

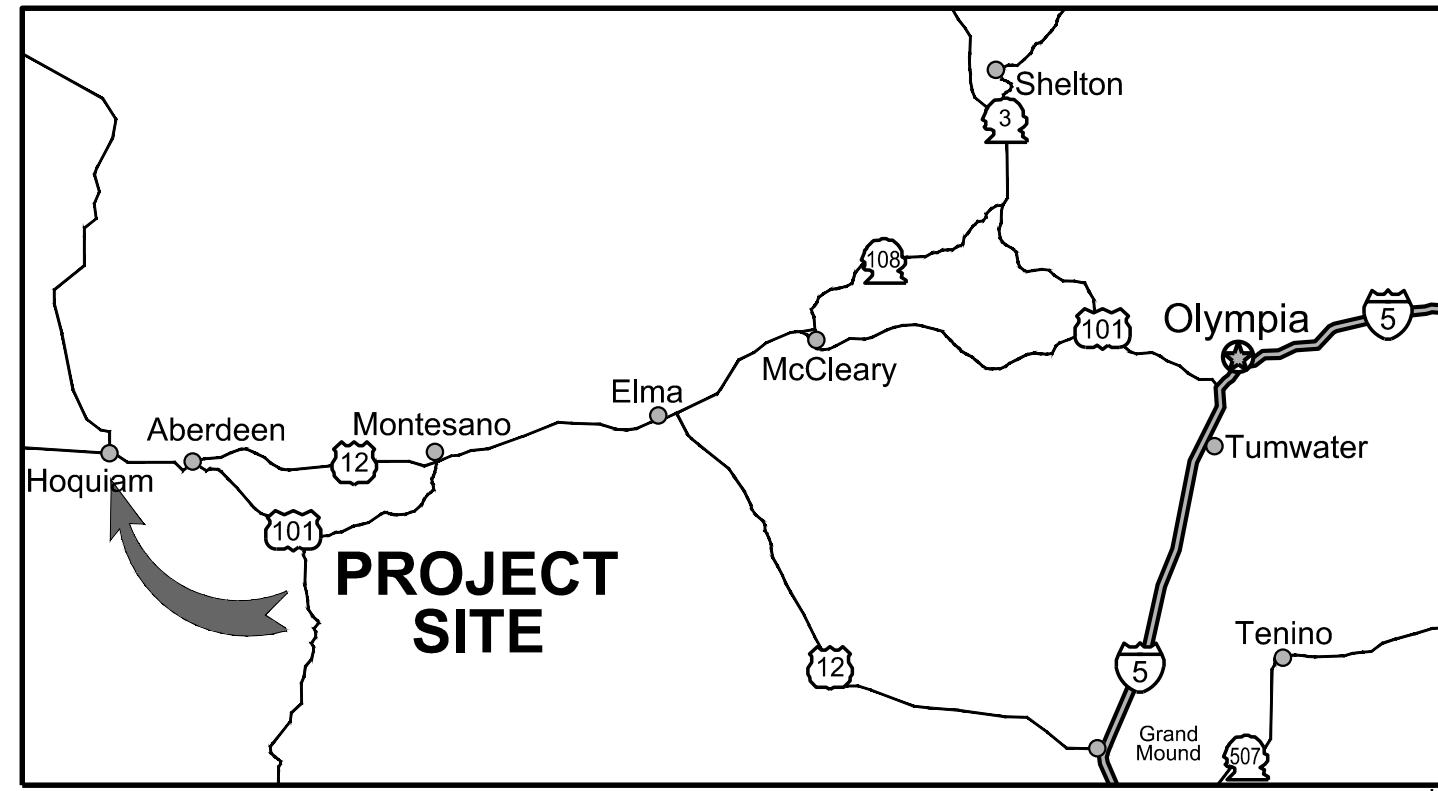
FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C1.0 & C1.1 - COVER SHEET & GENERAL NOTES
 PLOTTED: Dec 29, 2020 - 12:22:01 PM - PLOTTED BY: Nstee



NORTH SHORE LEVEE WEST SEGMENT

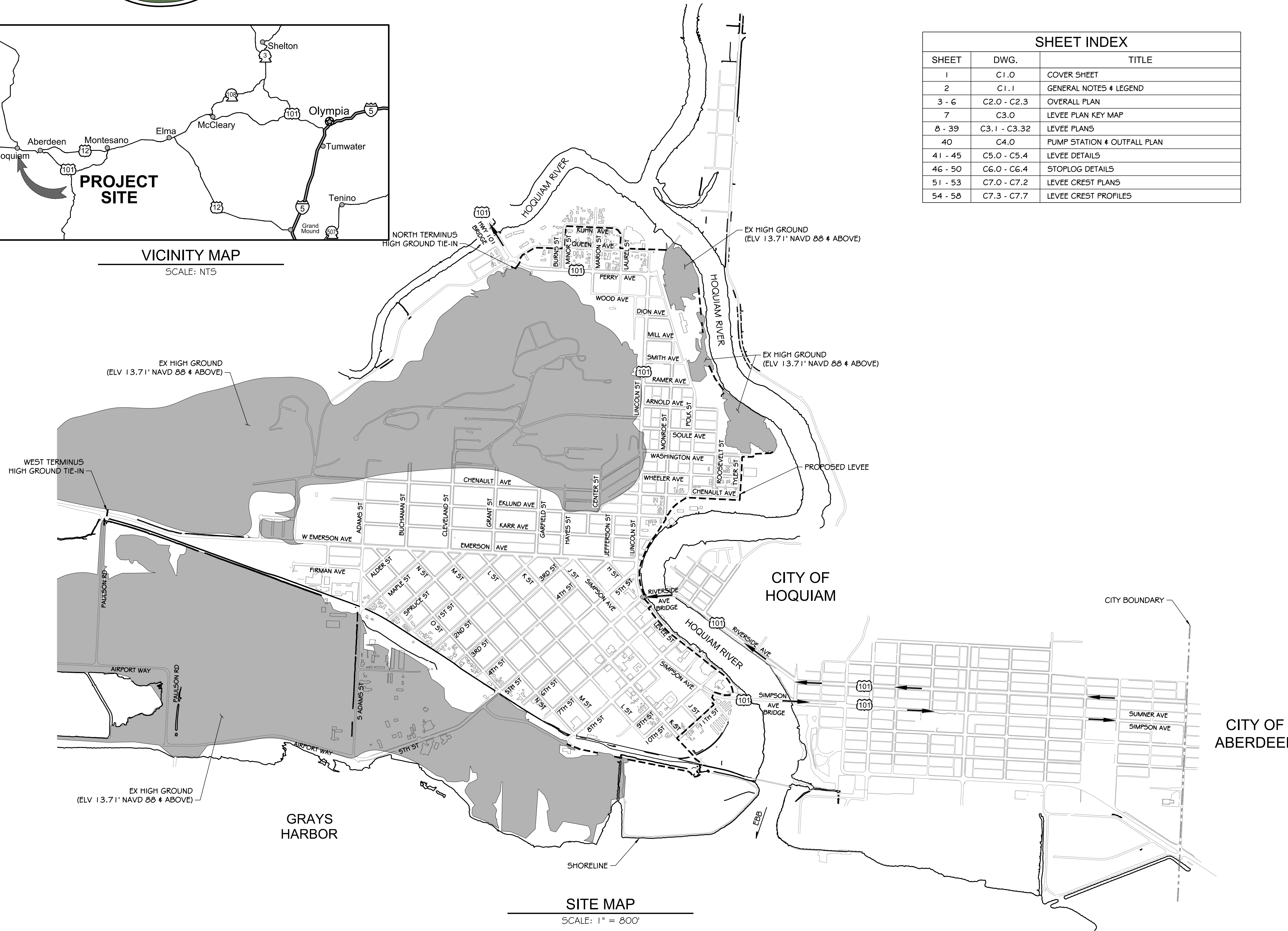
HOQUIAM RIVER, & GRAYS HARBOR

CLOMR SUBMITTAL

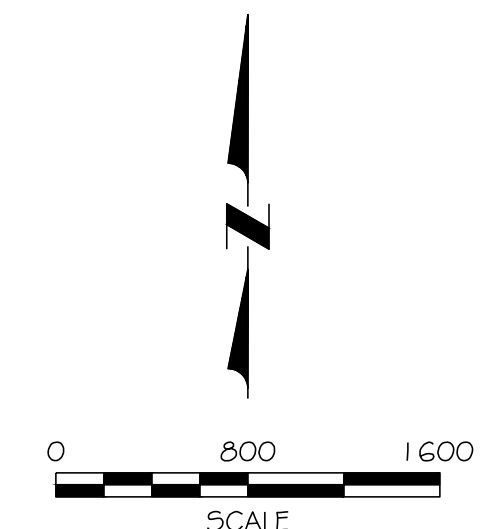


VICINITY MAP
SCALE: NTS

SHEET INDEX		
SHEET	DWG.	TITLE
1	C1.0	COVER SHEET
2	C1.1	GENERAL NOTES & LEGEND
3 - 6	C2.0 - C2.3	OVERALL PLAN
7	C3.0	LEVEE PLAN KEY MAP
8 - 39	C3.1 - C3.32	LEVEE PLANS
40	C4.0	PUMP STATION & OUTFALL PLAN
41 - 45	C5.0 - C5.4	LEVEE DETAILS
46 - 50	C6.0 - C6.4	STOPLOG DETAILS
51 - 53	C7.0 - C7.2	LEVEE CREST PLANS
54 - 58	C7.3 - C7.7	LEVEE CREST PROFILES



SITE MAP
SCALE: 1" = 800'



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OWNER:

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 609 8TH ST
 HOQUIAM, WA 98550
 TEL: (360) 538-3983
 CONTACT: BRIAN SHAY

CIVIL ENGINEER:

KPFF CONSULTING ENGINEERS
 612 WOODLAND SQ LP SE, SUITE 100
 LACEY, WA 98503
 TEL: (360) 292-7230
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 CONTACT: MARK STEEPLY, P.E.

SURVEYOR:

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GEOTECHNICAL ENGINEER:

GEOENGINEERS INC.
 1101 S FAWCETT AVE, #200
 TACOMA, WA 98402
 TEL: (253) 383-4940
 CONTACT: LYLE STONE

HYDRAULIC ANALYSIS:

WATERSHED SCIENCE & ENGINEERING
 110 PREFONTAINE PLACE S, SUITE 508
 SEATTLE, WA 98104
 TEL: (206) 521-3000
 CONTACT: LARRY KARPACK, P.E.

