382	0.1315	0.1632	8 in Diam	5.4357	7.8459	0.06
P3	0.37	1.1179	0.331	0.2626	8 in Diam	2.8975	3.2032	0.01
P4	0.42	1.9058	0.2204	0.2128	8 in Diam	4.3771	5.4609	0.05
P5	0.06	2.7665	0.0217	0.0679	8 in Diam	3.2155	7.9271	0.06
P6	0.10	0.697	0.1435	0.1703	8 in Diam	1.4218	1.9973	0.10
P7	0.61	1.1601	0.5258	0.3435	8 in Diam	3.3643	3.3241	0.03
P8	1.06	5.0598	0.2095	0.3107	12 in Diam	5.0947	6.4424	1.06
P9	1.10	4.4914	0.2449	0.3368	12 in Diam	4.7315	5.7186	0.04
P10	1.77	10.1525	0.1743	0.2821	12 in Diam	9.7296	12.9265	0.06

HGL Analysis

From Node	To Node	HG El (ft)	App (ft)	Bend (ft)	Junct Loss (ft)	Adjusted HG El (ft)	Max El (ft)
							6.9664
CB10	OUTFALL	8.4177	-----	0.0121	0.0110	8.4408	12.8000
CB7	CB10	9.1384	-----	0.0001	0.0060	9.1445	13.2100
CB4	CB7	10.0253	-----	0.1116	-----	10.1370	13.3600
No approach losses at node CB2 because inverts and/or crowns are offset.							
CB3	CB4	10.2891	0.4588	0.4794	-----	10.3097	13.5900

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

CB2	CB3	10.9841	-----	0.0004	-----	10.9845	12.5600
CB1	CB2	11.1188	-----	-----	-----	11.1188	12.6200
CB5	CB7	9.3412	-----	-----	-----	9.3412	13.2500
CB6	CB7	11.1079	-----	-----	-----	11.1079	12.6200
CB9	CB10	8.5073	0.4030	0.0191	-----	8.1233	12.4800
CB8	CB9	8.9067	-----	-----	-----	8.9067	12.6000

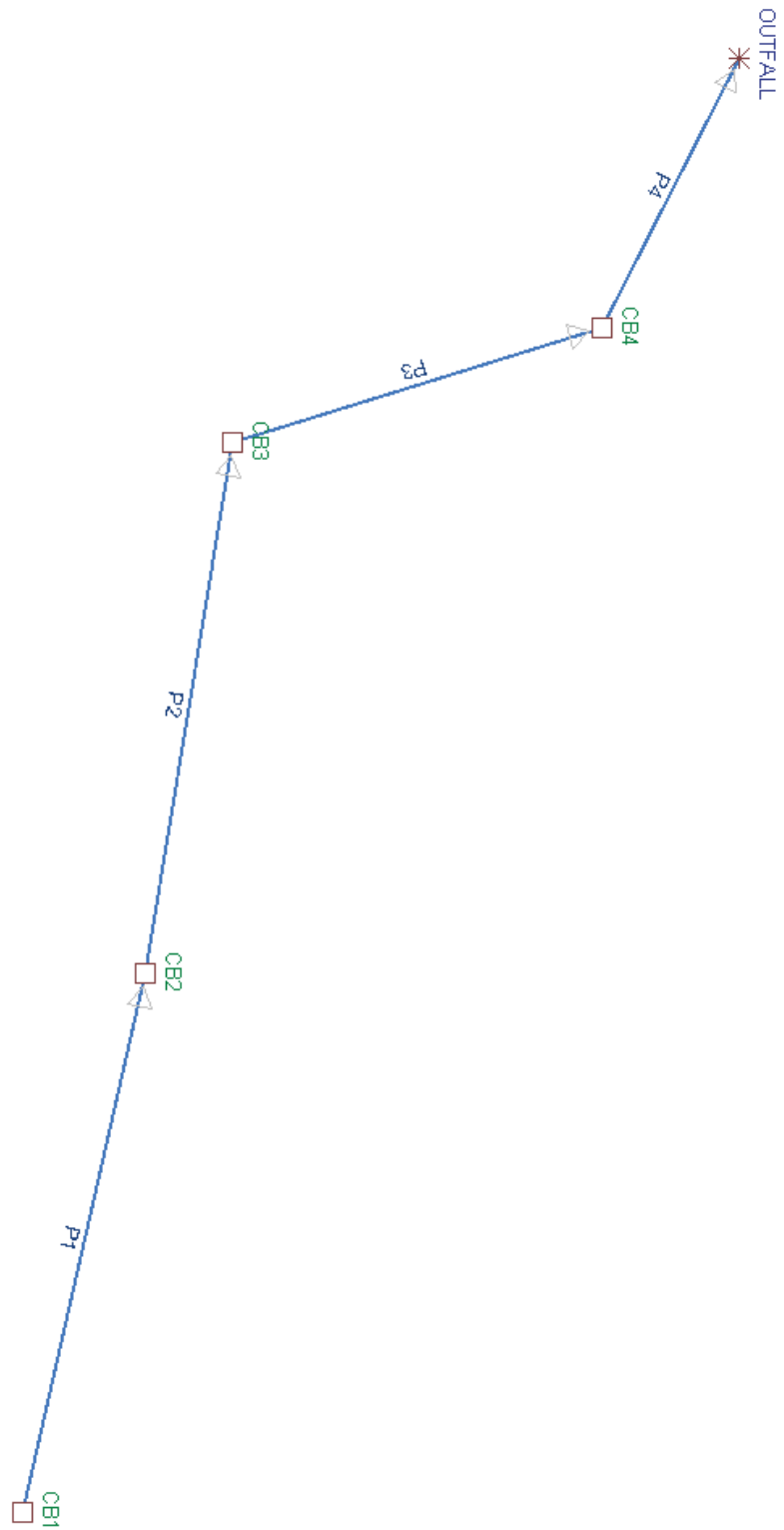
Conduit Notes

Reach	HW Depth (ft)	HW/D ratio	Q (cfs)	TW Depth (ft)	Dc (ft)	Dn (ft)	Comment
P10	0.8177	0.8177	1.77	0.5664	0.5664	0.2821	SuperCrit flow, Inlet end controls
P7	0.5384	0.8076	0.61	0.3675	0.3675	0.3435	SuperCrit flow, Inlet end controls
P4	0.4253	0.6381	0.42	0.9445	0.3022	0.2128	SuperCrit flow, Inlet end controls
P3	0.4891	0.7337	0.37	0.5370	0.2829	0.2626	Outlet Control M1 Backwater
P2	0.3841	0.5762	0.36	0.3097	0.2789	0.1632	SuperCrit flow, Inlet end controls
P1	0.4188	0.6283	0.30	0.3845	0.2537	0.3738	Outlet Control M1 Backwater
P5	0.1412	0.2119	0.06	0.9445	0.1109	0.0679	SuperCrit flow, Inlet end controls
P6	0.2079	0.3120	0.10	0.1703	0.1440	0.1703	Outlet Control M1 Backwater
P9	1.3073	1.3073	1.10	1.2408	0.4414	0.3368	Outlet Control
P8	0.6067	0.6067	1.06	0.4329	0.4329	0.3107	SuperCrit flow, Inlet end controls

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Appended on: Friday, December 9, 2022 3:50:52 PM

Layout Report: Portwalk Fixed Flows: Outfall 2

Event	Precip (in)
other	1.50
2 yr 24 hr	2.00
5 year	2.50
10 year	3.00
25 year	3.50
100 year	4.00

Reach Records

Record Id: P1

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB2	UpNode	CB1
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	87.00 ft	Slope	1.03%
Up Invert	11.10 ft	Dn Invert	10.20 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover			
3.00 ft			
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P2

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB3	UpNode	CB2
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	69.00 ft	Slope	1.30%
Up Invert	10.10 ft	Dn Invert	9.20 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		Ex/Infil Rate	0.00 in/hr

Record Id: P3

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB4	UpNode	CB3
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	75.00 ft	Slope	0.53%
Up Invert	8.70 ft	Dn Invert	8.30 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		Ex/Infil Rate	0.00 in/hr

Record Id: P4

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	OUTFALL	UpNode	CB4
Material	unspecified	Size	8 in Diam

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Ent Losses		Groove End w/Headwall	
Length	50.00 ft	Slope	3.60%
Up Invert	8.30 ft	Dn Invert	6.50 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		0.00 ft	Ex/Infil Rate
			0.00 in/hr

Node Records

Record Id: CB1

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	11.10 ft	Max El.	13.18 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: CB2

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	10.10 ft	Max El.	13.23 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: CB3

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	8.70 ft	Max El.	13.20 ft

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: CB4

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	8.30 ft	Max El.	13.15 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 2-48
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	12.5664 sf
MH/CB Type Node			

Record Id: OUTFALL

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	6.50 ft	Max El.	13.00 ft
Void Ratio	100.00		
Dummy Type Node			

Licensed to: Engenious Systems, Inc.
Appended on: Friday, December 9, 2022 3:51:39 PM

**ROUTEHYD [] THRU [Portwalk Outfall 2] USING [25 year] AND []
NOTZERO RELATIVE Fixed Flow**

Gravity Analysis using fixed flowrates

Reach ID	Flow (cfs)	Full Q (cfs)	Full ratio	nDepth (ft)	Size	nVel (ft/s)	fVel (ft/s)	CFlow
P1	0.06	1.7796	0.0337	0.0837	8 in Diam	2.3663	5.0993	0.06

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

P2	0.13	1.995	0.0652	0.1153	8 in Diam	3.2232	5.7163	0.07
P3	0.22	1.2778	0.1722	0.1868	8 in Diam	2.7477	3.6613	0.09
P4	0.34	3.3199	0.1024	0.1438	8 in Diam	6.143	9.5126	0.12

