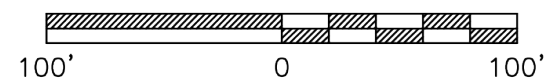


LEGEND

(48) – EXIST SUPPORT BENT

B.D. – BREASTING DOLPHIN

M.D. – MOORING DOLPHIN



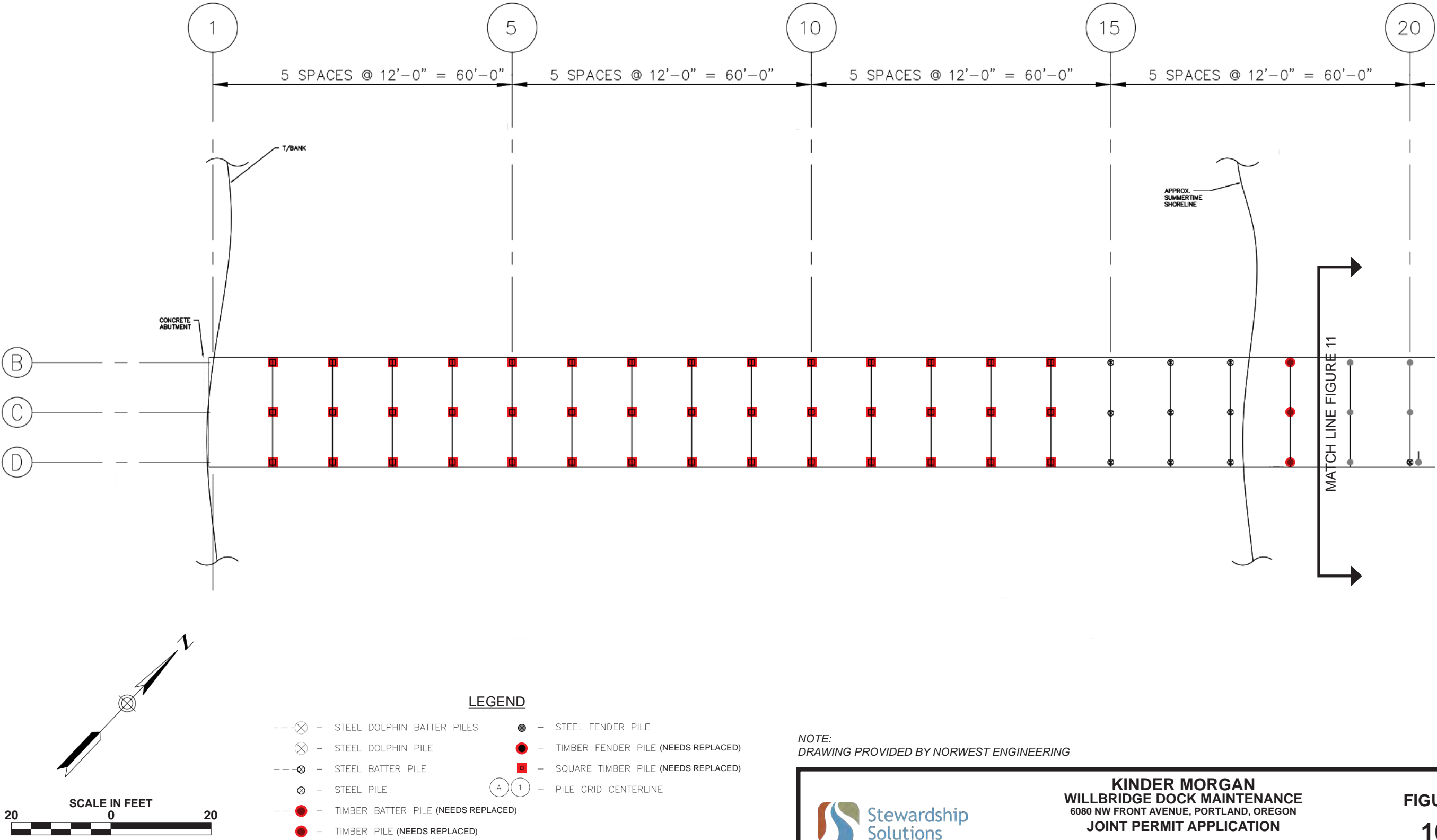
NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING

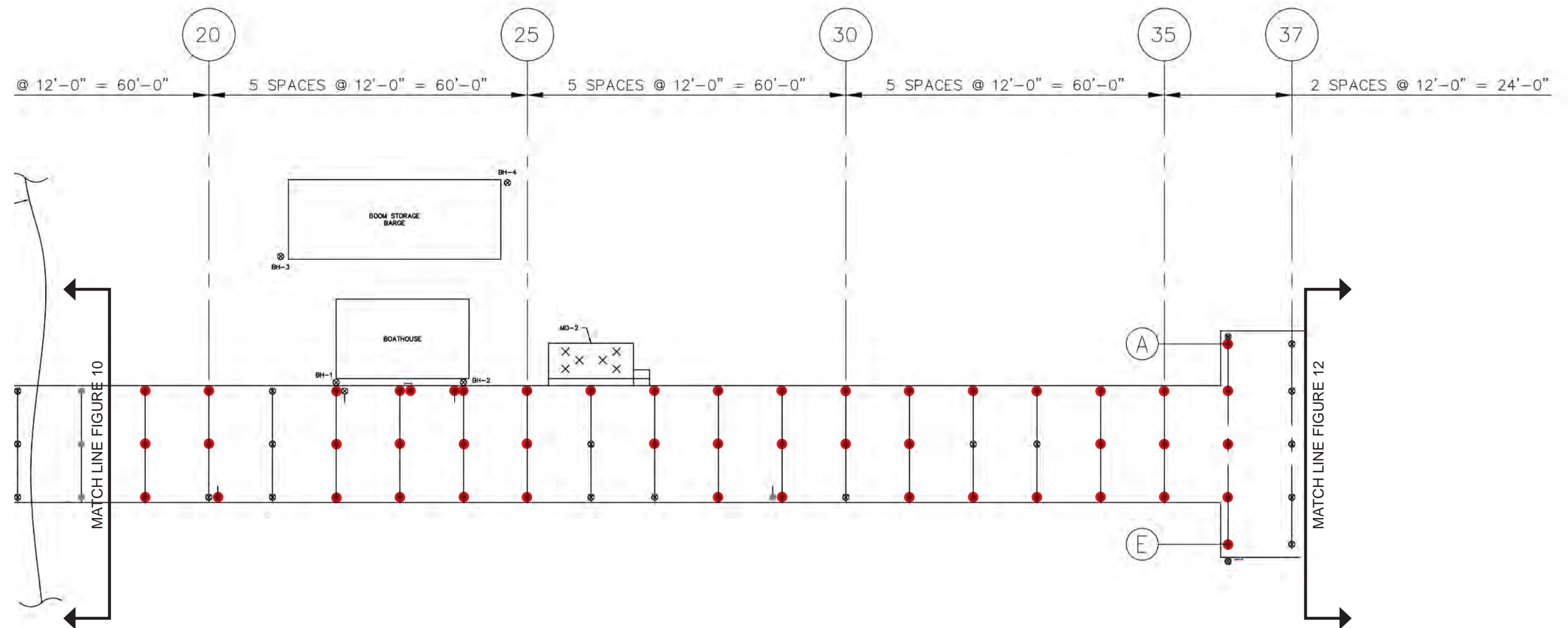


KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
OVERALL EXISTING CONDITIONS

FIGURE
9

J#1500-101 KinderMorganWillbridgeJPA Apr. 15, 2024





LEGEND

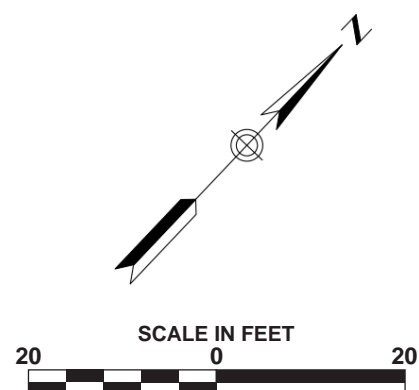
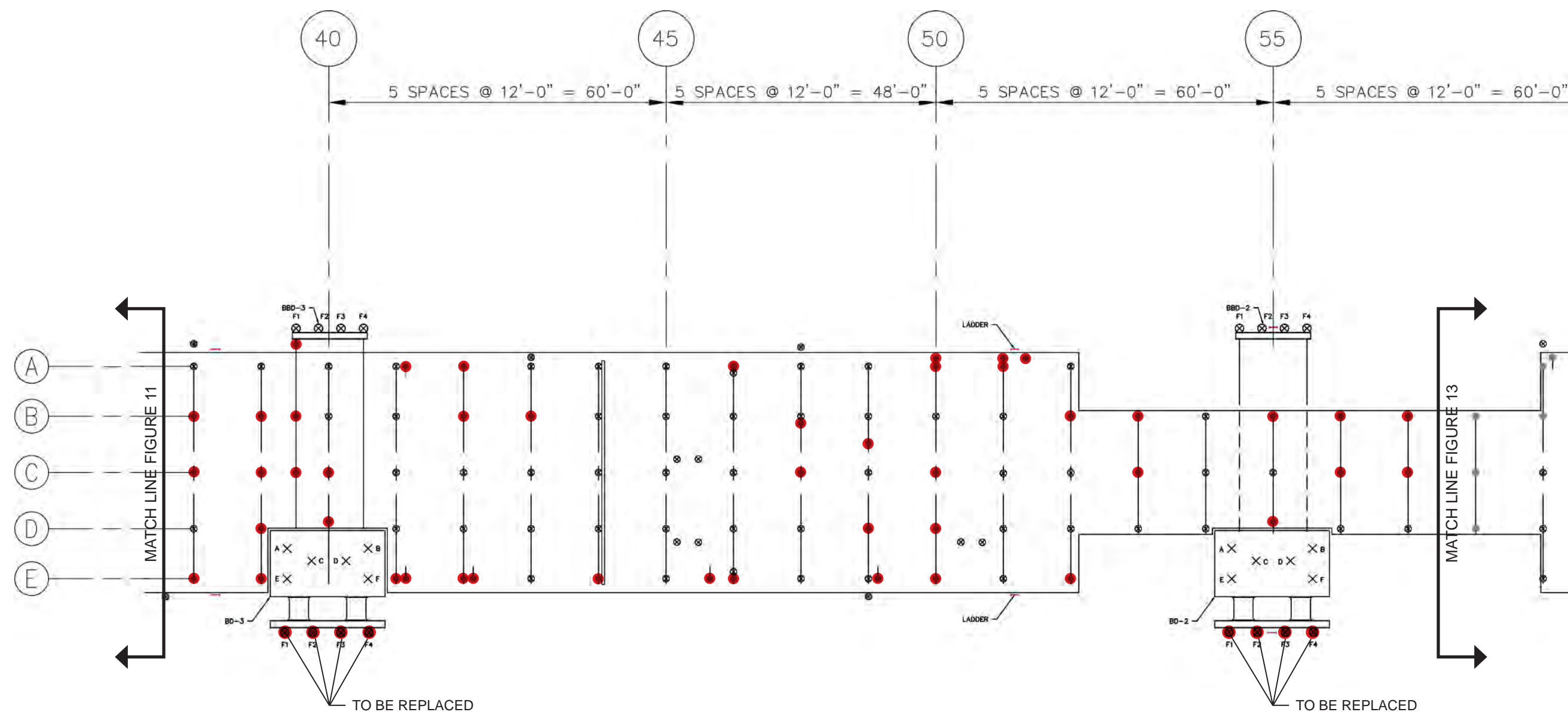
- | | | | |
|-------|-------------------------------------|-------|-------------------------------------|
| --⊗-- | STEEL DOLPHIN BATTER PILES | ● | STEEL FENDER PILE |
| ⊗ | STEEL DOLPHIN PILE | ● | TIMBER FENDER PILE (NEEDS REPLACED) |
| --⊗-- | STEEL BATTER PILE | ■ | SQUARE TIMBER PILE (NEEDS REPLACED) |
| ⊗ | STEEL PILE | (A) 1 | PILE GRID CENTERLINE |
| --●-- | TIMBER BATTER PILE (NEEDS REPLACED) | | |
| ● | TIMBER PILE (NEEDS REPLACED) | | |

NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING



KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
EXISTING CONDITIONS - PLAN 2

FIGURE
11



- LEGEND**
- ⊗--- STEEL DOLPHIN BATTER PILES
 - ⊗ STEEL DOLPHIN PILE
 - ⊗--- STEEL BATTER PILE
 - ⊗ STEEL PILE
 - TIMBER BATTER PILE (NEEDS REPLACED)
 - TIMBER PILE (NEEDS REPLACED)
 - STEEL FENDER PILE
 - TIMBER FENDER PILE (NEEDS REPLACED)
 - SQUARE TIMBER PILE (NEEDS REPLACED)
 - (A) 1 PILE GRID CENTERLINE

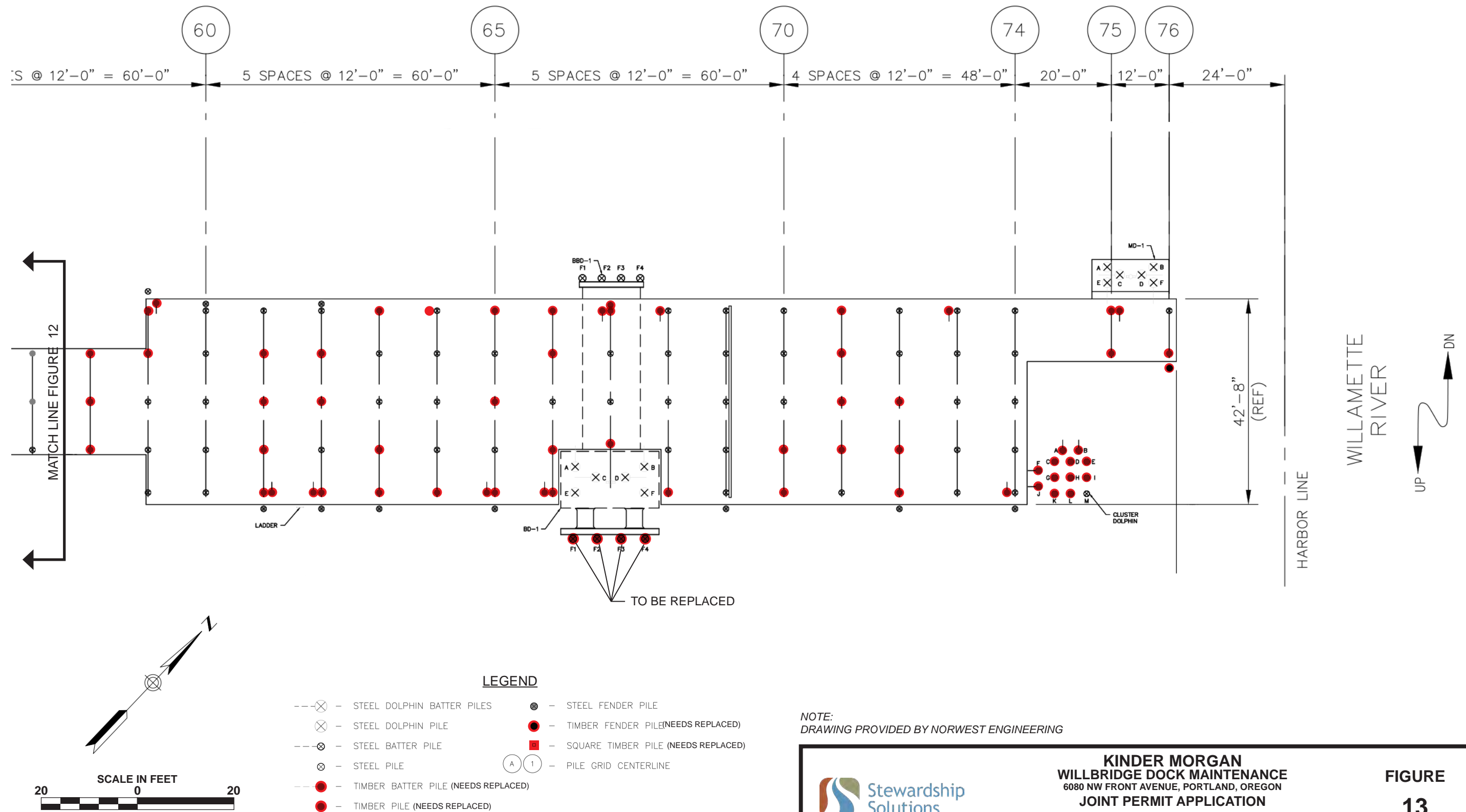
NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING