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NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
 HOQUIAM, WASHINGTON
COVER SHEET

CLOMR PLAN SET
C1.0
 SHEET 1 OF 58

CLOMR SUBMITTAL NOTES:

- THIS DESIGN SET IS FOR FEMA REVIEW AS PART OF THE CLOMR APPLICATION FOR THE HOQUIAM WEST SEGMENT LEVEE. IT EMPHASIZES LEVEE DESIGN AND FLOOD PROTECTION MEASURES. ADDITIONAL DETAILS AND DESIGN WILL BE ADDED UPON APPROVAL OF THE PRELIMINARY DESIGN.
- TE5C AND DEMO PLANS HAVE NOT BEEN INCLUDED WITH THIS SUBMITTAL AS THEY DO NOT SHOW INFORMATION THAT IS PERTINENT TO THE ISSUANCE OF A CLOMR.
- THE PUMP STATION DESIGN SHOWN ON C4.0 IS PRELIMINARY AND WILL BE IMPROVED UPON APPROVAL OF CONCEPT. THE PUMP STATIONS ARE SIZED FOR THE 10-YEAR STORM, WILL BE AUTOMATIC, AND WILL NOT REQUIRE ANY PRIOR FLOOD WARNING FOR OPERATION.

SURVEY NOTES:

- BACKGROUND SHOWING TOPOGRAPHY, BUILDINGS AND STREETS WERE PREPARED BY DAVID C. SMITH & ASSOCIATES BASED ON AERIAL PHOTOGRAPHY DATED APRIL 8TH, 2016.
- BACKGROUNDS SHOWING UTILITIES WERE PREPARED BY KPFF CONSULTING ENGINEERS BASED ON FIELD SURVEY IN 2015-2017.
- BACKGROUNDS SHOWING RIGHT-OF-WAY LINES WERE PREPARED BY KPFF CONSULTING ENGINEERS BASED ON INFORMATION AVAILABLE IN 2016. RIGHT-OF-WAYS AND PROPERTY LINES ARE APPROXIMATE IN SOME AREAS AND WILL BE FINALIZED AS DESIGN CONTINUES.

GENERAL NOTES:

- IN AREAS WHERE LEAKAGE AND SEEPAGE IS EXPECTED, SUCH AS UTILITY TRENCHES (EXISTING AND PROPOSED), A FILTER SOIL LAYER WILL BE RECOMMENDED ON THE LANDWARD SIDE OF THE LEVEE. THE RECOMMENDED SOIL LAYER CONSISTS OF WSDOT SPECIFICATION 9-03.1(2) (FINE AGGREGATE FOR PORTLAND CONCRETE CEMENT). THE FILTER MATERIAL SHOULD BE PLACED FROM THE UTILITY PENETRATION OR OTHER SEEPAGE SOURCE UP TO THE ELEVATION OF THE EXISTING GROUND. THE FILTER SHOULD EXTEND ABOUT 1 FOOT BEYOND THE SEEPAGE SOURCE PARALLEL TO THE LEVEE AND SHOULD EXTEND AT LEAST 5 FEET PERPENDICULAR TO THE LEVEE.
- EXISTING CITY AND PRIVATELY OWNED COLLECTION AND CONVEYANCE STORM SYSTEMS INTERNAL TO THE PROPOSED LEVEE WILL BE MODIFIED/UPGRADED TO ADEQUATELY CONVEY STORM FLOWS. ALL UPGRADED STORM SYSTEMS WILL CONNECT TO THE EXISTING CONVEYANCE SYSTEM THAT ULTIMATELY FLOWS TO THE PROPOSED PUMP STATIONS.

 DRY UTILITIES: SEAL LARGE CONDUITS
 STORM DRAINAGE: INSTALL IN-LINE CHECK VALVES
 WATER & GAS: MAINTAIN PRESSURE
 SANITARY SEWER: INSTALL LOCKING WATER-TIGHT LIDS
- MEASURES WILL BE TAKEN TO BLOCK ALL FLOOD WATERS FROM FLOWING THROUGH ANY UTILITY TRENCHES. THE FOLLOWING MEASURES FOR EACH UTILITY ARE:

 ALL EXISTING TREES AND VEGETATION IN LEVEE FOOTPRINT SHALL BE REMOVED.
- ALL LOCATIONS SHOWING A STOPLOG CLOSURE WILL BE EVALUATED AT FUTURE DESIGN ON THE FEASIBILITY AND APPLICABILITY OF USING A PASSIVE (FLOATING) BARRIER RATHER THAN A STOPLOG ENCLOSURE. COST, LOCATION, LENGTH/SIZE, AND TRAFFIC CHARACTERISTICS WILL BE SOME OF THE FACTORS TO THE DECISION OF THE TYPE OF CLOSURE TO USE.
- ALL LOCATIONS SHOWING A PEDESTRIAN HINGED FLOODGATE WILL BE EVALUATED AT FUTURE DESIGN. PEDESTRIAN HINGED FLOODGATES ARE INTENDED FOR SPECIFIC AREAS THAT REQUIRE PEDESTRIAN ACCESS.

LEGEND

	ROADWAY CENTERLINE
	BACK OF CURB
	FACE OF CURB
	MINOR CONTOUR
	MAJOR CONTOUR
	EDGE OF PAVEMENT
	LEVEE (SHEET PILE)
	LEVEE (CONCRETE)
	LEVEE (EARTHEN) / GRAVEL ROAD
	STOPLOG
	CONTROL POINT
	STORM DRAIN LINE
	STORM CATCH BASIN
	EXISTING STRUCTURE
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT
	PARALLEL CURB RAMP
	SINGLE DIRECTION CURB RAMP
	DRIVEWAY
	STOPLOG RAILROAD CROSSING

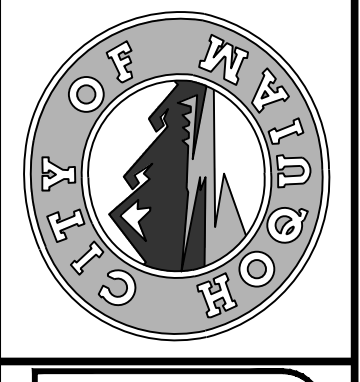
ABBREVIATIONS:

APPROX	APPROXIMATELY
AR	AIR RELEASE
AVE	AVENUE
BCR	BEGINNING OF CURB RETURN
BLDG	BUILDING
BLVD	BOULEVARD
BO	BLOW-OFF
CB	CATCH BASIN
CO	CLEANOUT
CPP	CORRUGATED POLYETHYLENE PIPE
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
E	EAST, EASTING
ECP	END OF CURB RETURN
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FM	FORCE MAIN
FT	FEET
GA	GAUGE
GRVL	GRAVEL
HDPPE	HIGH DENSITY POLYETHYLENE
HORIZ, HORIZ	HORIZONTAL
IE	INVERT ELEVATION
LF	LINEAR FEET
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH, NORTHING
NE	NORTHEAST
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NW	NORTHWEST
PC	POINT OF CURVE
PI	POINT OF TANGENT INTERSECTION
POC	POINT OF CONNECTION
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE
R	RANGE, RADIUS
RD	ROOF DRAIN, ROAD
S	SOUTH, SLOPE
SCH	SCHEDULE
SE	SOUTHEAST
SEC	SECTION
SF	SQUARE FEET
SD	STORM DRAIN
SS	SANITARY SEWER
SSMH	SEWER MANHOLE
ST	STREET
STA	STATION
STD	STANDARD
SW	SOUTHWEST
T	TOWNSHIP
TYP	TYPICAL
VERT	VERTICAL
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVE
VPT	VERTICAL POINT OF TANGENT
W	WEST
WI	WITH
WM	WATER MAIN

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**NORTH SHORE LEVEE WEST SEGMENT
 CLOMR PLANS
 HOQUIAM, WASHINGTON**

GENERAL NOTES & LEGEND

CLOMR PLAN SET

PLOTTED: Dec 30, 2020 - 7:04:12pm PLOTTED BY: bkskel

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LEGEND

EXISTING HIGH GROUND

KEY NOTE:

STOP LOG NUMBER AND LOCATION

0 200 400
SCALE

VERTICAL DATUM
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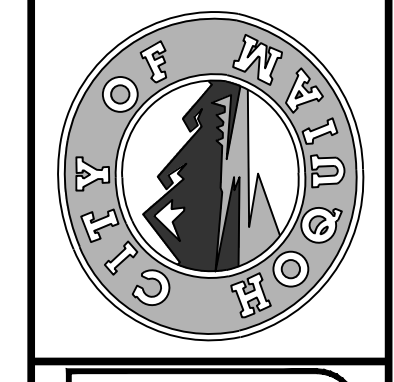
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**NORTH SHORE LEVEE WEST SEGMENT
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HOQUIAM, WASHINGTON**

OVERALL LEVEE PLAN

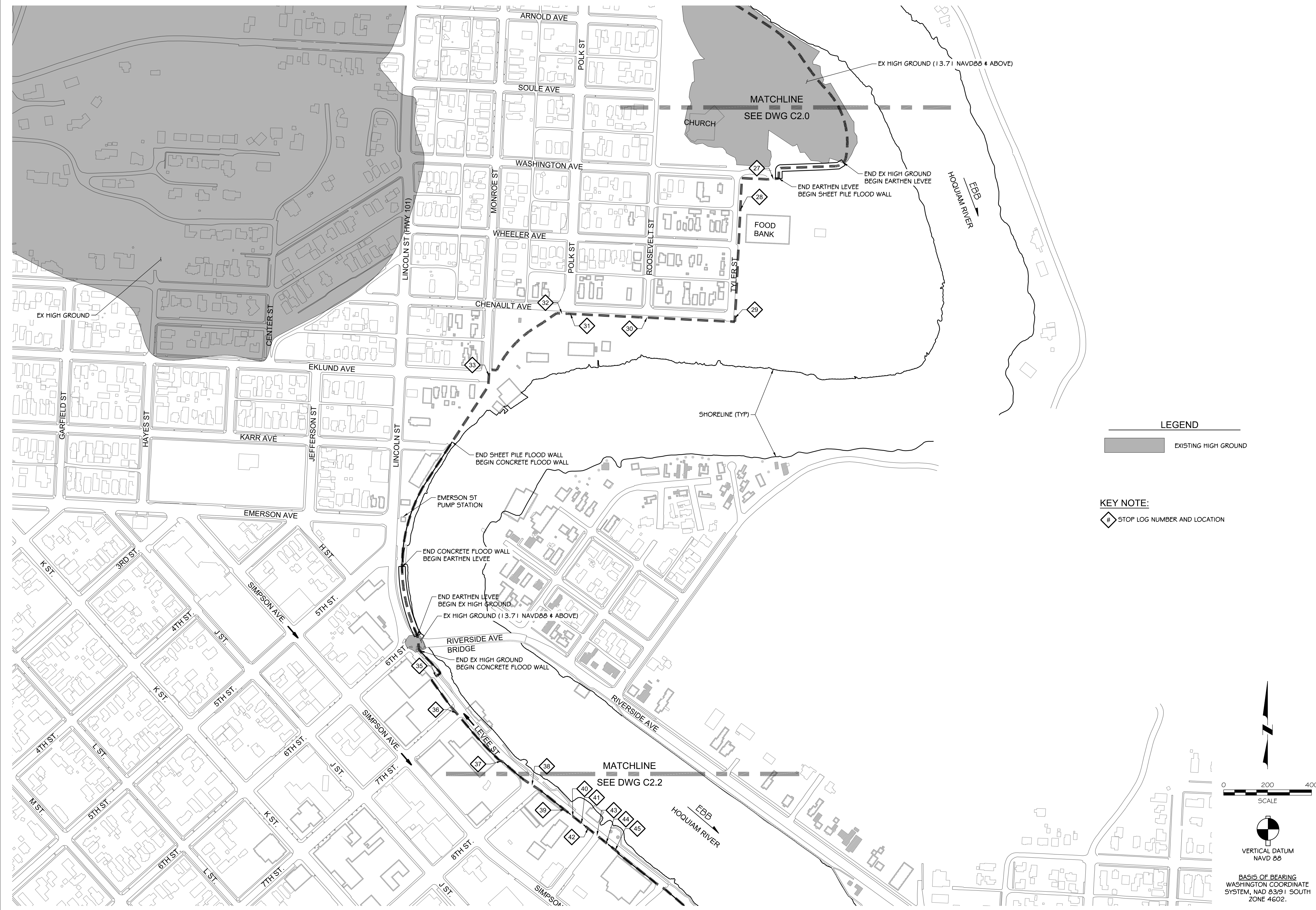
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C2.0