HGL Analysis

From Node	To Node	HG EI (ft)	App (ft)	Bend (ft)	Junct Loss (ft)	Adjusted HG EI (ft)	Max EI (ft)
							6.7707
CB4	OUTFALL	8.6676	-----	0.0465	-----	8.7140	13.1500
No approach losses at node CB2 because inverts and/or crowns are offset.							
CB3	CB4	8.9957	-----	0.1128	-----	9.1085	13.2000
CB2	CB3	10.3197	-----	0.0013	-----	10.3210	13.2300
CB1	CB2	11.2461	-----	-----	-----	11.2461	13.1800

Conduit Notes

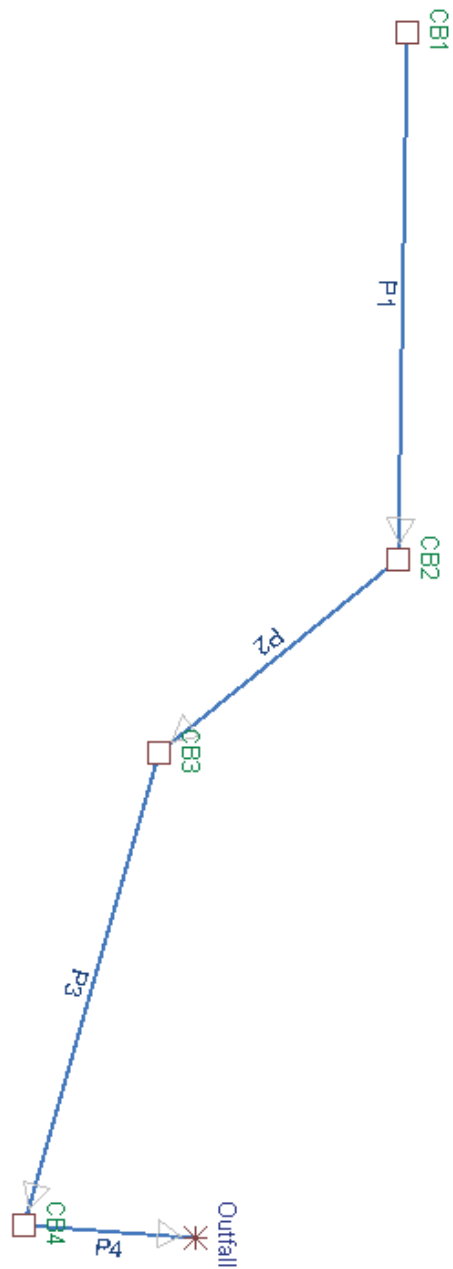
Reach	HW Depth (ft)	HW/D ratio	Q (cfs)	TW Depth (ft)	Dc (ft)	Dn (ft)	Comment
P4	0.3676	0.5514	0.34	0.2707	0.2707	0.1438	SuperCrit flow, Inlet end controls
P3	0.2957	0.4435	0.22	0.4140	0.2159	0.1868	SuperCrit flow, Inlet end controls
P2	0.2197	0.3296	0.13	0.1647	0.1647	0.1153	SuperCrit flow, Inlet end controls
P1	0.1461	0.2192	0.06	0.1210	0.1109	0.0837	SuperCrit flow, Inlet end controls

Licensed to: Engenious Systems, Inc.

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Appended on: Friday, December 9, 2022 3:54:24 PM

Layout Report: Outfall 3

Event	Precip (in)
other	1.50
2 yr 24 hr	2.00
5 year	2.50
10 year	3.00
25 year	3.50
100 year	4.00

Reach Records

Record Id: P1

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB2	UpNode	CB1
Material	unspecified	Size	8 in Diam
Ent Losses	Groove End w/Headwall		
Length	160.00 ft	Slope	0.50%
Up Invert	10.70 ft	Dn Invert	9.90 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Min Cover			
3.00 ft			
Drop across MH	0.00 ft	Ex/Infil Rate	0.00 in/hr

Record Id: P2

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB3	UpNode	CB2

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Material	unspecified	Size	6 in Diam
Ent Losses	Groove End w/Headwall		
Length	38.00 ft	Slope	0.50%
Up Invert	9.90 ft	Dn Invert	9.71 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		Ex/Infil Rate	0.00 in/hr

Record Id: P3

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	CB4	UpNode	CB3
Material	unspecified	Size	6 in Diam
Ent Losses	Groove End w/Headwall		
Length	73.00 ft	Slope	0.50%
Up Invert	9.70 ft	Dn Invert	9.335 ft
Conduit Constraints			
Min Vel	Max Vel	Min Slope	Max Slope
2.00 ft/s	15.00 ft/s	0.50%	2.00%
Drop across MH		Ex/Infil Rate	0.00 in/hr

Record Id: P4

Section Shape:	Circular		
Uniform Flow Method:	Manning's	Coefficient:	0.009
Routing Method:	Travel Time Shift	Contributing Hyd	
DnNode	Outfall	UpNode	CB4
Material	unspecified	Size	12 in Diam
Ent Losses	Groove End w/Headwall		
Length	9.50 ft	Slope	12.63%

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Up Invert		9.30 ft		Dn Invert		8.10 ft	
Conduit Constraints							
Min Vel	Max Vel	Min Slope	Max Slope	Min Cover			
2.00 ft/s	15.00 ft/s	0.50%	2.00%	3.00 ft			
Drop across MH		0.00 ft		Ex/Infil Rate		0.00 in/hr	

Node Records

Record Id: CB1

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	10.70 ft	Max El.	12.42 ft
Void Ratio	100.00		
Dummy Type Node			

Record Id: CB2

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	11.20 ft	Max El.	12.96 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: CB3

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	11.10 ft	Max El.	12.72 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

MH/CB Type Node

Record Id: CB4

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	9.30 ft	Max El.	12.55 ft
Void Ratio	100.00		
Condition	Existing	Structure Type	CB-TYPE 1
		Channelization	No Special Shape
Catch	0.00 ft	Bottom Area	3.97 sf
MH/CB Type Node			

Record Id: Outfall

Descrip:	Prototype Record	Increment	0.10 ft
Start El.	8.10 ft	Max El.	12.00 ft
Void Ratio	100.00		
Dummy Type Node			

Licensed to: Engenious Systems, Inc.

Appended on: Friday, December 9, 2022 3:56:52 PM

ROUTEHYD [] THRU [Outfall 3] USING [25 year] AND [] NOTZERO RELATIVE Fixed Flow

Gravity Analysis using fixed flowrates

Reach ID	Flow (cfs)	Full Q (cfs)	Full ratio	nDepth (ft)	Size	nVel (ft/s)	fVel (ft/s)	CFlow
P1	0.13	1.2372	0.1051	0.1455	8 in Diam	2.3092	3.5451	0.13
P2	0.31	0.5746	0.5395	0.2617	6 in Diam	2.98	2.9266	0.18
P3	0.31	0.5746	0.5395	0.2617	6 in Diam	2.98	2.9266	0.00
P4	0.31	18.3384	0.0169	0.0905	12 in Diam	8.778	23.3492	0.00

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT *HGL Analysis*

From Node	To Node	HG El (ft)	App (ft)	Bend (ft)	Junct Loss (ft)	Adjusted HG El (ft)	Max El (ft)
							8.3294
CB4	Outfall	9.5482	-----	0.2317	-----	9.7799	12.5500
CB3	CB4	10.1148	-----	0.0352	-----	10.1500	12.7200
CB2	CB3	10.3148	-----	0.0382	-----	10.3529	12.9600
CB1	CB2	10.9224	-----	-----	-----	10.9224	12.4200

Conduit Notes

Reach	HW Depth (ft)	HW/D ratio	Q (cfs)	TW Depth (ft)	Dc (ft)	Dn (ft)	Comment
P4	0.2482	0.2482	0.31	0.2294	0.2294	0.0905	SuperCrit flow, Inlet end controls
P3	0.4148	0.8295	0.31	0.4449	0.2818	0.2617	SuperCrit flow, Inlet end controls
P2	0.4148	0.8295	0.31	0.4400	0.2818	0.2617	SuperCrit flow, Inlet end controls
P1	0.2224	0.3336	0.13	0.4529	0.1647	0.1455	SuperCrit flow, Inlet end controls

Licensed to: Engenious Systems, Inc.

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Water Quality System Basin Map



April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

WWHM2012
PROJECT REPORT

Project Name: Edmonds Portwalk WQ 11.23.22
Site Name:
Site Address:
City :
Report Date: 11/23/2022
MGS Regoin : Puget East
Data Start : 1901/10/1
Data End : 2058/09/30
DOT Data Number: 03
Version Date: 2019/09/13
Version : 4.2.17

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

High Flow Threshold for POC 1: 50 year

PREDEVELOPED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
C, Forest, Flat	.32

Pervious Total	0.32
----------------	------

<u>Impervious Land Use</u>	<u>acre</u>
Impervious Total	0

Basin Total	0.32
-------------	------

Element Flows To:		
Surface	Interflow	Groundwater

MITIGATED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

<u>Pervious Land Use</u>	<u>acre</u>
C, Lawn, Flat	.03
Pervious Total	0.03
<u>Impervious Land Use</u>	<u>acre</u>
DRIVEWAYS FLAT	0.16
SIDEWALKS FLAT	0.13
Impervious Total	0.29
Basin Total	0.32

Element Flows To:		
Surface	Interflow	Groundwater

ANALYSIS RESULTS

Stream Protection Duration

Predeveloped Landuse Totals for POC #1
Total Pervious Area:0.32
Total Impervious Area:0

Mitigated Landuse Totals for POC #1
Total Pervious Area:0.03
Total Impervious Area:0.29

Flow Frequency Return Periods for Predeveloped. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.005328
5 year	0.008754
10 year	0.010685
25 year	0.012692
50 year	0.013901
100 year	0.014905

Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.07316
5 year	0.096898
10 year	0.113973
25 year	0.13715
50 year	0.155614
100 year	0.175137