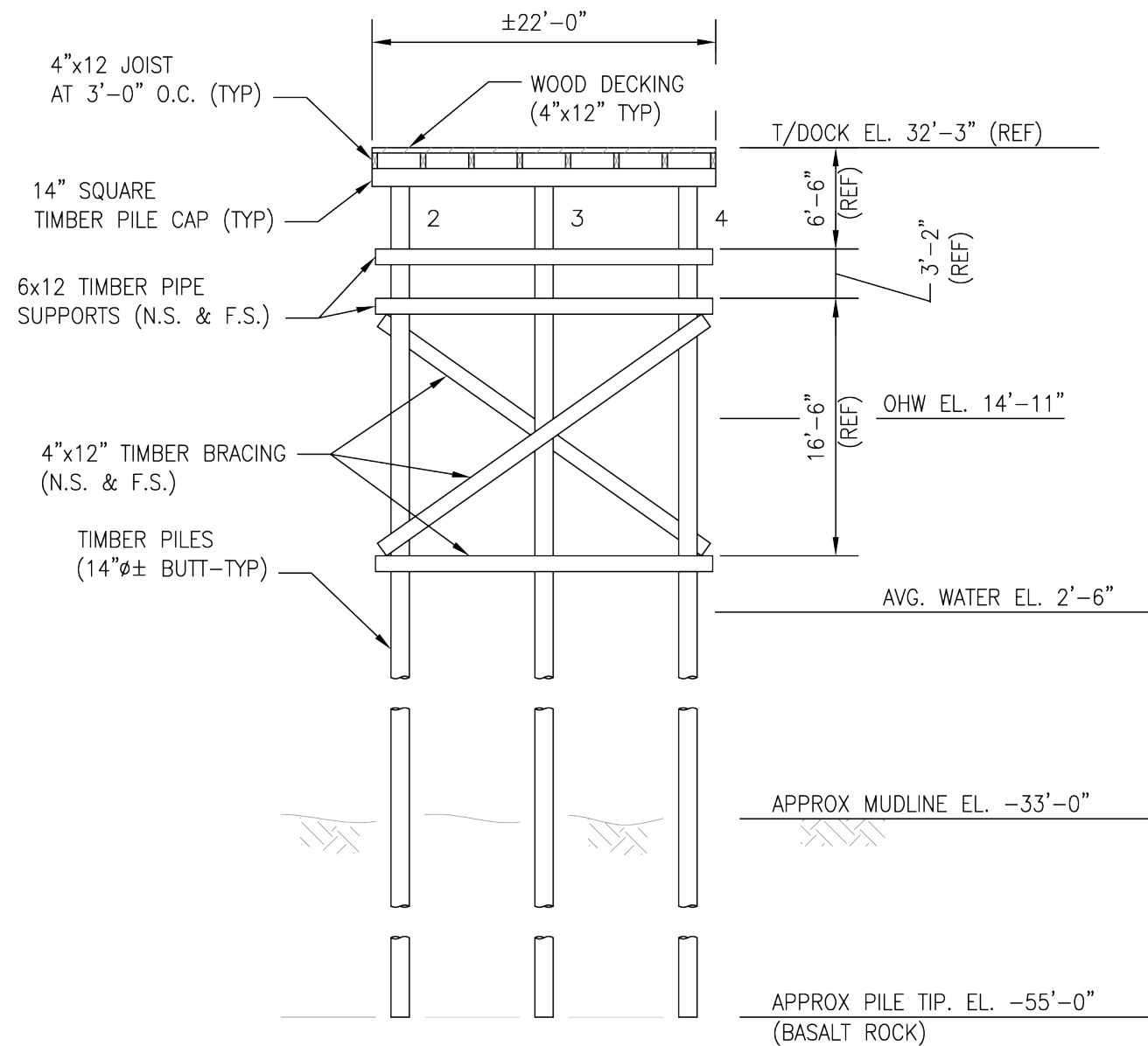


KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
EXISTING CONDITIONS - PLAN 3