SHEET 3 OF 58

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LEGEND

EXISTING HIGH GROUND

KEY NOTE:

STOP LOG NUMBER AND LOCATION

200 400
SCALE

VERTICAL DATUM
NAVD 88

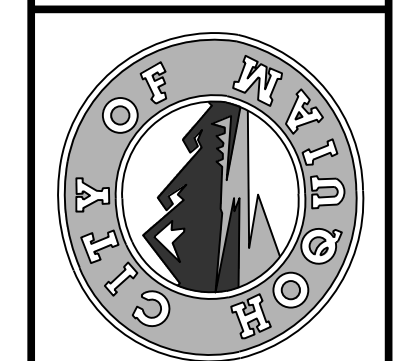
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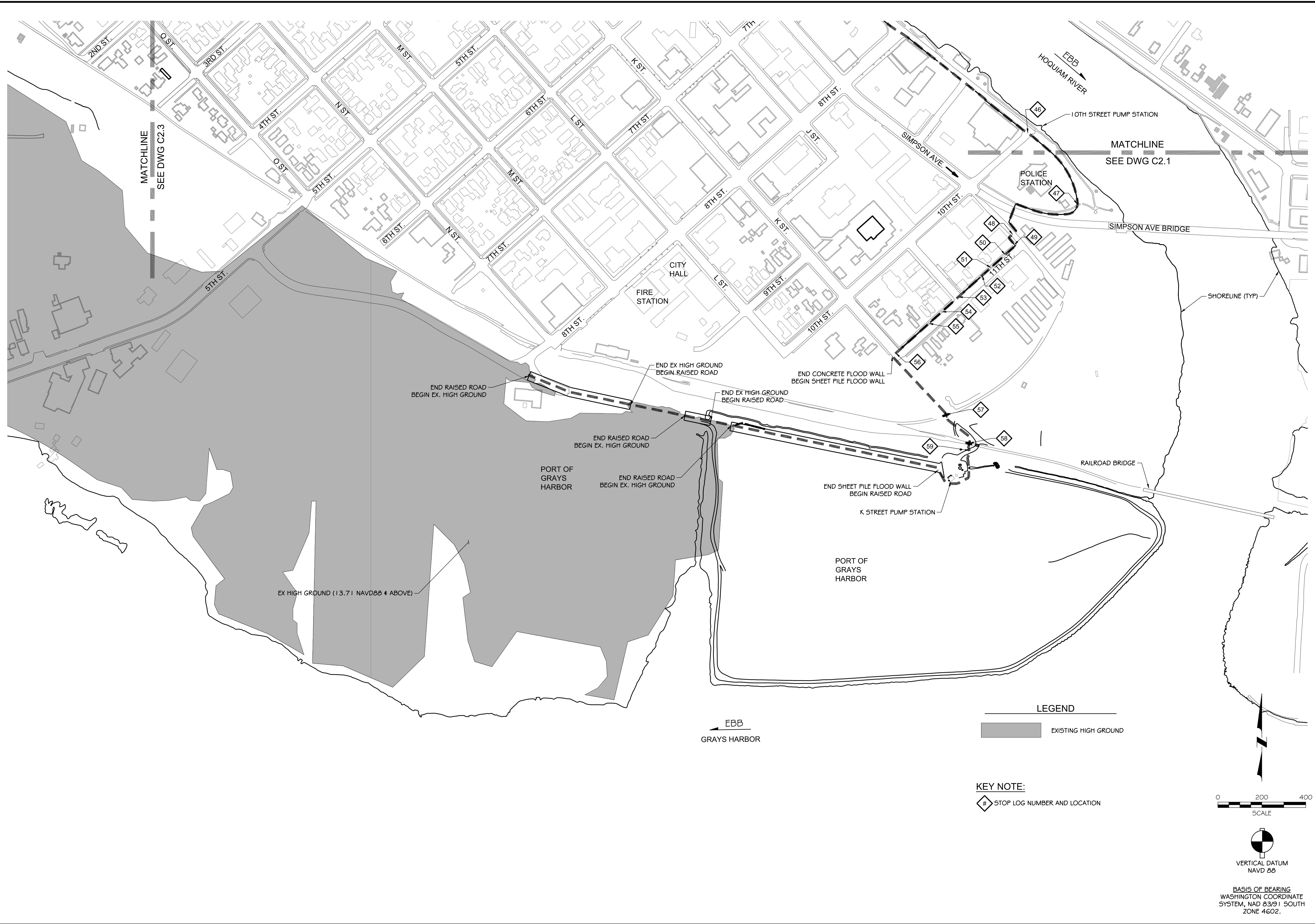
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HOQUIAM, WASHINGTON**

OVERALL LEVEE PLAN

CLOMR PLAN SET

C2.1

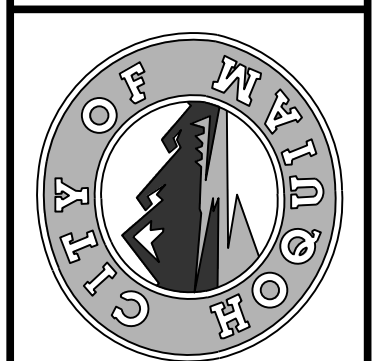
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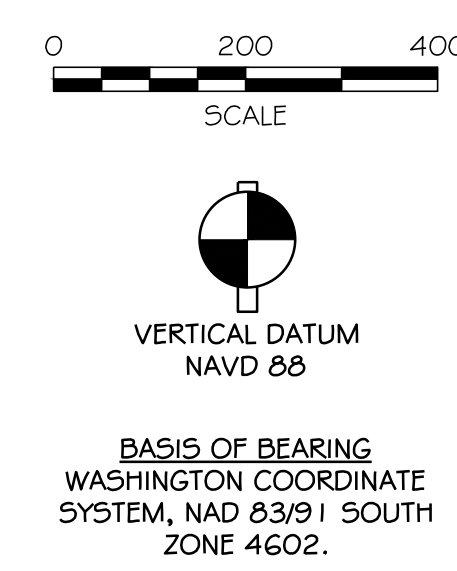
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**NORTH SHORE LEVEE WEST SEGMENT
 CLOMR PLANS
 HOQUIAM, WASHINGTON**

OVERALL LEVEE PLAN

CLOMR PLAN SET

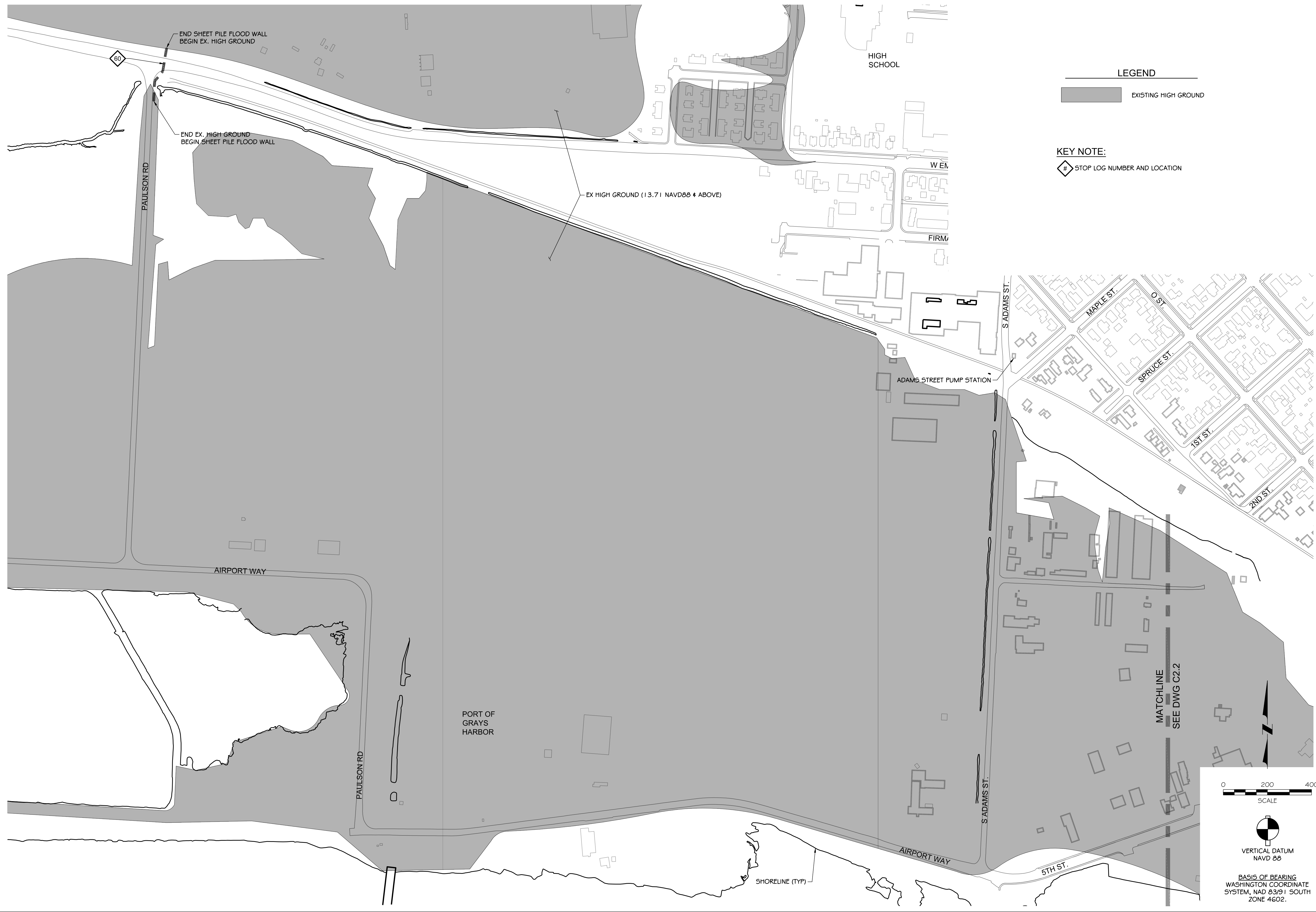
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 SHEET 5 OF 58