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Stream Protection Duration		
Annual Peaks for Predeveloped and Mitigated. POC #1		
Year	Predeveloped	Mitigated
1902	0.007	0.080
1903	0.002	0.090
1904	0.005	0.104
1905	0.003	0.048
1906	0.001	0.054
1907	0.008	0.074
1908	0.005	0.065
1909	0.006	0.083
1910	0.009	0.076
1911	0.005	0.078
1912	0.019	0.133
1913	0.008	0.047
1914	0.002	0.189
1915	0.003	0.050
1916	0.004	0.079
1917	0.002	0.049
1918	0.005	0.072
1919	0.004	0.043
1920	0.005	0.063
1921	0.005	0.047
1922	0.006	0.064
1923	0.005	0.068
1924	0.003	0.086
1925	0.002	0.047
1926	0.004	0.091
1927	0.006	0.065
1928	0.004	0.060
1929	0.009	0.100
1930	0.005	0.113
1931	0.005	0.051
1932	0.004	0.061
1933	0.004	0.057
1934	0.012	0.091
1935	0.004	0.054
1936	0.007	0.058
1937	0.006	0.082
1938	0.006	0.054
1939	0.000	0.075
1940	0.004	0.102
1941	0.005	0.086
1942	0.007	0.080
1943	0.002	0.091
1944	0.006	0.134
1945	0.005	0.090
1946	0.004	0.063
1947	0.003	0.058
1948	0.011	0.074
1949	0.009	0.117
1950	0.005	0.049
1951	0.006	0.076
1952	0.018	0.129
1953	0.014	0.125

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

1954	0.004	0.065
1955	0.004	0.056
1956	0.002	0.044
1957	0.006	0.064
1958	0.015	0.081
1959	0.009	0.077
1960	0.003	0.062
1961	0.009	0.179
1962	0.005	0.070
1963	0.002	0.048
1964	0.003	0.130
1965	0.011	0.078
1966	0.002	0.058
1967	0.004	0.066
1968	0.006	0.059
1969	0.004	0.066
1970	0.006	0.078
1971	0.012	0.081
1972	0.007	0.237
1973	0.008	0.128
1974	0.005	0.098
1975	0.012	0.114
1976	0.005	0.097
1977	0.003	0.044
1978	0.010	0.083
1979	0.003	0.075
1980	0.005	0.073
1981	0.005	0.083
1982	0.004	0.060
1983	0.009	0.085
1984	0.002	0.080
1985	0.005	0.078
1986	0.004	0.051
1987	0.009	0.081
1988	0.006	0.054
1989	0.005	0.052
1990	0.006	0.056
1991	0.005	0.091
1992	0.007	0.091
1993	0.006	0.104
1994	0.011	0.069
1995	0.003	0.048
1996	0.012	0.071
1997	0.006	0.059
1998	0.005	0.075
1999	0.000	0.081
2000	0.004	0.083
2001	0.003	0.074
2002	0.009	0.110
2003	0.006	0.057
2004	0.006	0.096
2005	0.008	0.140
2006	0.004	0.061
2007	0.004	0.086
2008	0.005	0.067
2009	0.003	0.064
2010	0.003	0.080

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

2011	0.003	0.054
2012	0.005	0.081
2013	0.004	0.060
2014	0.003	0.064
2015	0.010	0.115
2016	0.001	0.052
2017	0.009	0.118
2018	0.017	0.080
2019	0.017	0.105
2020	0.005	0.088
2021	0.007	0.082
2022	0.002	0.105
2023	0.006	0.114
2024	0.021	0.158
2025	0.005	0.062
2026	0.008	0.070
2027	0.003	0.083
2028	0.002	0.038
2029	0.006	0.062
2030	0.012	0.095
2031	0.003	0.044
2032	0.002	0.052
2033	0.003	0.055
2034	0.003	0.059
2035	0.013	0.078
2036	0.007	0.056
2037	0.001	0.078
2038	0.007	0.076
2039	0.000	0.122
2040	0.002	0.063
2041	0.004	0.072
2042	0.014	0.087
2043	0.006	0.096
2044	0.008	0.066
2045	0.005	0.062
2046	0.006	0.060
2047	0.004	0.081
2048	0.005	0.067
2049	0.005	0.101
2050	0.003	0.062
2051	0.005	0.103
2052	0.003	0.064
2053	0.005	0.067
2054	0.008	0.106
2055	0.002	0.065
2056	0.002	0.085
2057	0.003	0.051
2058	0.004	0.092

Stream Protection Duration

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.0211	0.2365
2	0.0191	0.1887
3	0.0177	0.1795
4	0.0170	0.1584

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

5	0.0165	0.1396
6	0.0150	0.1338
7	0.0140	0.1332
8	0.0137	0.1301
9	0.0131	0.1295
10	0.0125	0.1278
11	0.0123	0.1246
12	0.0121	0.1217
13	0.0119	0.1183
14	0.0115	0.1171
15	0.0110	0.1146
16	0.0109	0.1140
17	0.0108	0.1136
18	0.0104	0.1126
19	0.0097	0.1095
20	0.0093	0.1055
21	0.0091	0.1055
22	0.0090	0.1055
23	0.0090	0.1044
24	0.0090	0.1042
25	0.0088	0.1035
26	0.0088	0.1024
27	0.0087	0.1006
28	0.0086	0.1004
29	0.0084	0.0981
30	0.0083	0.0971
31	0.0082	0.0965
32	0.0082	0.0960
33	0.0082	0.0950
34	0.0080	0.0916
35	0.0080	0.0914
36	0.0075	0.0910
37	0.0074	0.0907
38	0.0073	0.0905
39	0.0073	0.0905
40	0.0071	0.0903
41	0.0070	0.0898
42	0.0069	0.0883
43	0.0067	0.0870
44	0.0064	0.0864
45	0.0064	0.0858
46	0.0063	0.0856
47	0.0062	0.0851
48	0.0061	0.0846
49	0.0061	0.0834
50	0.0061	0.0831
51	0.0060	0.0830
52	0.0059	0.0830
53	0.0058	0.0828
54	0.0058	0.0824
55	0.0058	0.0821
56	0.0058	0.0815
57	0.0057	0.0813
58	0.0057	0.0811
59	0.0057	0.0808
60	0.0057	0.0807
61	0.0057	0.0807

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

62	0.0056	0.0805
63	0.0055	0.0804
64	0.0055	0.0802
65	0.0055	0.0799
66	0.0054	0.0798
67	0.0053	0.0786
68	0.0053	0.0784
69	0.0053	0.0782
70	0.0053	0.0779
71	0.0053	0.0778
72	0.0052	0.0777
73	0.0052	0.0777
74	0.0052	0.0769
75	0.0051	0.0765
76	0.0051	0.0764
77	0.0051	0.0759
78	0.0050	0.0755
79	0.0050	0.0751
80	0.0050	0.0749
81	0.0050	0.0743
82	0.0050	0.0742
83	0.0049	0.0735
84	0.0049	0.0731
85	0.0049	0.0724
86	0.0049	0.0719
87	0.0048	0.0713
88	0.0047	0.0700
89	0.0046	0.0699
90	0.0046	0.0689
91	0.0046	0.0680
92	0.0046	0.0673
93	0.0046	0.0670
94	0.0045	0.0665
95	0.0044	0.0661
96	0.0044	0.0658
97	0.0044	0.0656
98	0.0042	0.0654
99	0.0042	0.0650
100	0.0041	0.0648
101	0.0041	0.0647
102	0.0041	0.0644
103	0.0041	0.0642
104	0.0040	0.0637
105	0.0040	0.0637
106	0.0039	0.0636
107	0.0039	0.0635
108	0.0038	0.0631
109	0.0038	0.0628
110	0.0037	0.0623
111	0.0036	0.0620
112	0.0036	0.0620
113	0.0035	0.0618
114	0.0035	0.0616
115	0.0035	0.0608
116	0.0035	0.0605
117	0.0034	0.0602
118	0.0034	0.0602

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

119	0.0033	0.0601
120	0.0033	0.0596
121	0.0033	0.0592
122	0.0032	0.0590
123	0.0032	0.0586
124	0.0032	0.0583
125	0.0031	0.0582
126	0.0031	0.0576
127	0.0030	0.0569
128	0.0029	0.0569
129	0.0028	0.0564
130	0.0027	0.0558
131	0.0027	0.0557
132	0.0026	0.0550
133	0.0026	0.0545
134	0.0026	0.0544
135	0.0026	0.0544
136	0.0026	0.0538
137	0.0025	0.0537
138	0.0024	0.0519
139	0.0024	0.0518
140	0.0024	0.0516
141	0.0024	0.0515
142	0.0023	0.0513
143	0.0022	0.0513
144	0.0022	0.0500
145	0.0021	0.0492
146	0.0021	0.0489
147	0.0020	0.0485
148	0.0020	0.0480
149	0.0019	0.0479
150	0.0019	0.0474
151	0.0017	0.0474
152	0.0015	0.0469
153	0.0011	0.0443
154	0.0011	0.0437
155	0.0004	0.0437
156	0.0003	0.0428
157	0.0001	0.0384

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

The development has an increase in flow durations from 1/2 Predeveloped 2 year flow to the 2 year flow or more than a 10% increase from the 2 year to the 50 year flow.
The development has an increase in flow durations for more than 50% of the flows for the range of the duration analysis.

Water Quality BMP Flow and Volume for POC #1
On-line facility volume: 0.027 acre-feet
On-line facility target flow: 0.0365 cfs.
Adjusted for 15 min: 0.0408 cfs.
Off-line facility target flow: 0.0206 cfs.
Adjusted for 15 min: 0.023 cfs.

LID Report

LID Technique	Used for	Total Volume	Volume	Infiltration	Cumulative	Percent
Water Quality	Percent	Comment				
	Treatment?	Needs	Through	Volume	Volume	Volume
Water Quality		Treatment	Facility	(ac-ft.)	Infiltration	

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

Infiltrated	Treated	(ac-ft)	(ac-ft)	Credit
Total Volume Infiltrated		0.00	0.00	0.00
0.00	0%	No Treat.	Credit	
Compliance with LID Standard 8				
Duration Analysis Result = Failed				

Perln d and Implnd Changes

No changes have been made.