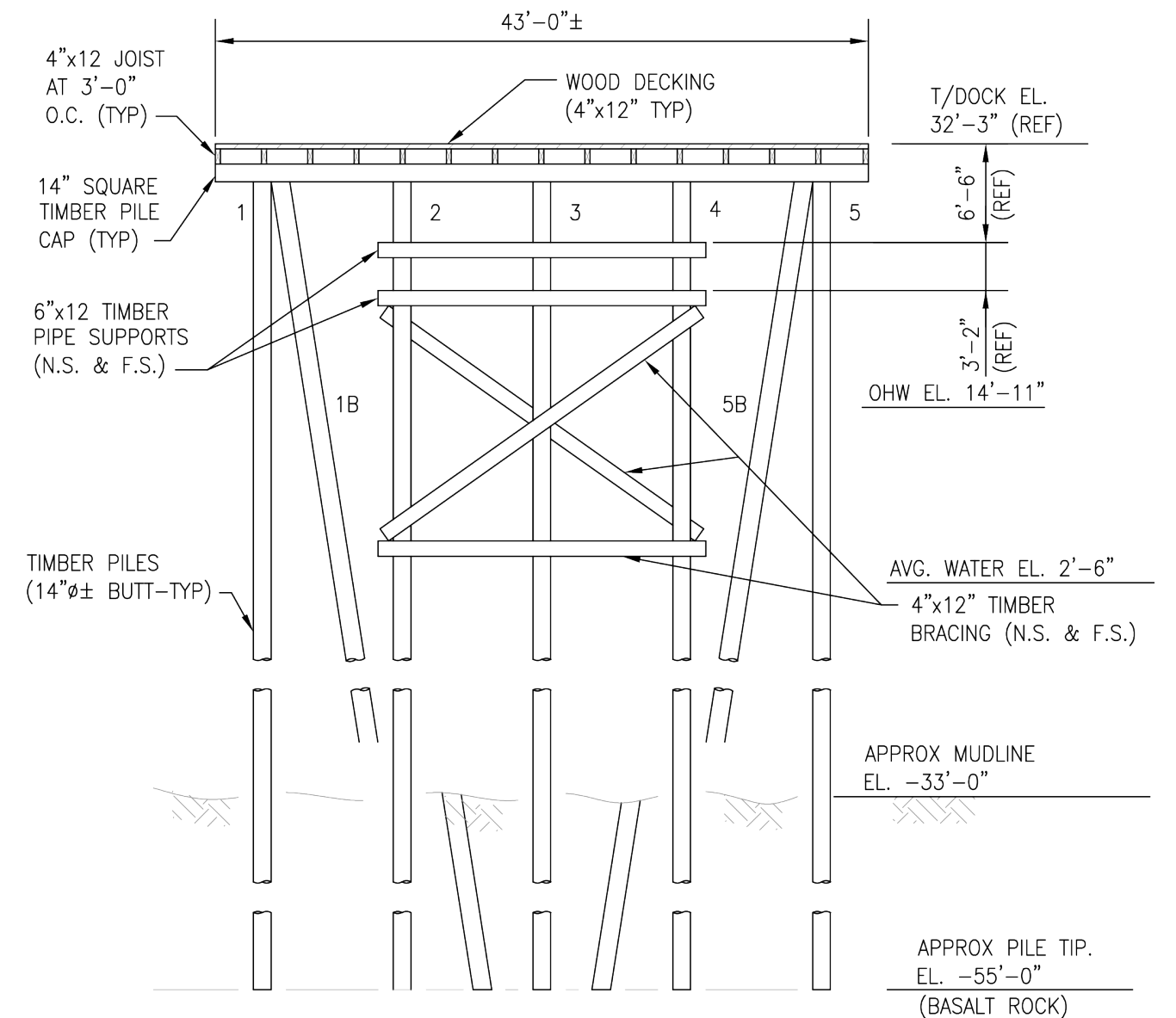
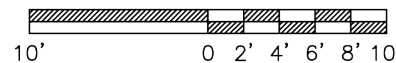
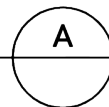
FIGURE
12

J#1500-101 KinderMorganWillbridgeJPA Apr. 16, 2024

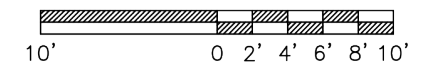
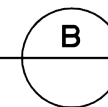




SECTION
3/32" = 1'-0"



SECTION
3/32" = 1'-0"