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LEGEND

EXISTING HIGH GROUND

KEY NOTE:

STOP LOG NUMBER AND LOCATION

0 200 400
SCALE

VERTICAL DATUM
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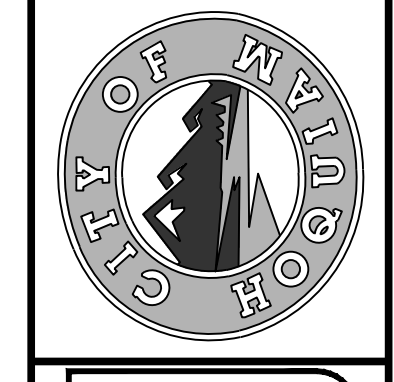
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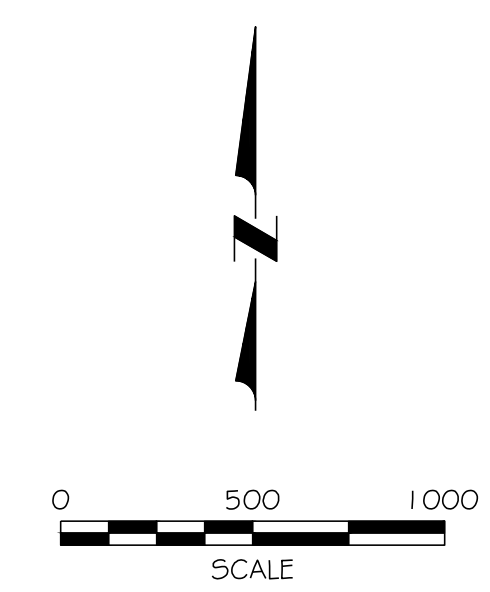
**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON**

OVERALL LEVEE PLAN

CLOMR PLAN SET

C2.3

SHEET 6 OF 58



VERTICAL DATUM
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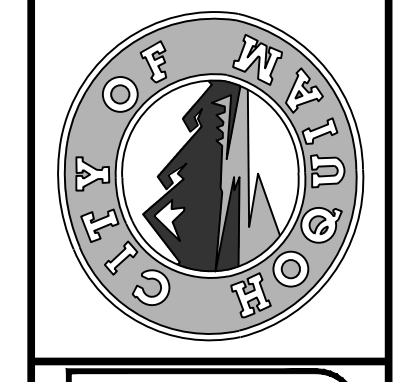
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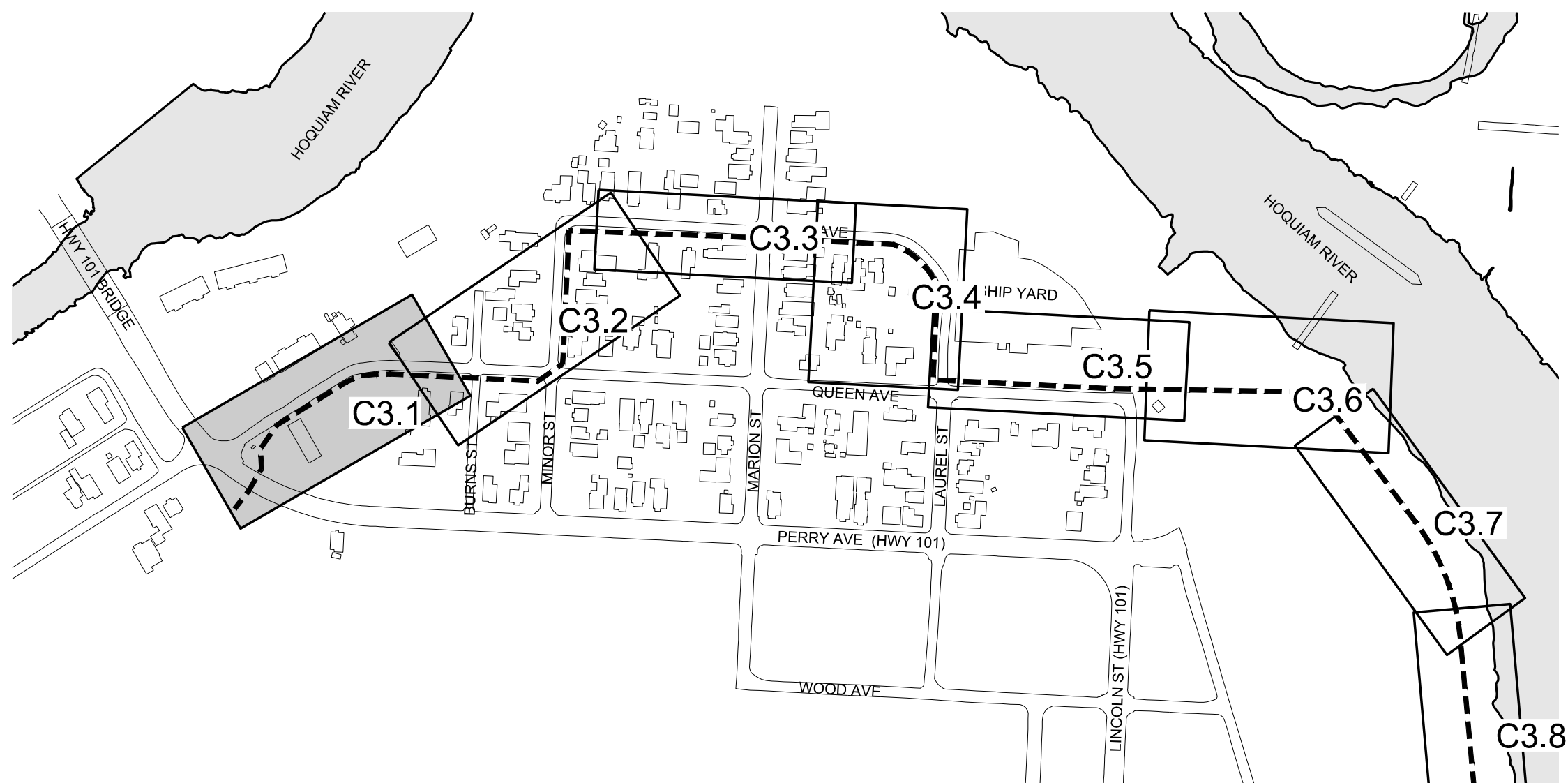
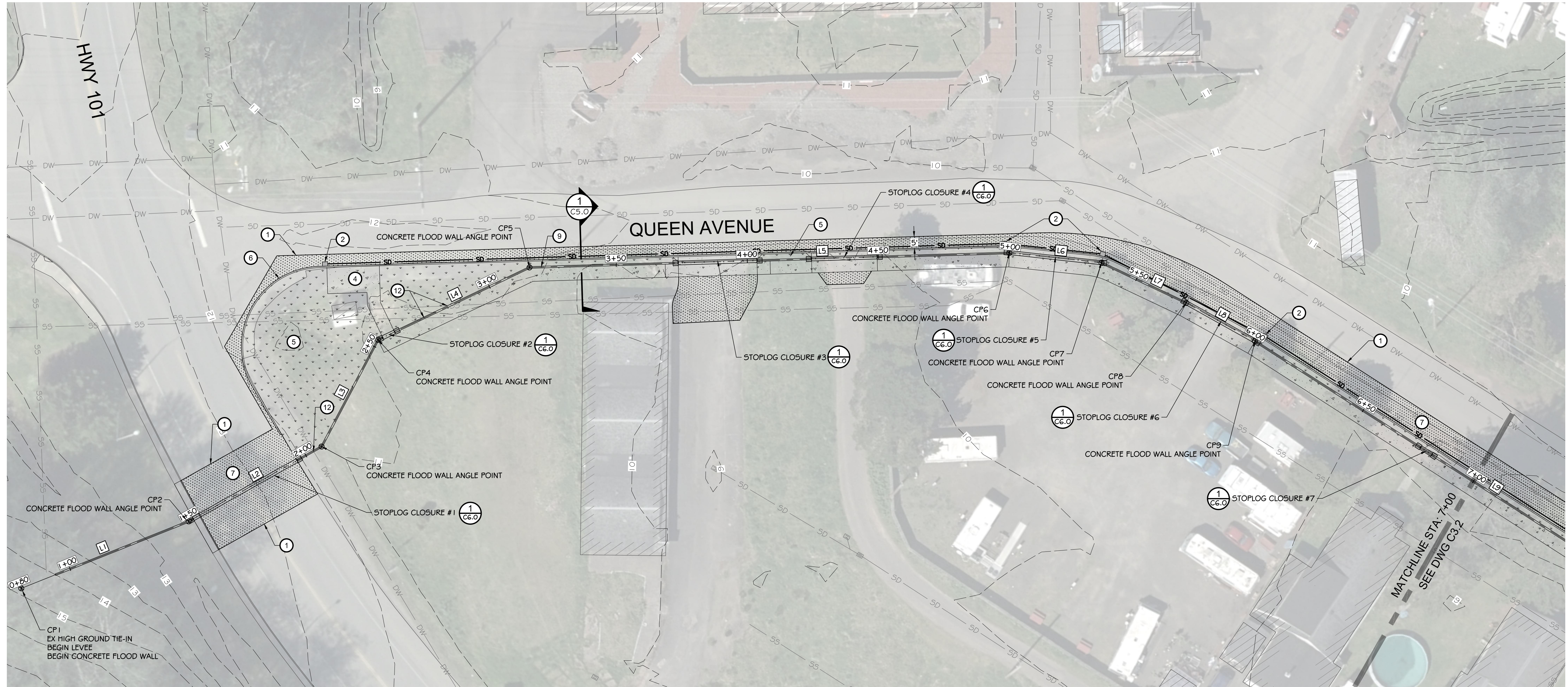
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NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON

LEVEE PLAN KEY MAP

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KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L1	68.72'	N38° 11' 21"E	1	623,355.74	793,782.85
L2	58.18'	N30° 37' 22"E	2	623,409.76	793,825.34
L3	46.00'	N02° 09' 28"W	3	623,459.82	793,854.98
L4	64.05'	N34° 26' 57"E	4	623,505.79	793,853.25
L5	183.00'	N58° 16' 22"E	5	623,558.60	793,889.48
L6	35.33'	NG6° 02' 32"E	6	623,654.84	794,045.13
L7	35.78'	N85° 23' 30"E	7	623,669.19	794,077.42
L8	30.00'	N89° 03' 09"E	8	623,672.06	794,113.09
L9	331.12'	S87° 16' 41"E	9	623,672.56	794,143.08

- CONSTRUCTION NOTES:**
- ① SAWCUT / MATCH EXISTING
 - ② CATCH BASIN / SD IMPROVEMENTS
 - ③ CONNECT TO EXISTING UTILITY
 - ④ CEMENT CONCRETE SIDEWALK
 - ⑤ LANDSCAPE PLANTER
 - ⑥ CEMENT CONCRETE CURB
 - ⑦ ASPHALT PAVEMENT
 - ⑧ SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - ⑨ CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - ⑩ ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - ⑪ EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - ⑫ PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - ⑬ CEMENT CONCRETE ADA RAMP
 - ⑭ STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - ⑮ CUT AND CAP EXISTING STORM DRAINAGE LINE