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages. Software Copyright © by : Clear Creek Solutions, Inc. 2005-2022; All Rights Reserved.

Section IV – Construction Stormwater Pollution Prevention Plan

Section IV Summary:

Narrative

Construction SWPPP Elements

Source Controls

Erosion control details are provided consistent with the City of Edmonds guidelines. Erosion control plan sheets are provided in full-size as a part of the civil drawing set.

A Construction SWPPP is not required by the Department of Ecology because the site is under one acre (the land-disturbing activity threshold which requires the completion of their SWPPP document and Construction Stormwater General Permit).

Construction SWPPP Elements

The elements for construction pollution prevention are discussed as follows:

Element 1: Mark Clearing Limits

To protect adjacent properties and to reduce the area of soil exposed to construction, the limits of construction will be clearly marked before land-disturbing activities begin. Clearing limits will be to the extents of necessary land disturbance for the new building and this can be seen on drawing sheet C2.1. The BMPs relevant to marking the clearing limits that will be applied for this project include:

High Visibility Plastic or Metal Fence (BMP C103)

Element 2: Establish Construction Access

Construction access or activities occurring on unpaved areas shall be minimized, yet where necessary, access points shall be stabilized to minimize the tracking of sediment onto public roads. A stabilized construction entrance should not be required since all site areas are paved and there should not be any construction equipment tracking through sediment-laden areas.

Element 3: Control Flow Rates

The site is mostly flat throughout and runoff is expected to sheet flow unconcentrated into existing stormwater infrastructure. Straw Wattles are proposed on the TESC plan (C2.1) and they are expected to assist with the dispersal of any flows that could become concentrated from any construction activities.

Element 4: Install Sediment Controls

All stormwater runoff from disturbed areas shall pass through an appropriate sediment removal BMP before leaving the construction site or prior to being discharged. Straw Wattles are proposed along the downstream perimeter of the project site. Pollution prevention facilities on the erosion control plan must be constructed prior to or in conjunction with all clearing and grading to ensure that the transport of sediment to surface waters and adjacent properties is minimized. The specific BMPs to be used for controlling sediment on this project include:

Straw Wattles (BMP C235)

Element 5: Stabilize Soils

Exposed and unworked soils shall be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. The specific BMPs for soil stabilization for this project include:

Temporary and Permanent Seeding (BMP C120)

Mulching (BMP C121)

Nets and Blankets (BMP C122)

Plastic Covering (BMP C123)

Sodding (BMP C124)

Topsoiling/Composting (BMP C125)

Surface Roughening (BMP C130)

Dust Control (BMP C140)

Element 6: Protect Slopes

There are existing surfaces that will be removed as part of the development. Exposed slopes shall be stabilized with BMPs found in Element 5.

Element 7: Protect Drain Inlets

Existing catch basins on-site and within 500' downstream of site must be protected from sedimentation. Stormwater shall not enter the conveyance system without first being filtered or treated to remove sediment. Inlet protection devices shall be cleaned or removed and replaced when sediment has filled one-third of the available storage (or as specified by the manufacturer). The specific BMPs to be used for protecting drain inlets are:

Storm Drain Inlet Protection (BMP C220)

Element 8: Stabilize Channels and Outlets

Conveyance channels are not located on or in the immediate vicinity of the site.

Element 9: Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The suggested BMPs are:

Concrete Handling (BMP C151)
Sawcutting and Surfacing Pollution Prevention (BMP C152)
Material Delivery, Storage and Containment (BMP C153)

Element 10: Control Dewatering

De-watering is not anticipated to be required.

Element 11: Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function.

Element 12: Manage the Project

- Phase development projects to the maximum degree practicable and consider seasonal work limits.
- Inspection and monitoring – Inspect, maintain, and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with the Construction Stormwater General Permit or local plan approval authority.
- Maintain an Updated Construction SWPPP
 - This SWPPP shall be retained on-site or within reasonable access to the site.
 - The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.
 - The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within seven (7) days following the inspection.

Element 13: Protect Low Impact Development BMPs

Low-Impact Development BMPs are not proposed for this project.

Source Controls

This project should incorporate required BMPs from Volume IV of the DOE Manual: S407 – BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots; S411 – BMPs for Landscaping and Lawn/Vegetation Management; and S417 – BMPs for Maintenance of Stormwater Drainage and Treatment Systems. The Operation & Maintenance Manual found in Section VII contains guide sheets for the aforementioned BMPs.

Section V – Special Reports and/or Studies

Section V Summary:

Narrative

The following reports are included in this section:

1. Critical Areas Report by Landau Associates dated June 17, 2017.
2. Geotechnical Engineering Report by Landau Associates dated, October 15, 2021.

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

**Fish and Wildlife Habitat Conservation Areas
Critical Areas Report
North Portwalk and Seawall Reconstruction
Port of Edmonds
Edmonds, Washington**

February 16, 2023

Prepared for

Port of Edmonds
336 Admiral Way
Edmonds, Washington 98020



155 NE 100th St, Ste 302
Seattle, WA 98125
206.631.8680

**Fish and Wildlife Habitat Conservation Areas
Critical Areas Report
North Portwalk and Seawall Reconstruction
Port of Edmonds
Edmonds, Washington**

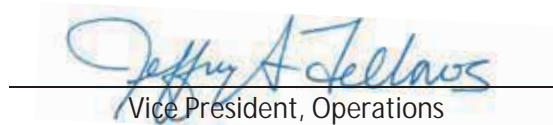
This document was prepared by, or under the direct supervision of, the technical professionals noted below.

Document prepared by:


Senior Associate

Steve Quarterman

Document reviewed by:


Vice President, Operations

Jeffrey Fellows, PE

Date: February 16, 2023
Project No.: 0173038.010.017
File path: \\edmdata01\projects\173\038.010\R\FWHCA CritAreas\LAI_Portwalk Critical Areas Report Final_02.16.2023.docx
Project Coordinator: tac

RECEIVED

April 26, 2023

Landau Associates

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

This page intentionally left blank.

EXECUTIVE SUMMARY

The Port of Edmonds is proposing to reconstruct and renovate the approximately 900-foot section of waterfront boardwalk that starts near the Port of Edmonds Administration Building and extends north along the edge of the waterfront to Olympic Beach. Reconstruction of the approximately 13-foot-wide boardwalk is necessary due to significant deterioration and to provide upgraded public access and amenities to the waterfront.

Landau Associates, Inc. conducted a fish and wildlife habitat conservation area critical areas study in support of the proposed project. This report summarizes the results of the critical areas study, including a shoreline delineation, fish and wildlife inventory, and priority habitat inventory; an evaluation of mitigation sequencing; an assessment of unavoidable, project-related impacts; and a description of the proposed minimization measures to ensure no net loss of functions.

The proposed project will maintain the character of the shoreline and adjacent substrate (i.e., bulkhead and riprap shoreline) and will also result in a net gain in aquatic habitat. The developed uplands adjacent to the shoreline will be modified to include additional landscaping. As a result, no compensatory mitigation is proposed, because the project does not result in a permanent net loss of area or function of critical areas present in the study area.

RECEIVED

April 26, 2023

Landau Associates

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

This page intentionally left blank.

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	iii
1.0 INTRODUCTION	1-1
1.1 Project Description	1-1
1.2 Site Description	1-2
2.0 METHODS	2-3
2.1 Background Information Review	2-3
2.2 Waterway Delineation.....	2-3
2.3 Impact Assessment	2-4
2.4 Mitigation Sequencing.....	2-4
3.0 INVESTIGATION RESULTS	3-1
3.1 Waterways and Associated Habitat	3-1
3.2 Fish and Wildlife	3-1
3.3 Natural Heritage and State Natural Area Preserves and Natural Resource Conservation Area	3-2
4.0 IMPACT ASSESSMENT	4-1
5.0 MITIGATION	5-1
5.1 Mitigation Sequencing.....	5-1
5.1.1 Avoidance	5-1
5.1.2 Minimization	5-1
6.0 CONCLUSION AND ASSESSMENT OF NO NET LOSS	6-1
7.0 USE OF THIS REPORT	7-1
8.0 REFERENCES	8-2

FIGURES

<u>Figure</u>	<u>Title</u>
1	Vicinity Map
2	Study Area Map

APPENDICES

<u>Appendix</u>	<u>Title</u>
A	Background Information Review Figures
B	Site Plan Excerpts
C	Staff Qualifications

RECEIVED

April 26, 2023

Landau Associates

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

This page intentionally left blank.

LIST OF ABBREVIATIONS AND ACRONYMS

BMP.....	Best Management Practices
City.....	City of Edmonds
ECDC.....	Edmonds Community Development Code
Ecology.....	Washington State Department of Ecology
ft.....	foot /feet
FWHCA.....	Fish and Wildlife Habitat Conservation Area
GIS.....	Geographic Information Software
HTL.....	high tide line
Landau.....	Landau Associates, Inc.
MHHW.....	mean higher high water
MLLW.....	mean lower low water
NOAA.....	National Oceanic and Atmospheric Administration
OHHW.....	ordinary high water mark
PHS.....	Priority Habitats and Species
Port.....	Port of Edmonds
ROW.....	right-of-way
sf.....	square foot/square feet
SMP.....	Shoreline Master Program
SPCC.....	Spill Prevention, Control, and Countermeasure
TESC.....	Temporary Erosion and Sediment Control
USACE.....	US Army Corps of Engineers
USFWS.....	US Fish and Wildlife Service
DNR.....	Washington State Department of Natural Resources
WDFW.....	Washington Department of Fish & Wildlife
WRIA.....	Water Resource Inventory Area

RECEIVED

April 26, 2023

Landau Associates

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

This page intentionally left blank.