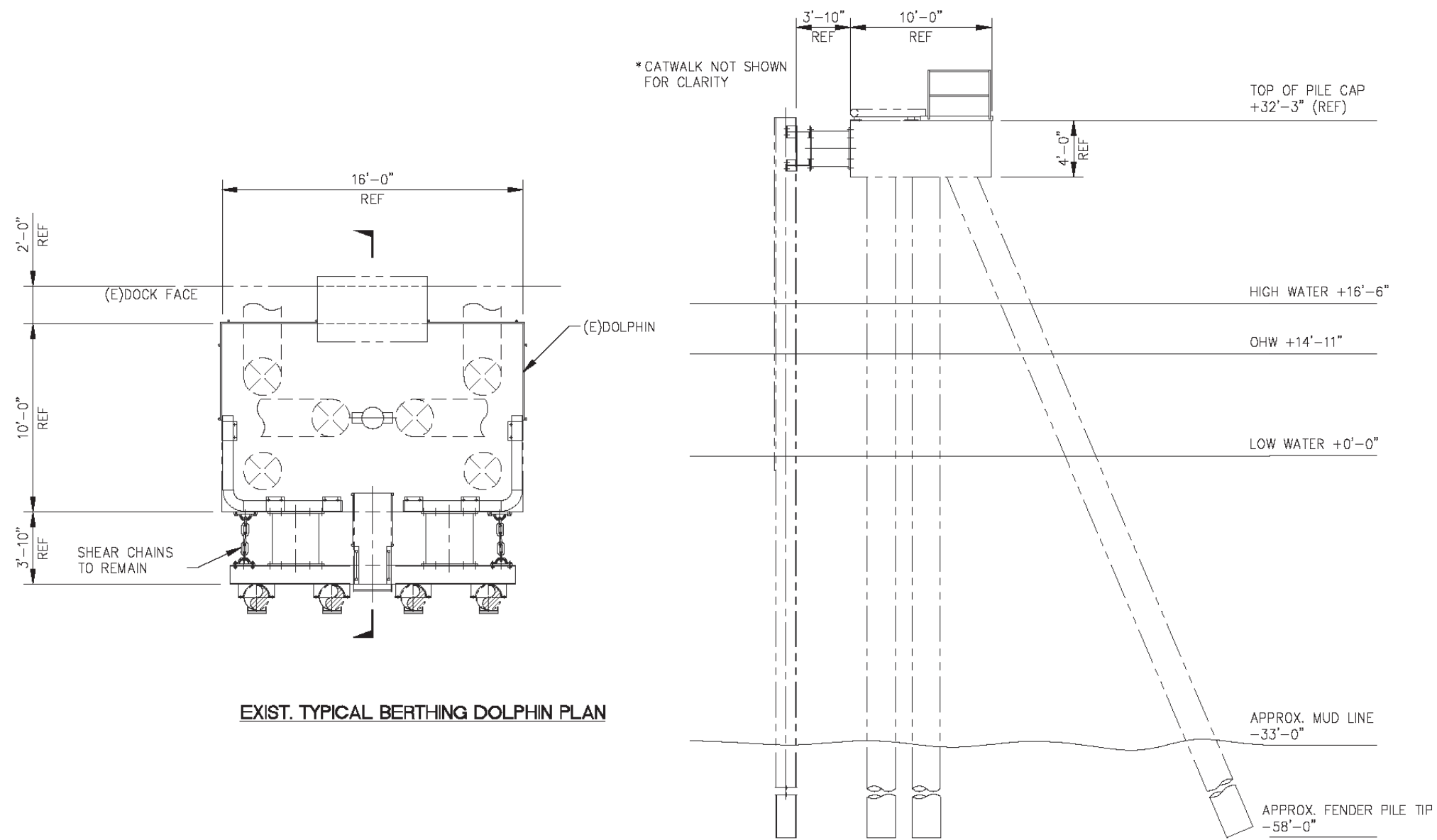
NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING



KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
TYPICAL BENT SECTIONS

FIGURE
14

J#1500-101 KinderMorganWillbridgeJPA Apr. 16, 2024



EXIST. TYPICAL BERTHING DOLPHIN PLAN

BERTHING DOLPHIN SECTION
NTS

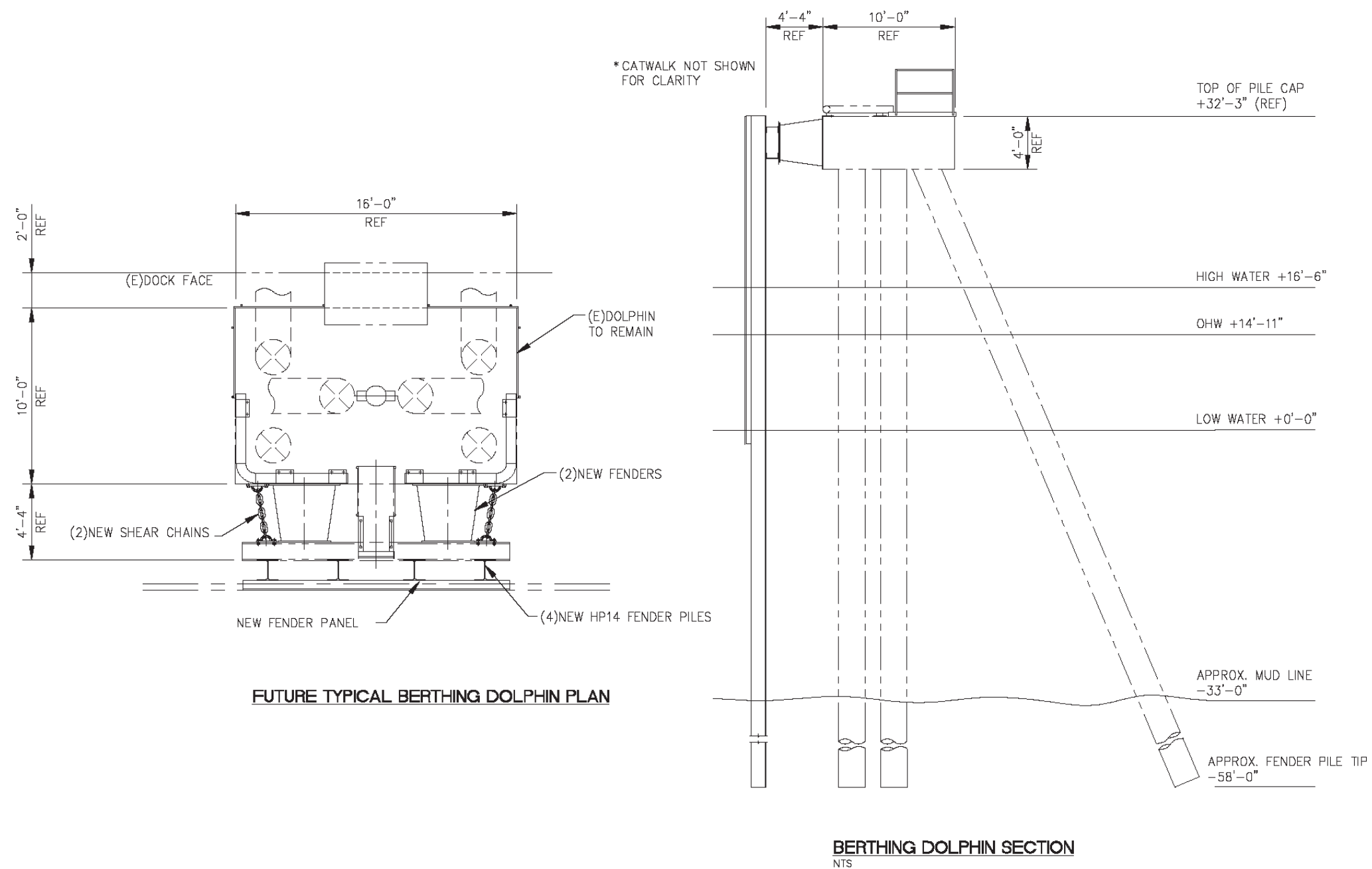


NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING



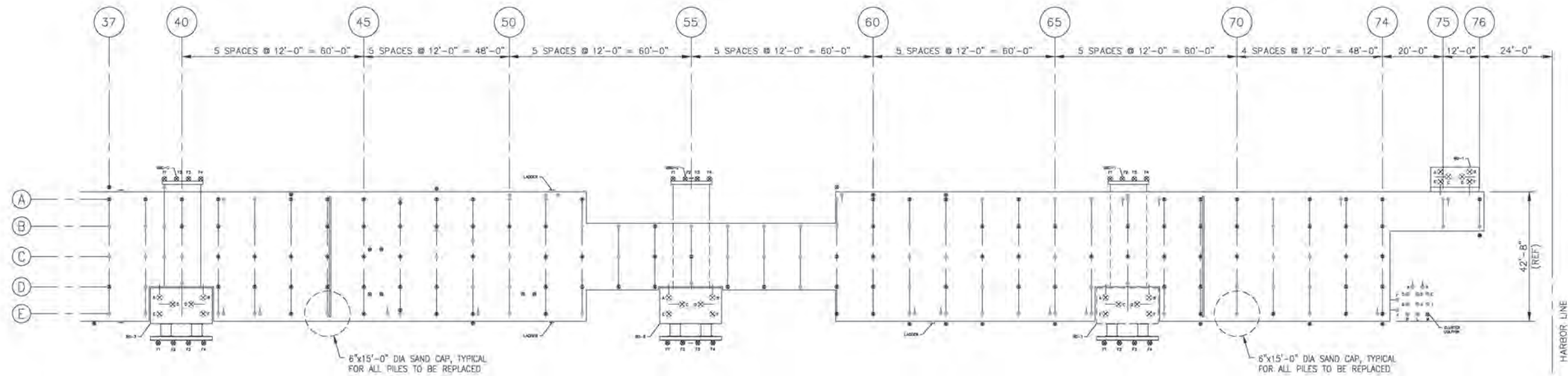
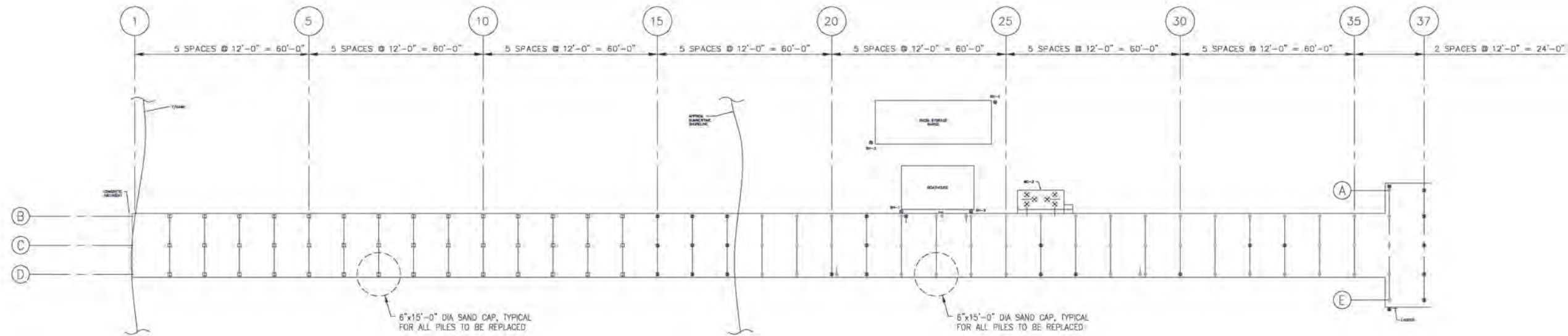
KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
EXISTING FENDER PILE PLAN