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

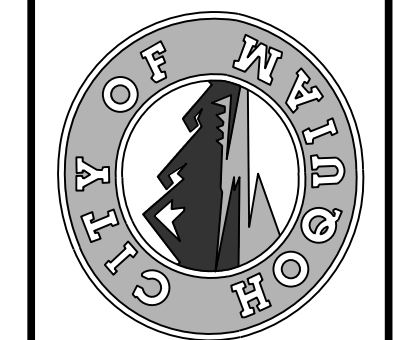
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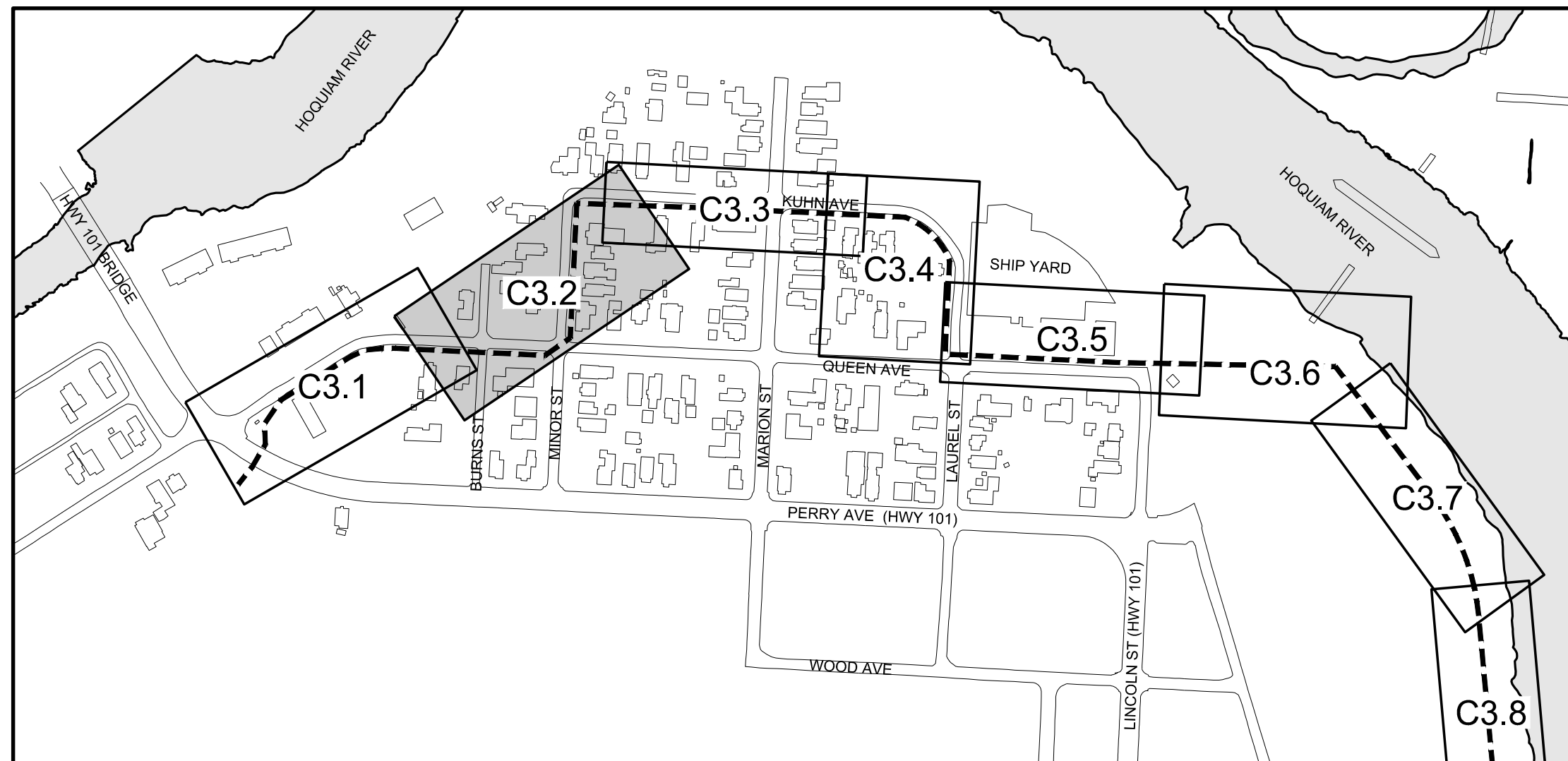
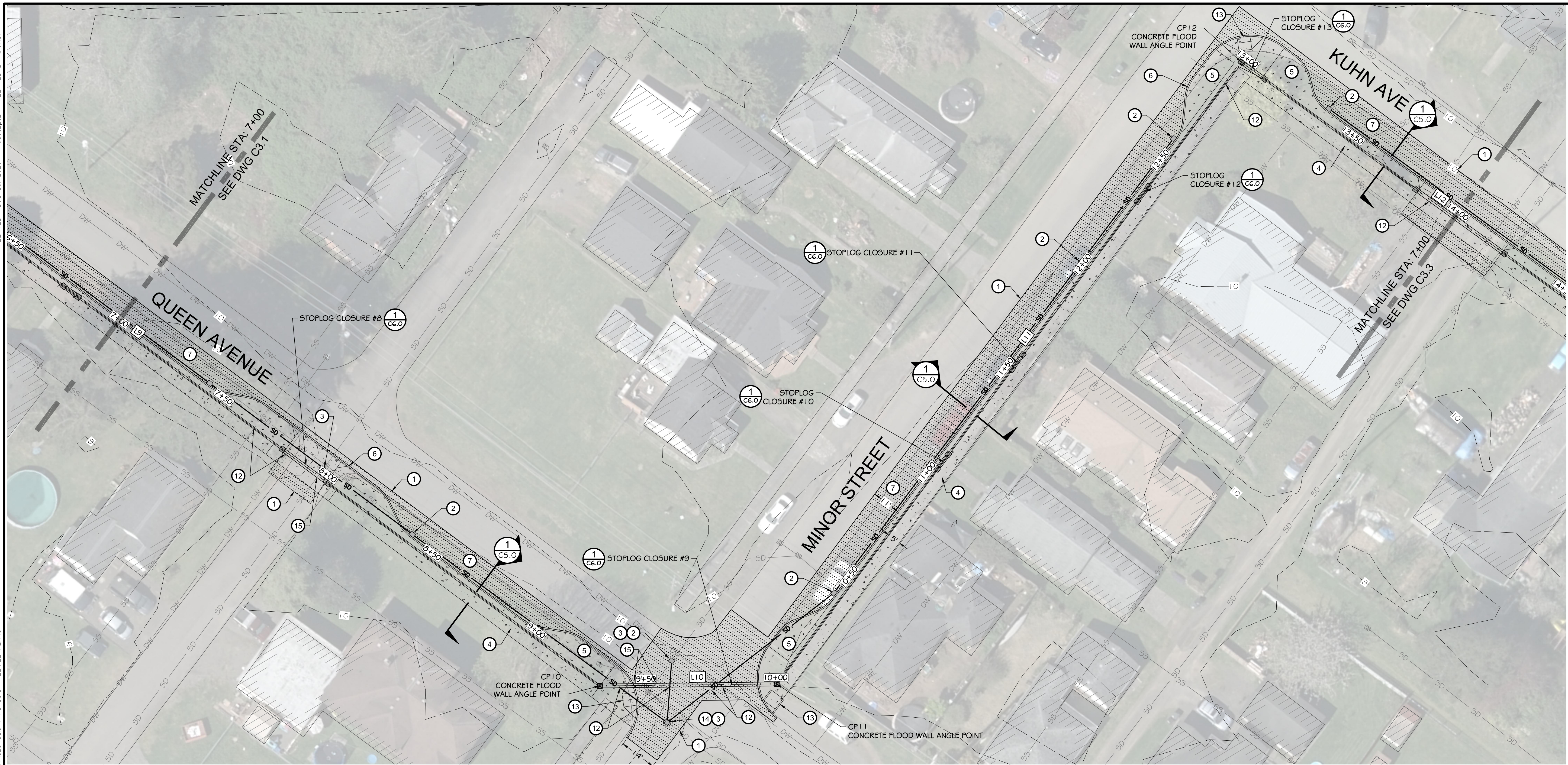
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<p>CLOMR PLAN SET</p>								
<p>C3.1 SHEET 8 OF 58</p>								



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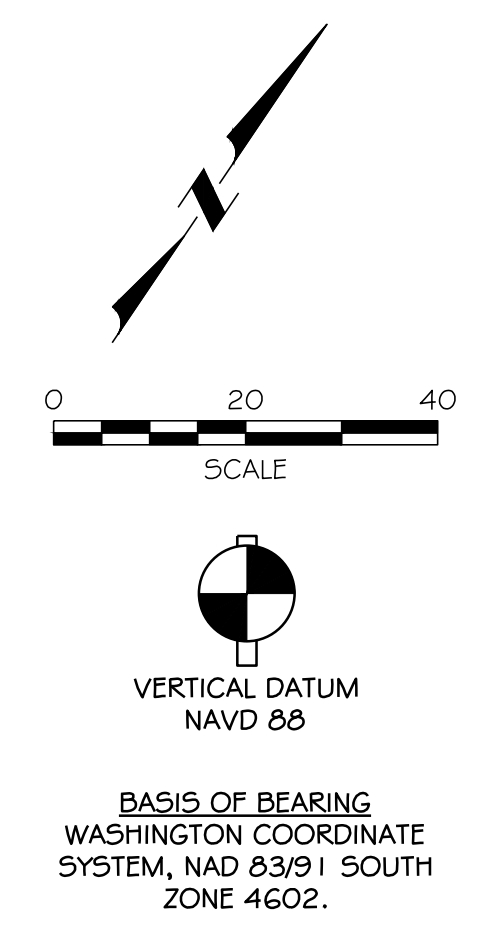


KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L9	331.12'	S87° 16' 41"E	10	623,656.83	794,473.83
L10	68.00'	N55° 20' 05"E	11	623,695.51	794,529.76
L11	298.42'	N02° 45' 40"E	12	623,993.59	794,544.14
L12	341.69'	S87° 54' 56"E			