1.0 INTRODUCTION

The Port of Edmonds (Port) is proposing to reconstruct and renovate the approximately 900-foot (ft) section of waterfront boardwalk that starts near the Port of Edmonds Administration Building and extends north along the edge of the waterfront to Olympic Beach (Figure 1). Reconstruction of the approximately 13-ft-wide boardwalk is necessary due to significant deterioration and to provide upgraded public access and amenities to the waterfront.

Landau Associates, Inc. (Landau) conducted a Fish and Wildlife Habitat Conservation Area (FWHCA) critical areas study in support of the proposed project. This report summarizes the results of the critical areas study, including a shoreline delineation, fish and wildlife inventory, and priority habitat inventory; an evaluation of mitigation sequencing; an assessment of unavoidable, project-related impacts; and a description of the proposed minimization measures to ensure no net loss of functions.

The proposed project will result in temporary and permanent impacts associated with in-water work and work on adjacent uplands. However, the character of the shoreline and adjacent substrate will be maintained under the proposed conditions, and the developed uplands will be modified to include additional landscaping. Impacts to federally listed species and critical habitats will be evaluated by National Oceanic and Atmospheric Administration (NOAA) Fisheries and US Fish and Wildlife Service (USFWS) through consultation with the US Army Corps of Engineers (USACE), with proposed determination of May Affect, Not Likely to Adversely Affect. No additional compensatory mitigation for FWHCA critical areas is proposed.

1.1 Project Description

The Port proposes to reconstruct and renovate an approximately 900-ft-long section of deteriorated waterfront boardwalk (i.e., North Portwalk) at the Port of Edmonds Marina and to repair a segment of seawall that extends between the Port of Edmonds Administration Building and Olympic Beach. Repair and renovation of the approximately 13-ft-wide boardwalk and underlying seawall are necessary due to significant deterioration; the boardwalk was constructed in the 1960s. The renovated boardwalk will provide upgraded public access to the water/shoreline and enhance amenities along the waterfront. Two plazas (Upper Plaza and Central Plaza) also will be added adjacent to the boardwalk and will provide public gathering spaces and restroom access. The Upper Plaza will be added in a segment of existing esplanade between the boardwalk and Arnie's Restaurant, and the Central Plaza will be added in an area currently occupied by a parking lot and the Port of Edmonds Administration Building (to be demolished).

The existing boardwalk is a treated-wood structure, supported by piling, that projects over the water from an asphalt walkway along the shoreline. The deck consists of continuous, parallel, treated-wood planks. The boardwalk extending north of the marina N dock is supported along the east (upland) side by creosote-treated timber piles, spaced 8 ft apart, and along the west (waterward) side by pairs of steel piles, one vertical and one battered, spaced 16 ft apart. Tiebacks embedded behind the marina's

seawall terminate at the timber seawall. The boardwalk south of N dock is supported along the east (upland) side by a concrete bulkhead and along the west (waterward) side by timber piles.

North of N dock, a two-tiered seawall forms the marina basin along its east side, where the boardwalk abuts the upland pavement. The lower tier is a (subtidal) concrete bulkhead that forms the toe of the marina basin's east side. Behind the concrete bulkhead is an earthen slope with a rock-armored surface. The upper tier is a vertical timber bulkhead. The bulkhead and the timber piles along the landward edge of the boardwalk retain the shoreline above the armored slope.

The steel piles that support the west side of the boardwalk will be repaired in-place with pipe sleeves. The timber piles that support the east side of the boardwalk (north and south of N dock) and the timber bulkhead will be replaced. The upper (timber) section of seawall will be replaced with a steel sheet pile wall, whereas the lower (concrete) section of seawall and the filled slope between the sections will remain unchanged along with the existing concrete bulkhead south of N dock. The bulkhead timber piles will be cut at grade, and the new sheet pile wall will be installed landward. The existing piles cannot be completely removed because they are connected below grade to an original lower timber bulkhead that is buried behind the current concrete bulkhead.

The timber boardwalk will be replaced within the same footprint but elevated 6 inches to create better pedestrian separation from the adjacent drive/fire lane and improve pedestrian and boater accessibility. The new walkway will have steel framing and a deck of concrete panels inset with clear glass blocks. The replacement structure will have new aluminum railing and way-finding signage. The marina's existing electrical utility panels and dock cart storage will be relocated from the overwater side of the new walk to the opposite side, over land. Marina gates to the gangways will be replaced in the same locations but aligned with the new walkway railings. The five existing boardwalk "viewing" bump-outs will be consolidated in a single area to provide enhanced public access, an enhanced gathering space, and better views of Puget Sound. The asphalt pavement abutting the boardwalk will be replaced with concrete on the same level as the elevated walkway, and the adjacent parking lot will be resurfaced.

1.2 Site Description

The approximately 3.9-acre project area is located in Section 23, Township 27N, Range 3E and in Water Resource Inventory Area (WRIA) 8 – Cedar/Sammamish, in Washington State. The project area is developed and includes Port of Edmonds Marina, the existing North Portwalk, Port of Edmonds Administration Building, and Port tenants, including Arnie's Restaurant and the Edmonds Yacht Club (Figure 2).

The study area extends 200 ft beyond the project area (Figure 2). Visual observation and public domain resources were used to estimate the extent of FWHCA critical areas in the study area. Review of the study area was limited to observation from a public right-of-way (ROW).

2.0 METHODS

Landau reviewed publicly available information, completed both site reconnaissance and impact assessment for the proposed project, and prepared a mitigation plan for project-related impacts to FWHCA critical areas in accordance with the methods described below.

2.1 Background Information Review

Landau reviewed the following resources to identify existing conditions and potential FWHCA critical areas within the study area for consistency with Edmonds Community Development Code (ECDC) 23.90.010.C:

- Washington Department of Fish and Wildlife (WDFW) priority habitat and species maps (Appendix A);
- Washington State Department of Natural Resources (DNR) Forest Practices Application Mapping Tool official water type reference maps, as amended (accessed November 10, 2021);
- DNR nearshore and shorezone inventory as documented in the Washington Marine Vegetation Atlas (Appendix A; accessed November 10, 2021);
- DNR Natural Heritage Program mapping data (DNR 2021);
- Washington State Department of Health annual inventory of shellfish harvest areas (DOH; accessed November 10, 2021);
- Biological Evaluation for the North Portwalk and Seawall Reconstruction Project (Landau 2021), which provides summary of anadromous and resident salmonid distribution contained in the habitat limiting factors reports published by the Washington Conservation Commission as identified in ECDC Chapter 23.90.010.C.7;
- DNR state natural area preserves maps (DNR; accessed November 10, 2021);
- DNR natural resource conservation area maps (DNR; accessed November 10, 2021); and
- City of Edmonds (City) critical areas map (City of Edmonds; accessed November 11, 2021).

2.2 Waterway Delineation

The ordinary high water mark (OHWM) determination for waterways was completed using guidance developed by the Washington State Department of Ecology (Ecology; 2016) and the definition provided in ECDC 20.20.038, which identifies the OHWM, in part as, the mark found by examining the bed and banks of a stream, lake, or tidal water and ascertaining where the presence and action of waters are so common and long maintained in ordinary years as to mark upon the soil a vegetative character distinct from that of the abutting upland. In any area where the OHWM cannot be found, the OHWM adjoining salt water shall be the line of mean higher high tide (also referred to as mean higher high water [MHHW]).

2.3 Impact Assessment

Project impacts were determined in coordination with the project engineering team based on pre- and post-project conditions documented on the plans. FWHCA functions were assessed with a qualitative evaluation and best professional judgment.

2.4 Mitigation Sequencing

Mitigation sequencing for wetlands and associated buffers was evaluated in accordance with ECDC Chapter 23.40.120. The evaluation included avoidance, minimization, and mitigation of adverse impacts. Mitigation methods must be prioritized as follows:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps, such as project redesign, relocation, or timing to avoid or reduce impacts;
3. Rectifying the impact to wetlands, frequently flooded areas, and fish and wildlife habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;
4. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineering or other methods;
5. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
6. Compensating for the impact to wetlands, frequently flooded areas, and fish and wildlife habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and/or
7. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Landau used best professional judgment to compare pre- and post-mitigation functions.

3.0 INVESTIGATION RESULTS

This section summarizes the results of Landau's background information review and site reconnaissance. conducted on July 28, 2021.

3.1 Waterways and Associated Habitat

A portion of Puget Sound occurs within the study area inside the Edmonds Marina, which is identified as Type S on DNR water type mapping. This section of Puget Sound is identified in the City Shoreline Master Program (SMP) with environmental designations of Urban Mixed Use II and Aquatic II. The upland adjacent to Edmonds Marina in the project area is developed with the existing North Portwalk; Port of Edmonds Administration Building, and Port tenants, including Arnie's Restaurant and the Edmonds Yacht Club and associated parking lot. The existing shoreline is armored with riprap and bulkheads with limited riparian vegetation dominated by landscaping in planters along the existing boardwalk. Because of the existing bulkhead and adjacent development, which precludes exposure of soil and establishment of vegetation, an OHWM as defined in ECDC 20.20.038 is not present and the shoreline is defined by the MHHW elevation.

Substrate in the project area includes existing riprap between the upper timber bulkhead and lower concrete bulkhead. The substrate adjacent to the lower concrete bulkhead in the marina consists of silt.

Priority Habitats and Species (PHS) on the Web identifies portions of Olympic Beach, outside the project area, as estuarine and marine wetland (see Appendix A). This estuarine and marine wetland is also identified on City critical areas mapping (see Appendix A) and is located outside the Edmonds marina, north of the public fishing pier.