FIGURE
15



KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
 6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
PROPOSED FENDER PILE PLAN

FIGURE
16



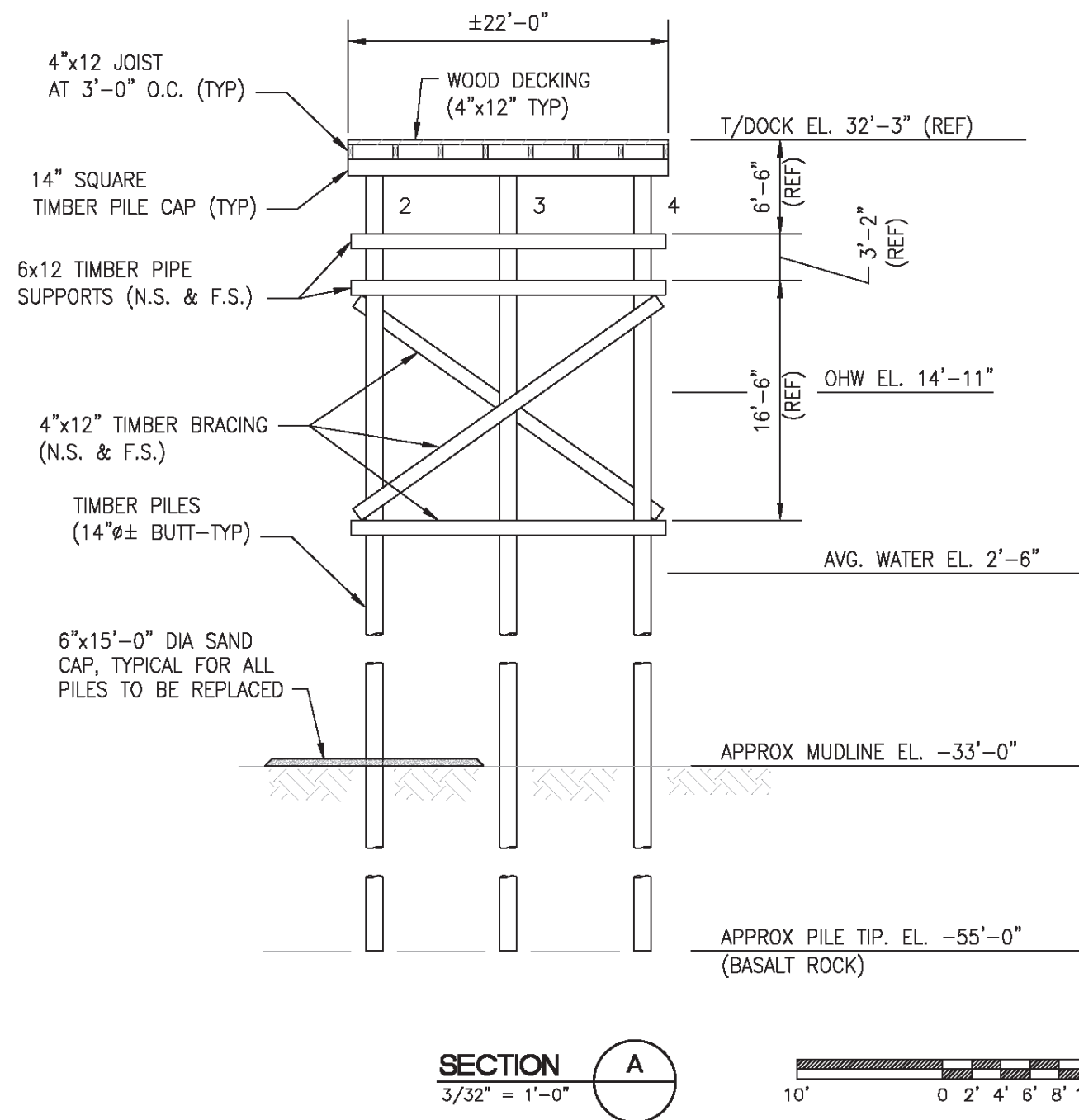
- | | |
|--------------------------------|--------------------------|
| ⊗ - STEEL DOLPHIN BATTER PILES | ⊗ - STEEL FENDER PILE |
| ⊗ - STEEL DOLPHIN PILE | ● - TIMBER FENDER PILE |
| ⊗ - STEEL BATTER PILE | □ - SQUARE TIMBER PILE |
| ⊗ - STEEL PILE | ⊙ - PILE GRID CENTERLINE |
| ● - TIMBER BATTER PILE | |
| ● - TIMBER PILE | |

NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING



KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
TYPICAL SAND CAP PLAN

FIGURE
17



NOTE:
DRAWING PROVIDED BY NORWEST ENGINEERING



KINDER MORGAN
WILLBRIDGE DOCK MAINTENANCE
6080 NW FRONT AVENUE, PORTLAND, OREGON
JOINT PERMIT APPLICATION
TYPICAL SAND CAP SECTION

FIGURE
18