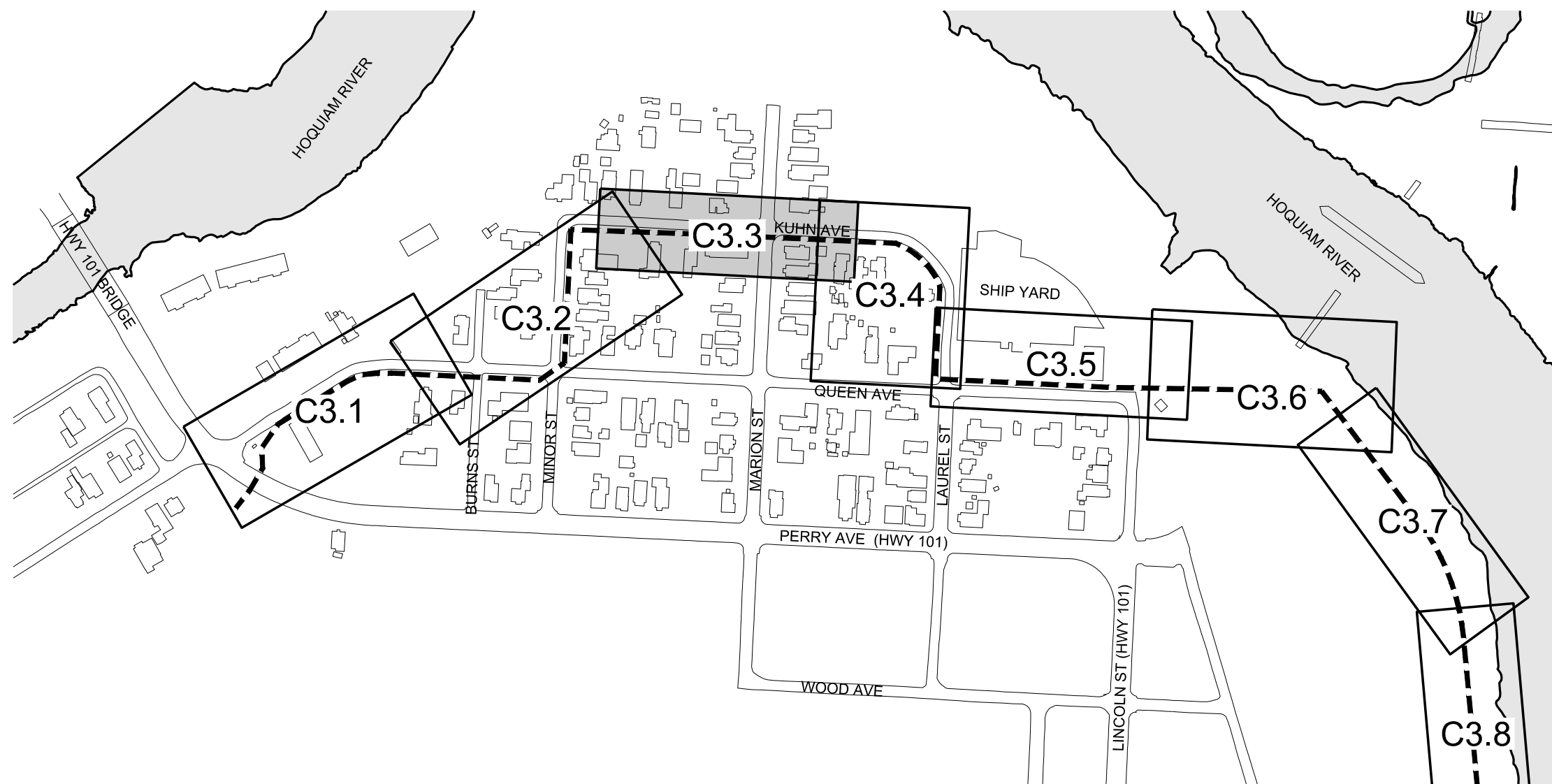
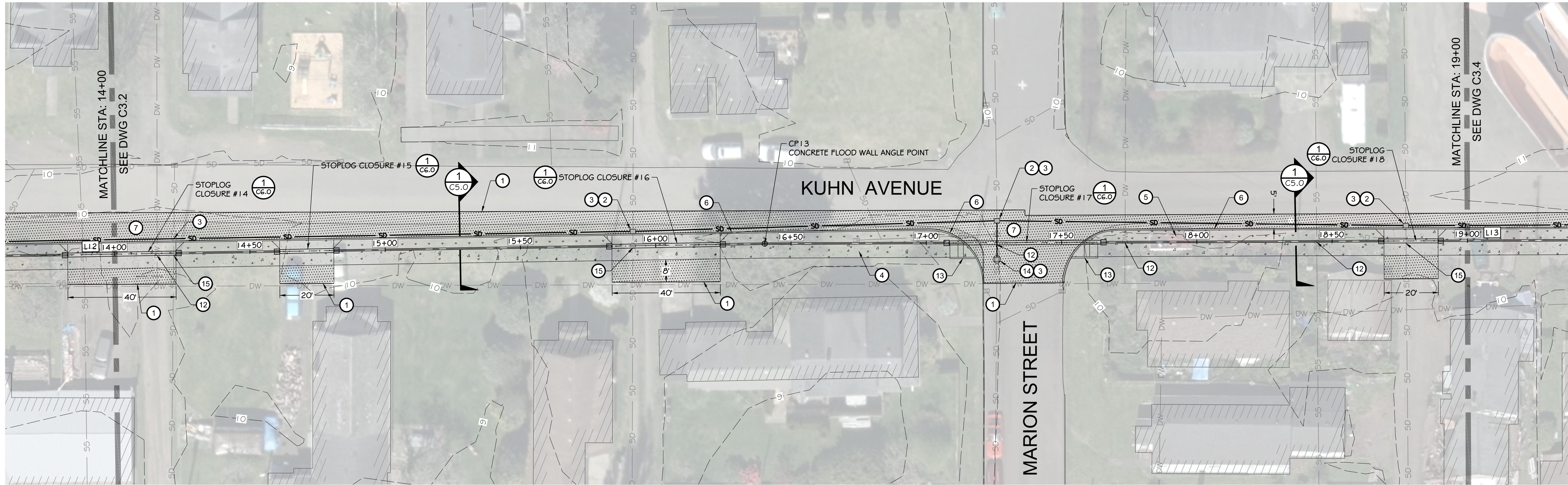
LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
- 1 SAWCUT / MATCH EXISTING
 - 2 CATCH BASIN / SD IMPROVEMENTS
 - 3 CONNECT TO EXISTING UTILITY
 - 4 CEMENT CONCRETE SIDEWALK
 - 5 LANDSCAPE PLANTER
 - 6 CEMENT CONCRETE CURB
 - 7 ASPHALT PAVEMENT
 - 8 SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - 9 CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - 10 ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - 11 EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - 13 CEMENT CONCRETE ADA RAMP
 - 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



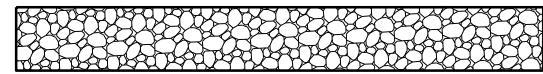
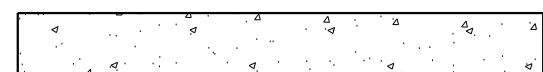
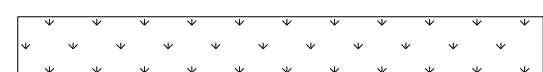

BASIS OF BEARING
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<p>CITY OF WAUKIAKUM</p>	<p>kpff 613 Westland Square Loop Lacey, WA 98503 360.929.7230 www.kpff.com</p>												
<p>CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED BY</td> <td>SDS</td> <td>DATE</td> <td>12-30-2020</td> </tr> <tr> <td>DRAWN BY</td> <td>NLA</td> <td>CHECKED BY</td> <td>MRS</td> </tr> <tr> <td>APPROVED BY</td> <td>SDS</td> <td>JOB NO.</td> <td>10181900007</td> </tr> </table>	DESIGNED BY	SDS	DATE	12-30-2020	DRAWN BY	NLA	CHECKED BY	MRS	APPROVED BY	SDS	JOB NO.	10181900007
DESIGNED BY	SDS	DATE	12-30-2020										
DRAWN BY	NLA	CHECKED BY	MRS										
APPROVED BY	SDS	JOB NO.	10181900007										
<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p>	<p>LEVEE PLAN</p>												
<p>CLOMR PLAN SET</p>	<p>C3.2 SHEET 9 OF 58</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>NO.</td> <td>DATE</td> <td>BY</td> <td>CHD/APPR</td> <td>REVISION</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	CHD/APPR	REVISION							
NO.	DATE	BY	CHD/APPR	REVISION									



KEY MAP
SCALE: 1" = 300'

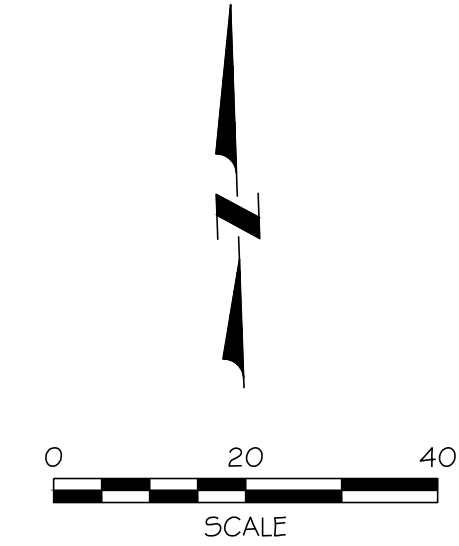
LEGEND

-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
- 3 CONNECT TO EXISTING UTILITY
- 4 CEMENT CONCRETE SIDEWALK
- 5 LANDSCAPE PLANTER
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- 13 CEMENT CONCRETE ADA RAMP
- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE

HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L12	341.69'	S87° 54' 56"E	13	623,981.16	794,885.61
L13	385.80'	S87° 14' 41"E			