DNR shorezone inventory available on the Washington Marine Vegetation Atlas identifies the project area with eelgrass (*Zostera marina*) and bull kelp (*Nereocystis luetkeana*). However, this data is noted as generalized by polygon, and does not indicate that seagrass or kelp was present or absent throughout the whole polygon (see Appendix A). Furthermore, the proposed work will occur outside the range of these species. At its shallowest extent, eelgrass generally establishes 10 ft waterward of the shore, at about -2 ft mean lower low water (MLLW), and kelp beds are found offshore of eelgrass beds, in deeper water, in areas of higher currents and rocky substrates that provide stable platforms for holdfast attachment (City of Edmonds 2007).

3.2 Fish and Wildlife

Federally listed species in the project vicinity are presented in the project biological evaluation (Landau 2021) and is incorporated by reference in this critical areas assessment. No additional PHS listed species or shellfish harvest areas are identified in the study area.

3.3 Natural Heritage and State Natural Area Preserves and Natural Resource Conservation Area

The study area is not listed within a township, range, or section listed as containing Natural Heritage resources within the Washington Natural Heritage Program data and is not mapped as a Natural Area Preserve or Natural Resource Conservation Area.

4.0 IMPACT ASSESSMENT

Piles associated with the existing upper timber bulkhead will be cut below the mudline and the remainder of the piles below the surface will be abandoned in place. Full extraction of these piles is not feasible because anchor tiebacks below the surface will need to remain in place. Approximately 55 piles associated with the timber bulkhead will be removed. Existing vertical and batter steel piles will be repaired in place. Segments of steel sleeves will be welded over damaged areas of these piles. It is anticipated that up to 1 cubic yard of excavation across approximately 9 square feet (sf) may occur below the MHHW at each batter pile (i.e., total 55 cubic yards; 495 sf) to facilitate installation of the sleeve. Following placement of the sleeve, the area of excavation will be restored with riprap excavated from around the pile and/or with clean sand.

Eight existing vertical treated timber piles in the vicinity of N dock will be removed. These piles will be fully extracted either by use of a "choker" chain and crane or with a vibratory pile driver. If a pile is too deteriorated to be fully extracted, the pile will be cut below the mudline. The area where the piling was removed will then be capped with clean sand or replaced with a new steel pile. Ten 12-inch steel piles will be installed to support the boardwalk in the vicinity of N dock. These piles will be installed using a vibratory hammer and will be embedded a minimum of 25 ft below the mudline.

A sheet pile bulkhead will be installed landward of the existing upper timber bulkhead. The driving of the sheet pile will occur outside of the MHHW; however, excavation and removal of the existing timber bulkhead will occur in/adjacent to the MHHW. The sheet pile wall will have a concrete beam across the top and will be supported by anchor tiebacks through the beam extending landward of the wall. Approximately 180 cubic yards of excavation, associated with replacement of the upper timber bulkhead, will occur below MHHW. The excavated material will include existing riprap across an area of approximately 2,100 sf between the upper and lower bulkheads. Approximately 77 cubic yards of riprap will be installed below MHHW, in the same area between the upper and lower bulkheads.

The existing timber boardwalk will be replaced with glass block and concrete panel modules. The boardwalk will be reconfigured to consolidate existing bump-outs into a single location. The proposed overwater section of the boardwalk will maintain the existing footprint of overwater cover.

The existing Portwalk includes planter boxes containing ornamental, herbaceous vegetation that will be removed as part of the project. Approximately 14 trees in the adjacent parking lot will be removed to accommodate the relocation of a hydrant and construction of the Central Plaza.

Excerpts of plan sheets showing the above are provided in Appendix B.

5.0 MITIGATION

This section outlines a mitigation sequence and mitigation plan for unavoidable impacts to wetlands, waterways, and associated buffers.

5.1 Mitigation Sequencing

ECDC Chapter 20.80.053 includes requirements for mitigation of impacts to critical areas. The mitigation sequence methods for avoidance and minimization are described below.

5.1.1 Avoidance

The proposed project, improvements to a waterfront facility, requires in-water work and work in adjacent habitat. Permanent adverse impacts will be avoided as detailed in the minimization measures below.

5.1.2 Minimization

A variety of conservation measures and best management practices (BMPs) will be used to reduce impacts to the environment during construction. The following conservation measures will be implemented so that potential impacts are mitigated throughout the duration of the project:

- Temporary Erosion and Sediment Control (TESC) and Spill Prevention, Control, and Countermeasure (SPCC) plans will be developed and implemented throughout construction.
- Work below the high tide line (HTL)/MHHW will occur during regulatory-approved in-water work windows.
- A debris boom will be installed around the boardwalk and will be maintained throughout construction.
- Wood products shall comply with the standards established by the Western Wood Preserves Institute in "Best Management Practices for Use of Treated Wood in Aquatic Environments."
- Barges used in support of construction will be prohibited from grounding.
- Piles and other construction debris will be disposed of offsite at an approved upland facility.
- Work below MHHW will result in a balance of cut and fill volumes.
- Installation of the sheetpile bulkhead will occur landward of the existing timber bulkhead, thereby avoiding in-water construction for this component of the project.

The new boardwalk will consolidate the viewing bump-outs to a single location and will maintain the area of overwater cover (i.e., no change in the total area of overwater coverage from existing conditions). In addition, the new boardwalk will increase light transmission by using glass blocks in the boardwalk surface. As a result, the proposed project will reduce from existing conditions the amount of shading associated with overwater cover and reduce potential adverse effects from the overwater structure.

The project will also remove segments of creosote-treated bulkhead and creosote-treated piles.

Approximately 75 sf of aquatic habitat, associated with the excavation for the replacement of the upper timber bulkhead, will be gained between N Dock and P Dock.

The project includes installation of planter boxes along the Portwalk and landscaping in the new plaza areas. Landscaping will consist of a mix of herbaceous species, shrubs, and trees. The project will increase the total area of vegetation within 200 ft of the shoreline.

Evaluation of project impacts to listed species is provided in the project Biological Evaluation, which presents effect determination of May Affect, Not Likely to Adversely Affect, which is subject to consultation by the USACE with NOAA Fisheries and USFWS. The project will be undergoing Section 7 Endangered Species Act consultation by the USACE with NOAA Fisheries under the Salish Sea Nearshore Programmatic (SSNP).

As a result, no compensatory mitigation is proposed because the minimization measures do not result in a permanent net loss of area or function of critical areas present in the study area.

6.0 CONCLUSION AND ASSESSMENT OF NO NET LOSS

The Port is proposing to reconstruct and renovate the approximately 900-ft section of waterfront boardwalk that starts near the Port of Edmonds Administration Building and extends north along the edge of the waterfront to Olympic Beach. The project includes unavoidable work in-water and in adjacent upland habitat. The mitigation sequence presented in this report meets City requirements, as outlined in the ECDC. The character of the shoreline and adjacent substrate (i.e., bulkhead and riprap shoreline) will be maintained under the proposed conditions, which will also result in a net gain in aquatic habitat, and the developed uplands will be modified to include additional landscaping. As a result, no compensatory mitigation is proposed because the project does not result in a permanent net loss of area or function of critical areas present in the study area.

USE OF THIS REPORT

The findings presented herein are based on Landau Associates' understanding of the Edmonds Community Development Code. Within the limitations of scope, schedule, and budget, findings accord with generally accepted sensitive area-investigation principles and practices in this locality, at the time the report was prepared. Landau Associates makes no other warranty, either express or implied. Qualifications of staff authoring this report are provided in Appendix C.

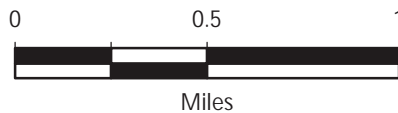
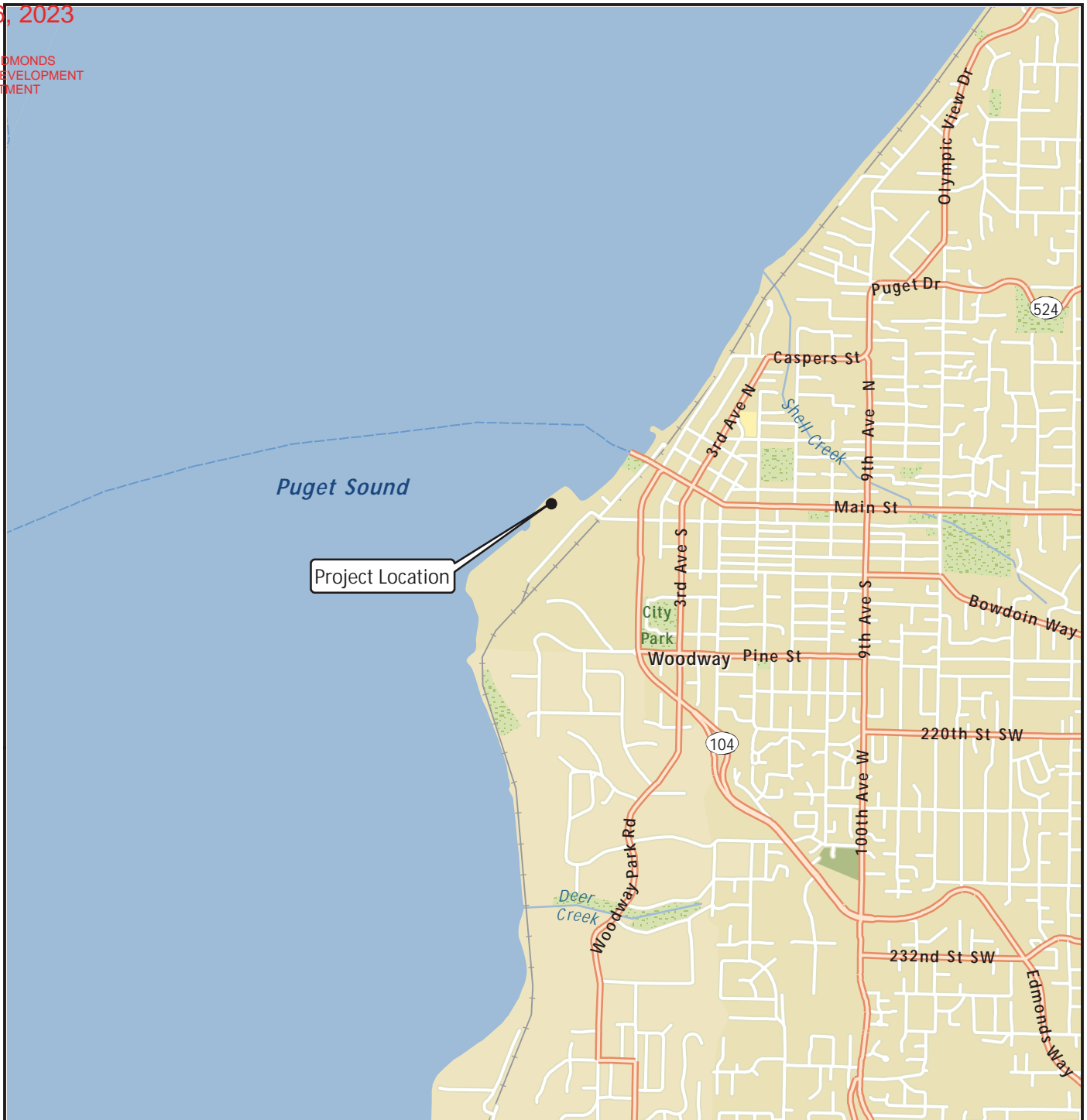
This report was prepared for the use of the Port of Edmonds and applicable regulatory agencies. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk.