VERTICAL DATUM
NAVD 88
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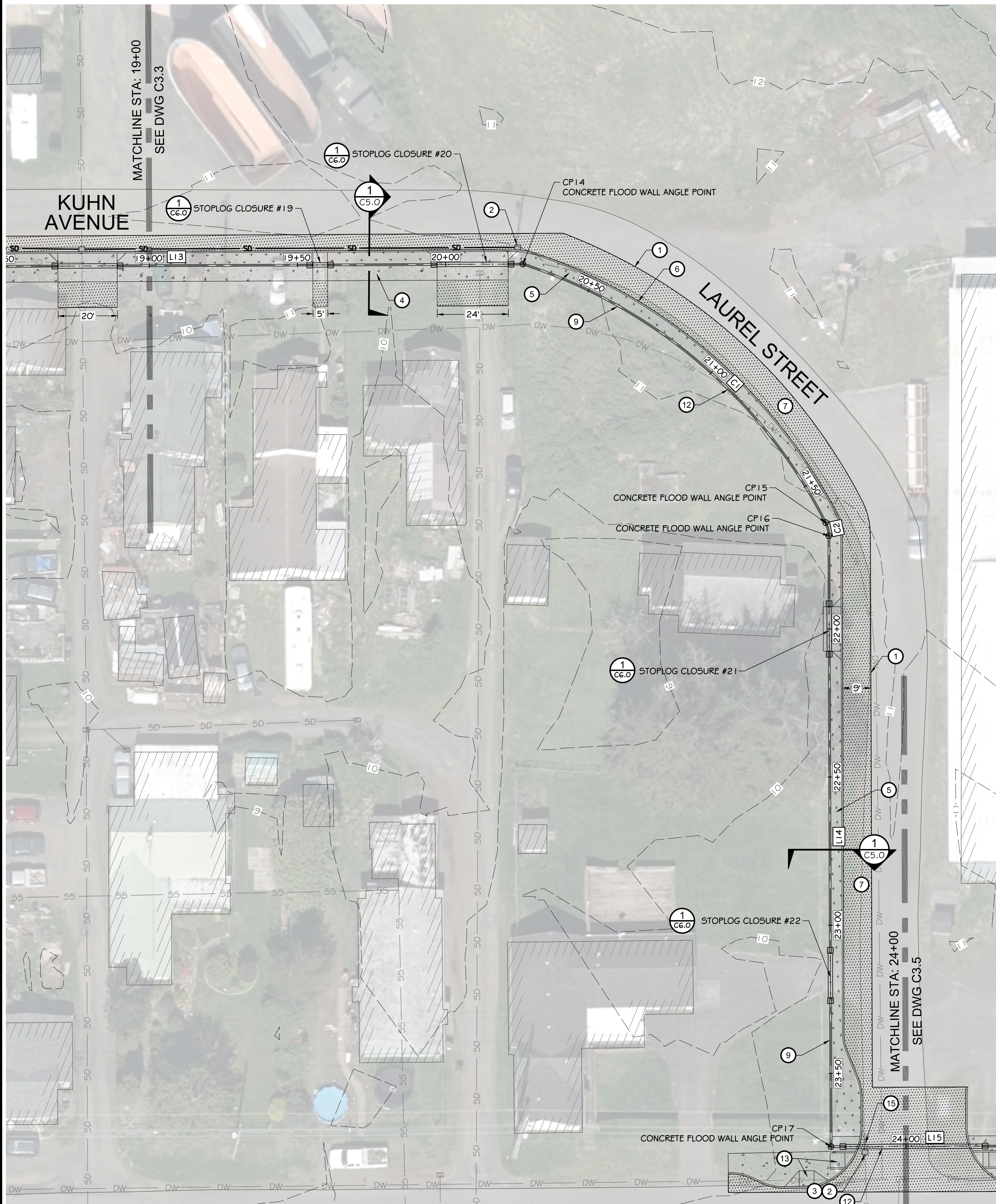
DESIGNED BY: SDS
DRAWN BY: NILA
CHECKED BY: SDS
APPROVED BY: MRS
DATE: 12-30-2020
JOB NO.: 1018190007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET
C3.3
SHEET 10 OF 58

PLOTTED: Dec 30, 2020 - 7:09:12pm PLOTTED BY: bkalet

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C3.1 THRU C3.5 - LEVEE PLANS

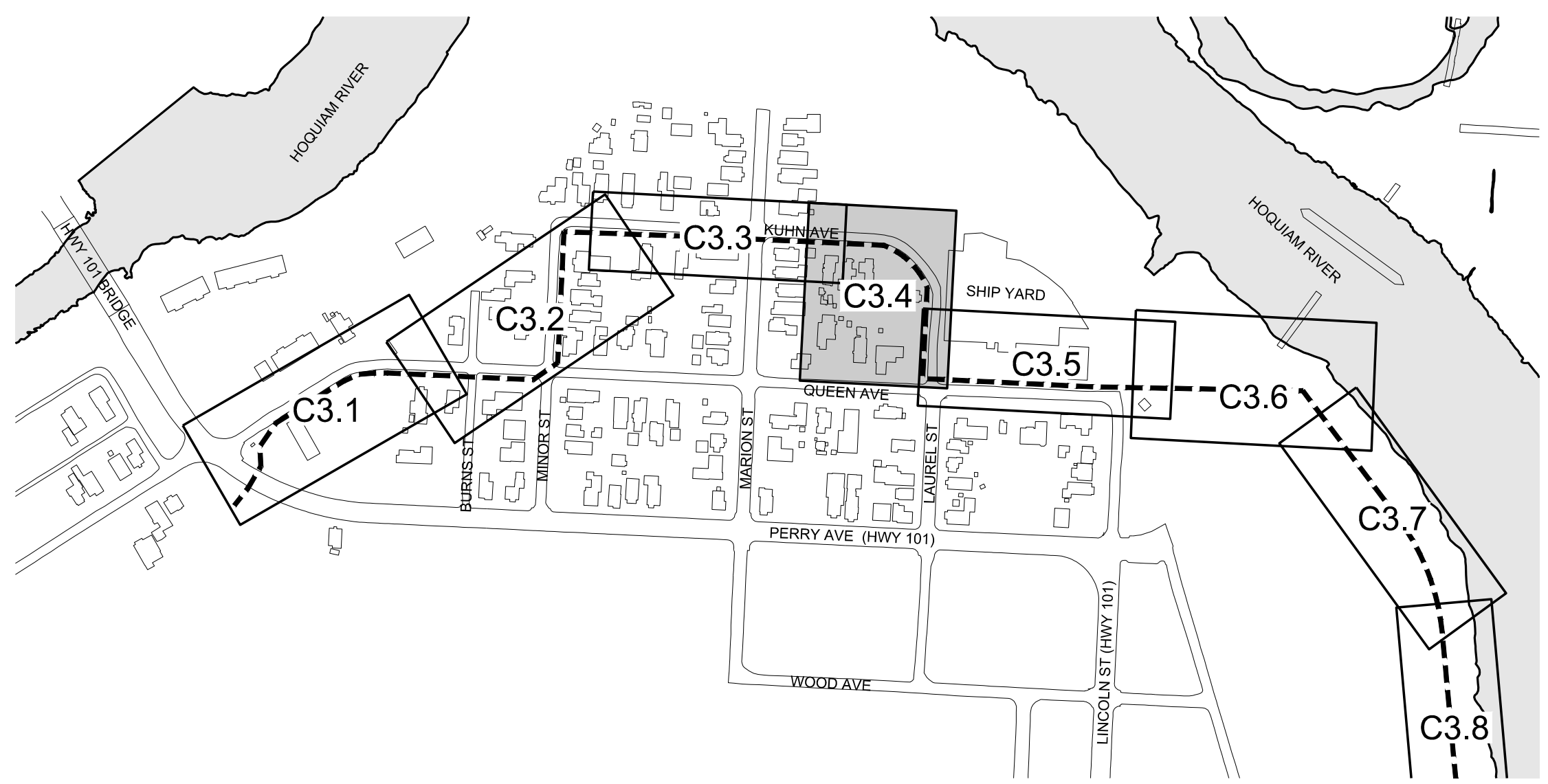
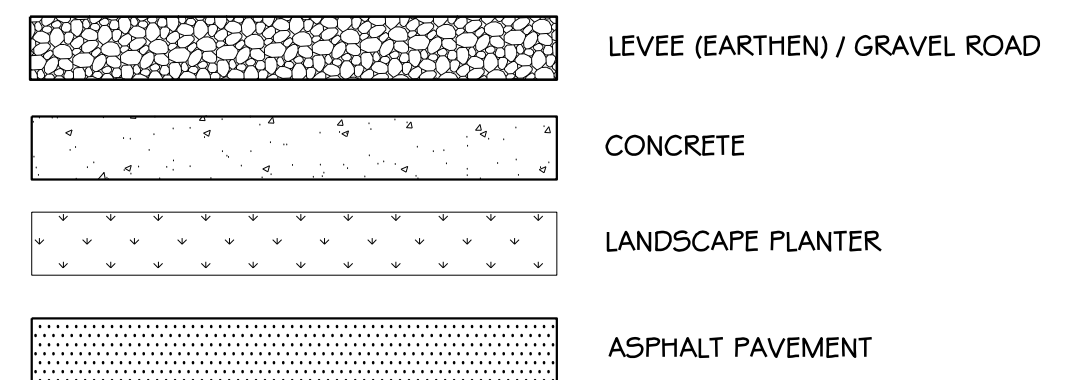


HORIZONTAL CONTROL									
LINE TABLE			CURVE TABLE				POINT TABLE		
LINE #	LENGTH	BEARING	CURVE #	RADIUS	LENGTH	Δ DELTA	POINT #	NORTHING	EASTING
L13	385.80'	S87° 14' 41"E	C1	175.00'	137.87'	045°08'24"	14	623,962.61	795,270.96
L14	206.09'	S02° 47' 43"W	C2	10.00'	4.67'	026°44'08"	15	623,870.16	795,368.42
L15	387.31'	S87° 12' 08"E					16	623,865.61	795,369.27
							17	623,659.77	795,359.22

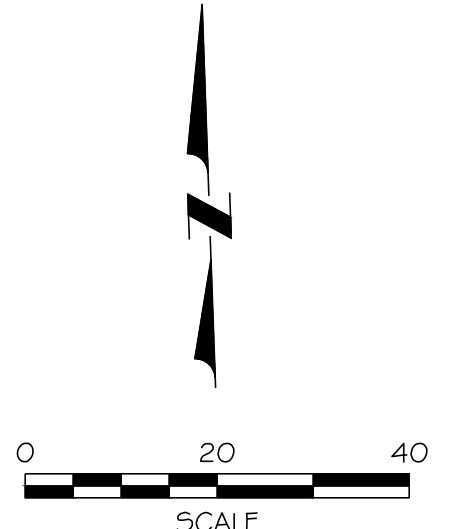
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LEGEND



KEY MAP
SCALE: 1" = 300'



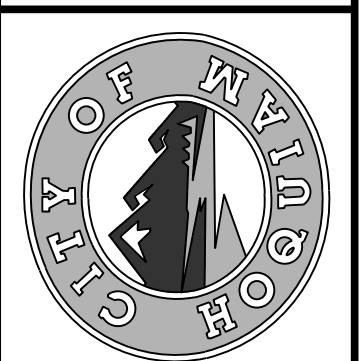
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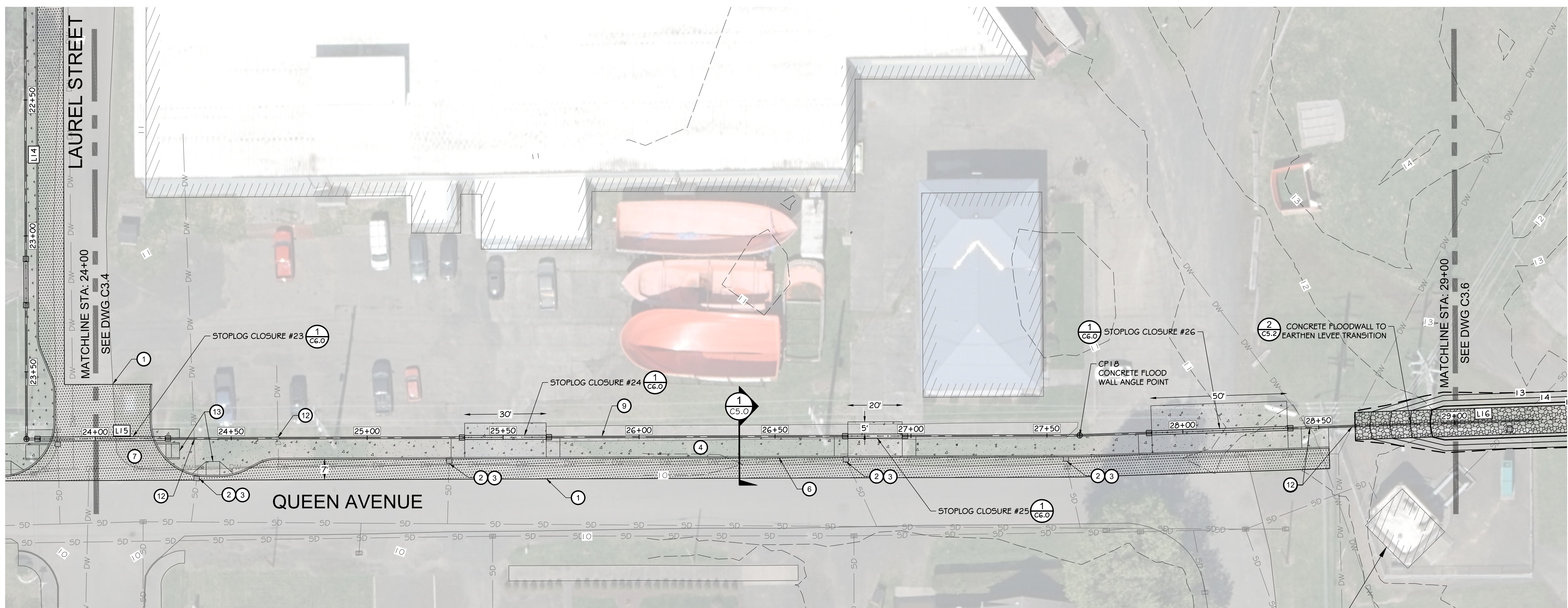
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DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	CHECKED BY	MRS
DATE	12-30-2020	JOB NO.	10181900007