REFERENCES

- City of Edmonds. 2007. *Shoreline Master Program Update, Shoreline Inventory & Characterization, SMA Grant Agreement No 60600108*. Prepared for City of Edmonds by Sea-Run Consulting; TetraTech, Inc.; Reid Middleton, Inc.; and Pentec. November.
- City of Edmonds. City of Edmonds, GIS. Available online at: https://maps.edmondswa.gov/Html5Viewer/?viewer=Edmonds_SSL.HTML. Accessed November 11, 2021.
- DOH. Office of Environmental Health and Safety Commercial Shellfish Map Viewer. Washington State Department of Health. [Commercial Shellfish Map Viewer \(wa.gov\)](#). Accessed November 10, 2021.
- DNR. 2021. *Sections That Contain Natural Heritage Features*. Washington State Department of Natural Resources. [TRS \(wa.gov\)](#). July 15.
- DNR. Forest Practices Application Mapping Tool. Washington State Department of Natural Resources. [Forest Practices Application Mapping Tool \(FPAMT\) \(wa.gov\)](#). Accessed November 10, 2021.
- DNR. Natural Area Preserves. Washington State Department of Natural Resources. [Natural Area Preserves | WA - DNR](#). Accessed November 10, 2021.
- DNR. Natural Resources Conservation Areas. Washington State Department of Natural Resources. [Natural Resources Conservation Areas | WA - DNR](#). Accessed November 10, 2021.
- Ecology. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Washington State Department of Ecology. October.
- Landau. 2021. *Biological Evaluation and Essential Fish Habitat Evaluation, North Portwalk and Seawall Reconstruction, Port of Edmonds, Edmonds, Washington*. Landau Associates. November 1.

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



Data Source: Esri 2012

G:\Project\1731038\1010\011\F01\VicMap.mxd 10/14/2021



North Portwalk and
Seawall Reconstruction
Port of Edmonds
Edmonds, Washington

Vicinity Map

Figure
1

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

N

Landau Associates | G:\Projects\173\038\010\011\F02-F07 ProjectMaps.dwg | 11/11/2021 3:18 PM | jvalluzzi

Legend

- Project Area
- - - Study Area (200-ft buffer)



Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Bing Aerial Imagery, 2021

North Portwalk and
Seawall Reconstruction
Port of Edmonds
Edmonds, Washington

Project Area Map

Figure
2

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

APPENDIX A

Background Information Review Figures

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

\\landau\projects\177938.edm\WMA\Gis\mxd\res\A-1.docx



North Portwalk and
Seawall Reconstruction
Port of Edmonds
Edmonds, Washington

Washington Marine Vegetation Atlas
Kelp

Figure
A-1



North Portwalk and
Seawall Reconstruction
Port of Edmonds
Edmonds, Washington

Washington Marine Vegetation Atlas
Seagrass

Figure
A-2

April 26, 2023

12/3/2021 11:03:01 AM \\edmdata01\projects\173\038.010\RFV\WHCA CritAreas\A-3.docx
CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT



Priority Habitats and Species on the Web



Report Date: 11/10/2021

PHS Species/Habitats Overview:

Occurrence Name	Federal Status	State Status	Sensitive Location
Estuarine and Marine Wetland	N/A	N/A	No

PHS Species/Habitats Details:

Estuarine and Marine Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Estuarine and Marine Wetland - NWI Code: E2AB/USN
Source Dataset	NWI Wetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Management Recommendations	http://www.wa.gov/programs/haas/wetlands/haas/index.html
Geometry Type	Polygons

DISCLAIMER: This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

RECEIVED

April 26, 2023

CITY OF EDMONDS
PLANNING & DEVELOPMENT
DEPARTMENT

APPENDIX B

Site Plan Excerpts

April 26, 2023

06

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

023
A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH; RANGE 3 EAST, W.M.

300-336 ADMIRAL WAY
EDMONDS, WA 98020

OWNER	CONSULTANTS	CIVIL ENGINEER	SOIL/GEOTECH ENGINEER	SURVEYOR
206.601.24.24 CONTACT: ROBERT KACHNER	LANDSCAPE ARCHITECTURE ARCHITECTURE AND URBAN DESIGN DESIGN FIRM 700 MAYERS STREET SUITE 200 MILWAUKEE, WI 53219 206.601.24.24 CONTACT: STEVE VUJNICH	200 425.778.8001 FAX 778.5335 425.778.8000 ECONOMICS, VA 98020 CONTACT: JAMES WILSON, PE	200 425.778.0090 ECONOMICS, VA 98020 CONTACT: JAMES WILSON, PE	DAVE DAREKOR DAVE DAREKOR WOODBRIDGE, VA 22191 CONTACT: DAVID HARTMAN
OWNER	STRUCTURAL ENGINEER	PLUMBING	ELECTRICAL	
206.601.24.24 CONTACT: ROBERT KACHNER	200 425.778.8001 FAX 778.5335 425.778.8000 ECONOMICS, VA 98020 CONTACT: JAMES WILSON, PE	200 425.778.8001 FAX 778.5335 425.778.8000 ECONOMICS, VA 98020 CONTACT: JAMES WILSON, PE	200 425.778.0090 ECONOMICS, VA 98020 CONTACT: JAMES WILSON, PE	

UTILITIES	
WATER/SEWER/STORM	
CITY OF RAINBOW 1000 N. 10TH ST. DENVER, CO 80202 303.733.1041	
GAS	
PIGGS SOUND ENERGY 10000 10TH AVE. BELLEVUE, WA 98004 1.888.225.5773	
FIRE	
3RD DISTRICT ONE 10000 10TH AVE. EVERETT, WA 98208 425.551.1200	
POWER	
CLATSOP COUNTY PUD 1000 10TH AVE. SEASIDE, OR 97138 503.737.9206	
CONCAST 10000 10TH AVE. LYNNWOOD, WA 877.624.2288	
CABLE & TELEPHONE	

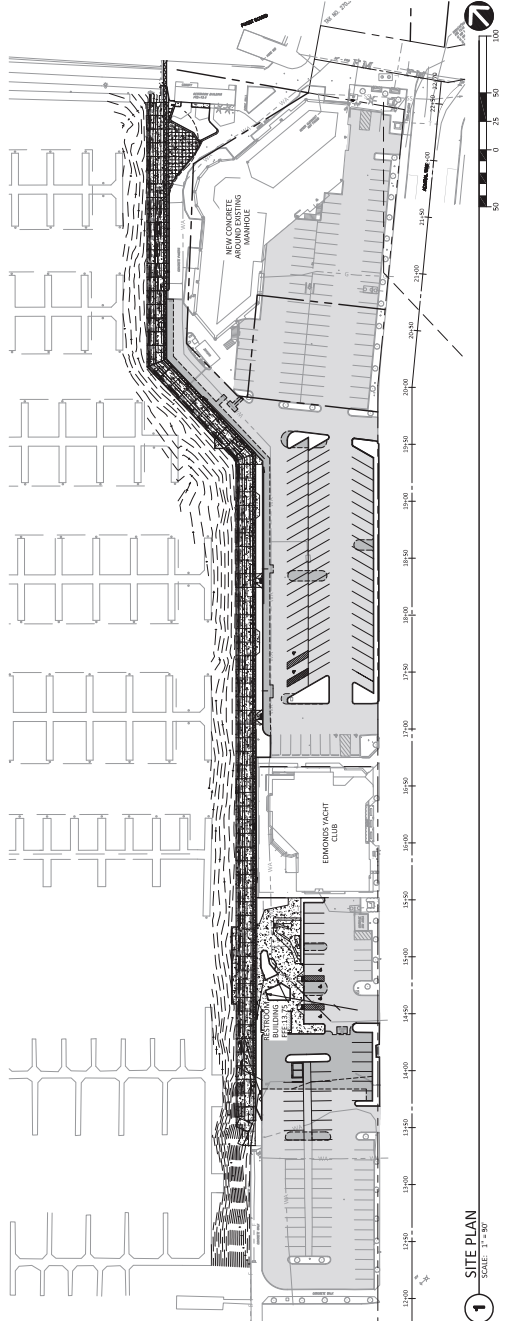
C3.2	PARTIAL GRADING & UTILITY PLAN
C3.3	PARTIAL GRADING & UTILITY PLAN
C3.4	PARTIAL GRADING & UTILITY PLAN
C3.5	PARTIAL GRADING & UTILITY PLAN
C3.6	PARTIAL GRADING & UTILITY PLAN
C3.7	PARTIAL GRADING & UTILITY PLAN
C3.8	GRADING & UTILITY DETAILS
C3.9	GRADING & UTILITY DETAILS
C4.1	OVERALL SITE IMPROVEMENT & TRAFFIC CONTROL PLAN
C4.2	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS
C4.3	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS & DETAILS
C4.4	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS
C4.5	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS

DATUM	LEGAL DESCRIPTION
VERTICAL: NAVD 88 TO CONVERT ELEVATIONS TO MEAN LOWER LOW WATER (MLLW), ADD 2.03 FEET.	GOV LOT 3, STR 23-27-3
HORIZONTAL: WASHINGTON STATE COORDINATE SYSTEM, NORTH ZONE NAD 83, 91 US FEET	HAUL ROUTE TO SITE: I-5 TO WA-100W SUGHT RIGHT TO CONTINUE

C4.6	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS
C4.7	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS
C4.8	PARTIAL SITE IMPROVEMENT & TRAFFIC CONTROL PLANS
PHASING SHEETS	
PH1.1	OVERALL PHASING PLAN

VICINITY MAP
NTS

	CAUTION!
	CALL BEFORE YOU DIG!
	BURIED UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE ONE-CALL UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION
	1-800-424-5555



1 SITE PLAN
SCALE: 1" = 90'

BLDXXXX-XXXX

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____ CITY ENGINEERING DIVISION

10.1

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
COVER SHEET AND
SITE PLAN

DESIGN:	TAF
DRAWN:	ATD
CHECK:	JPU
JOB NO:	21060.20
DATE:	XX/XX/XX

April 26, 2023

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



TEMPORARY EROSION CONTROL AND DEMO PLAN

SCALE: 1" = 40'

TEMPORARY EROSION CONTROL PLAN NOTES:

1. CLEARLY MARK ALL CLEARING LIMITS/CONSTRUCTION ACTIVITY AREA PER CIP BMP CDOL.
 2. ANY DISTURBED UNDESICATED AREAS ON AND OFF-SITE SHALL BE COMPOST-AMENDED FOR THE EQUIVALENT OF 0.5 LBS IN THE DISTURBED VOLUME; 1 GALLON = 8.3 LBS.
 3. SOILS MUST BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
 4. CONCRETE TRUCKS MUST NOT BE WASHED OUT ONTO THE DRAINAGE, OTHER DITCHES, STREAMS, OR STREAMS. EXCESS CONCRETE MUST NOT BE DISPOSED ON-SITE.
 5. INSTALL CATCH BASIN LINER PROTECTION PER DETAIL J-22.2 FOR ALL EXISTING INLETS WITHIN 50' OF WORK ZONES AND INSIDE AND IN THE ROW.
 6. ADDITIONAL BMPs MAY BE REQUIRED DURING CONSTRUCTION.
- CITY INSPECTION REQUIRED ON ALL EROSION CONTROL MEASURES BEFORE OTHER WORK CAN BEGIN.

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE
FURTHER DETAILED FOR FUTURE PHASES OF THE PROJECT.

BLDXXXX-XXXX

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____
CITY ENGINEERING DIVISION

02.1

NORTH PORTLAND AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
TEMPORARY EROSION CONTROL
AND DEMO PLAN

DESIGN: _____	TAF: _____
DRAWN: _____	ATD: _____
CHECK: _____	JPU: _____
JOB NO: 21060.20	
DATE: xx/xx/xx	
MARK	
DATE: xx/xx/xx	
DESCRIPTION	
DESIGN REVIEW SUBMITAL	



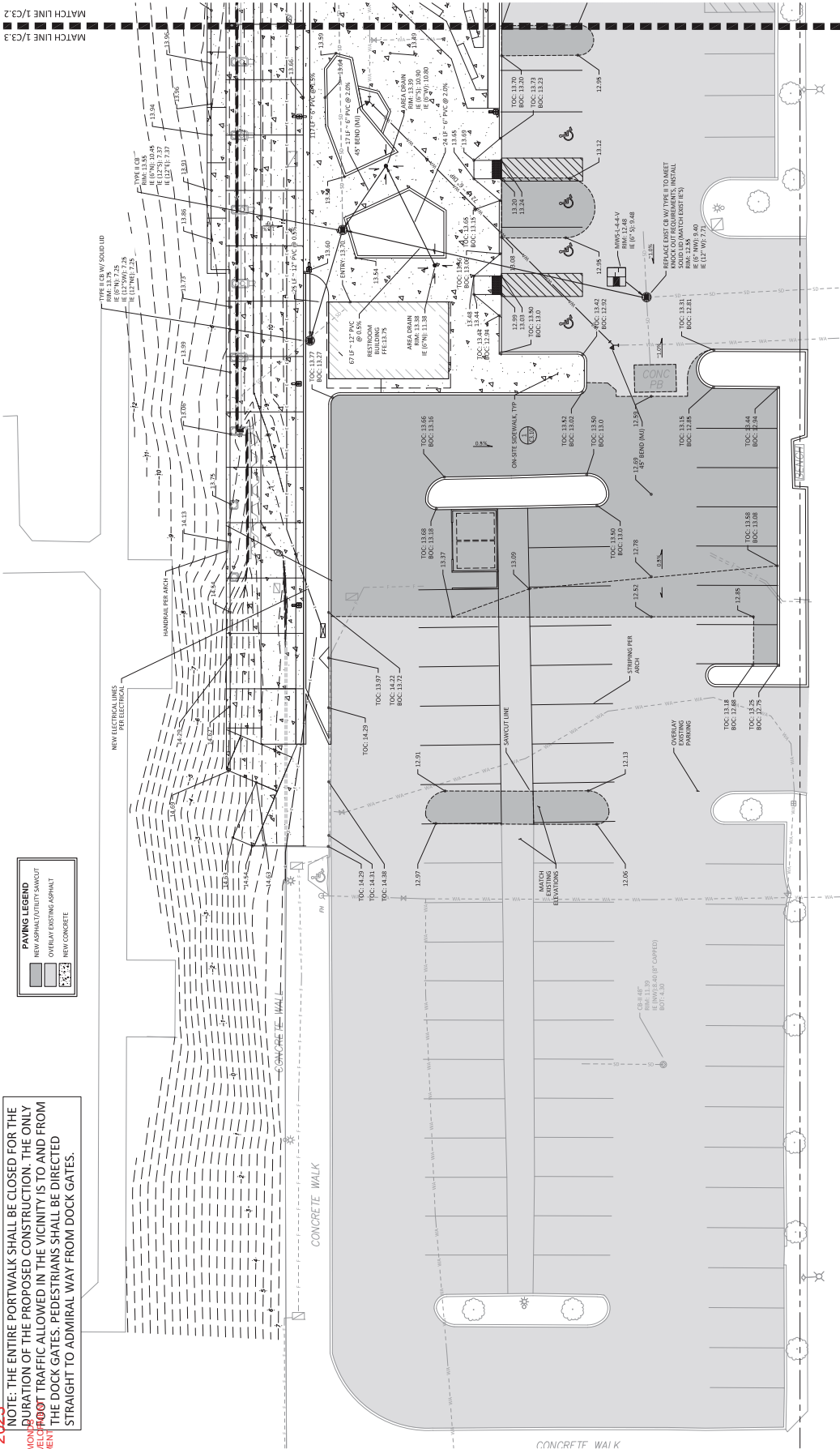
XX/XX/XX

April 26, 2023

PAVING LEGEND

	NEW ASPHALT/UTILITY SAWCUT
	OVERLAY EXISTING ASPHALT
	NEW CONCRETE

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



④ PARTIAL GRADING AND UTILITY PLAN

SCALE: 1" = 10'

THIS PLAN SET IS FOR A DESIGN REVIEW AND WILL BE

BI DXXXX-XXXX

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE:

BY: _____
CITY ENGINEERING DIVISION

3.2

SHEET.

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020
GRADING AND UTILITY
PLAN AND DETAILS

DESIGN:	TAF
DRAWN:	ATD
CHECK:	JPU
JOB NO:	21060.20
DATE:	00/00/00

NEW SUBMITTAL



S ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536

April 26, 2023

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



PAVING LEGEND

NEW ASPHALT/UTILITY SAWCUT

OVERLAY EXISTING ASPHALT

NEW CONCRETE

[illegible]

NORTH PORTWALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020

GRADING AND UTILITY PLAN

FILE NAME: 1

3.4

2 PARTIAL GRADING AND UTILITY PLAN

April 26, 2023

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.

CS
ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536



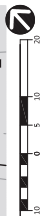
DESIGN:	TAF
DRAWN:	ATD
CHECK:	JPU
JOB NO:	21060.20
DATE:	XX/XX/XX

EDMONDS, WA 98020
3300-336 ADMIRAL WAY
NORTH PORTWALK AND SEAWALL RECONSTRUCTION

APPROVED FOR CONSTRUCTION
CITY OF EDMONDS

DATE: _____

BY: _____
CITY ENGINEERING DIVISION



April 26, 2023

A PORTION OF LOT 3, SECTION 23, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M.



SCALE: 1" = 10'

BLDXXXX-XXXX

DATE:

BY: _____
CITY ENGINEERING DIVISION

63

SHEET:

NORTH PORTALK AND SEAWALL RECONSTRUCTION
300-336 ADMIRAL WAY
EDMONDS, WA 98020

DESIGN:	TAF
DRAWN:	ATD
CHECK:	JPU
JOB NO:	21060.20
DATE:	XX/XX/XX

[illegible]

ENGINEERING
250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536

NOTE: THE ENTIRE PORTWALK SHALL BE CLOSED FOR THE DURATION OF THE PROPOSED CONSTRUCTION. THE ONLY FOOT TRAFFIC ALLOWED IN THE VICINITY IS TO AND FROM THE DOCK GATES. PEDESTRIANS SHALL BE DIRECTED STRAIGHT TO ADMIRAL WAY FROM DOCK GATES.