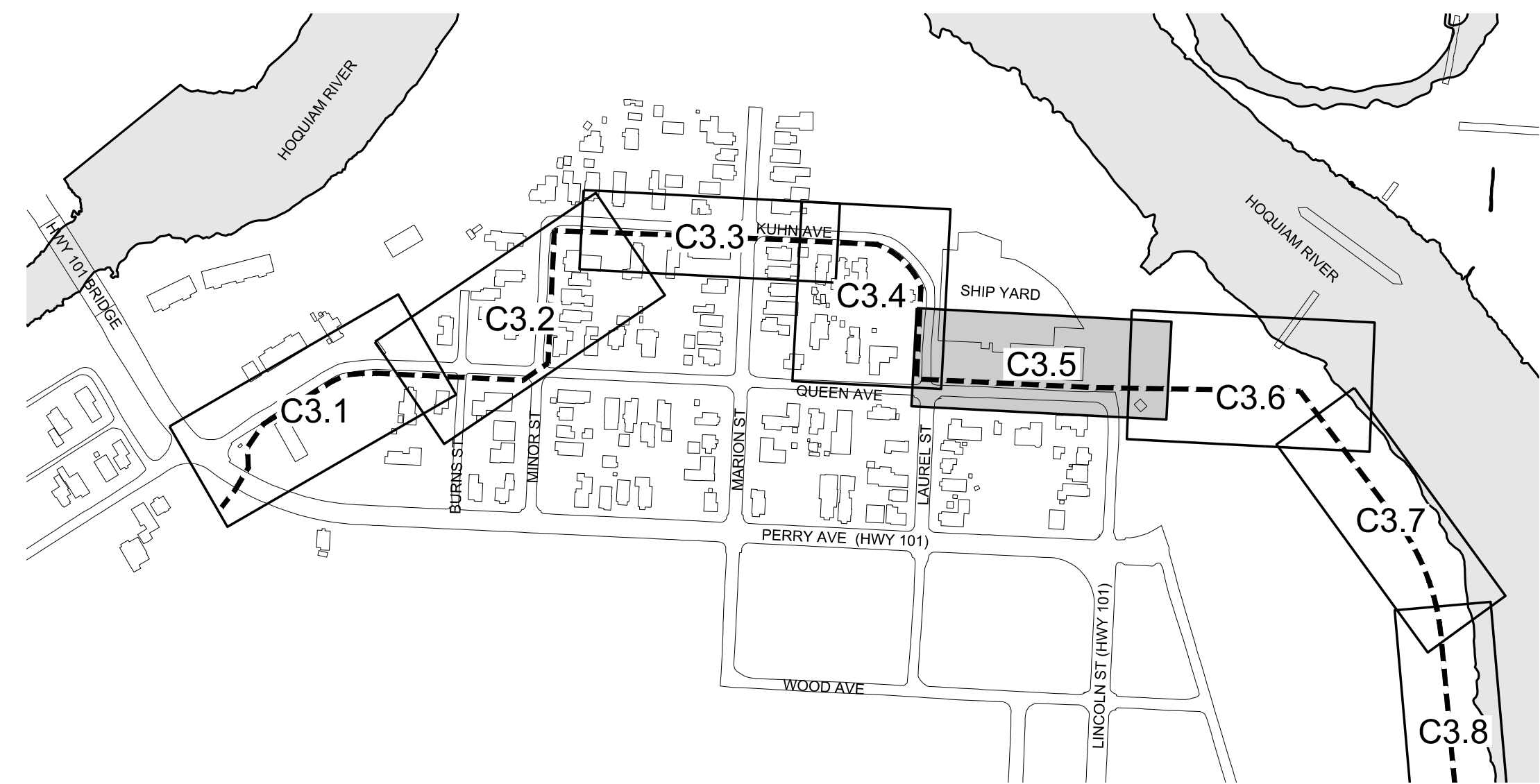
**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN**

CLOMR PLAN SET

C3.4
SHEET 11 OF 58



QUEEN ST PUMP STATION



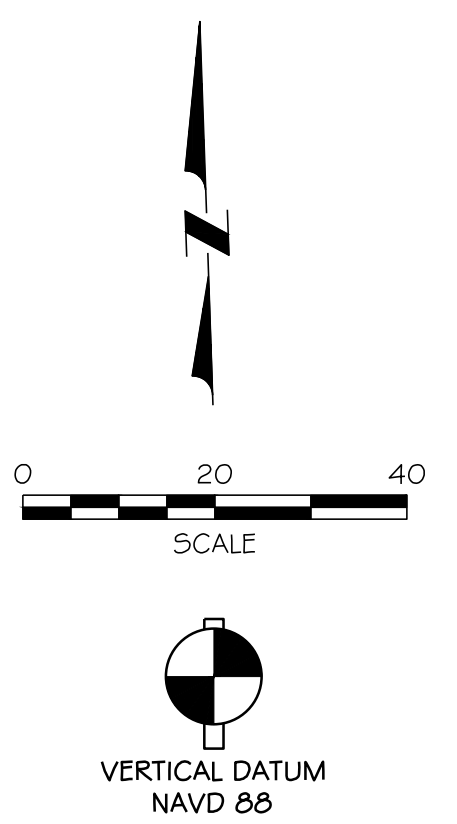
KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L14	206.09'	S02° 47' 43"W	17	623,659.77	795,359.22
L15	387.31'	S87° 12' 08"E	18	623,640.87	795,746.07
L16	477.40'	S88° 56' 08"E			

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

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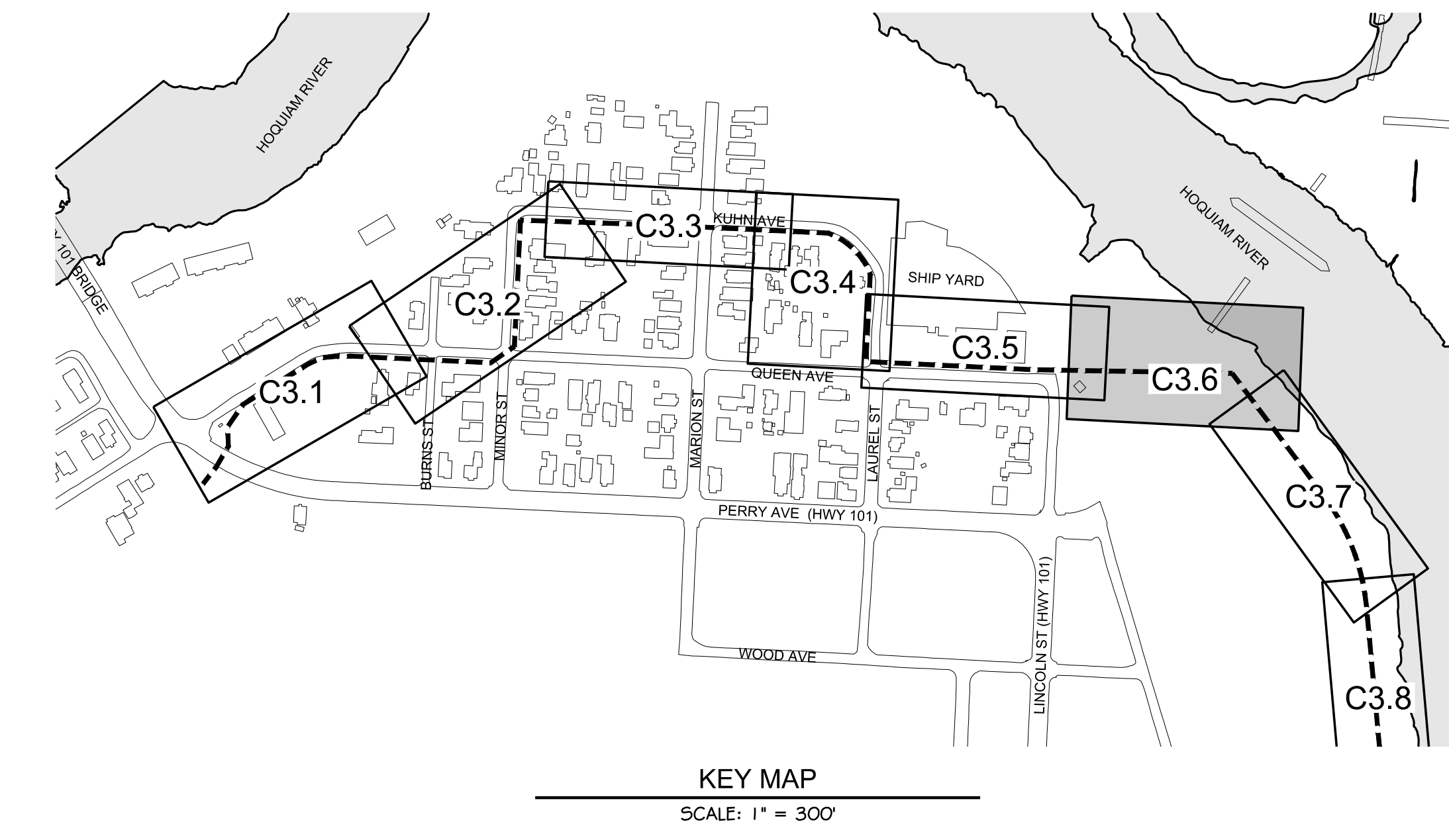
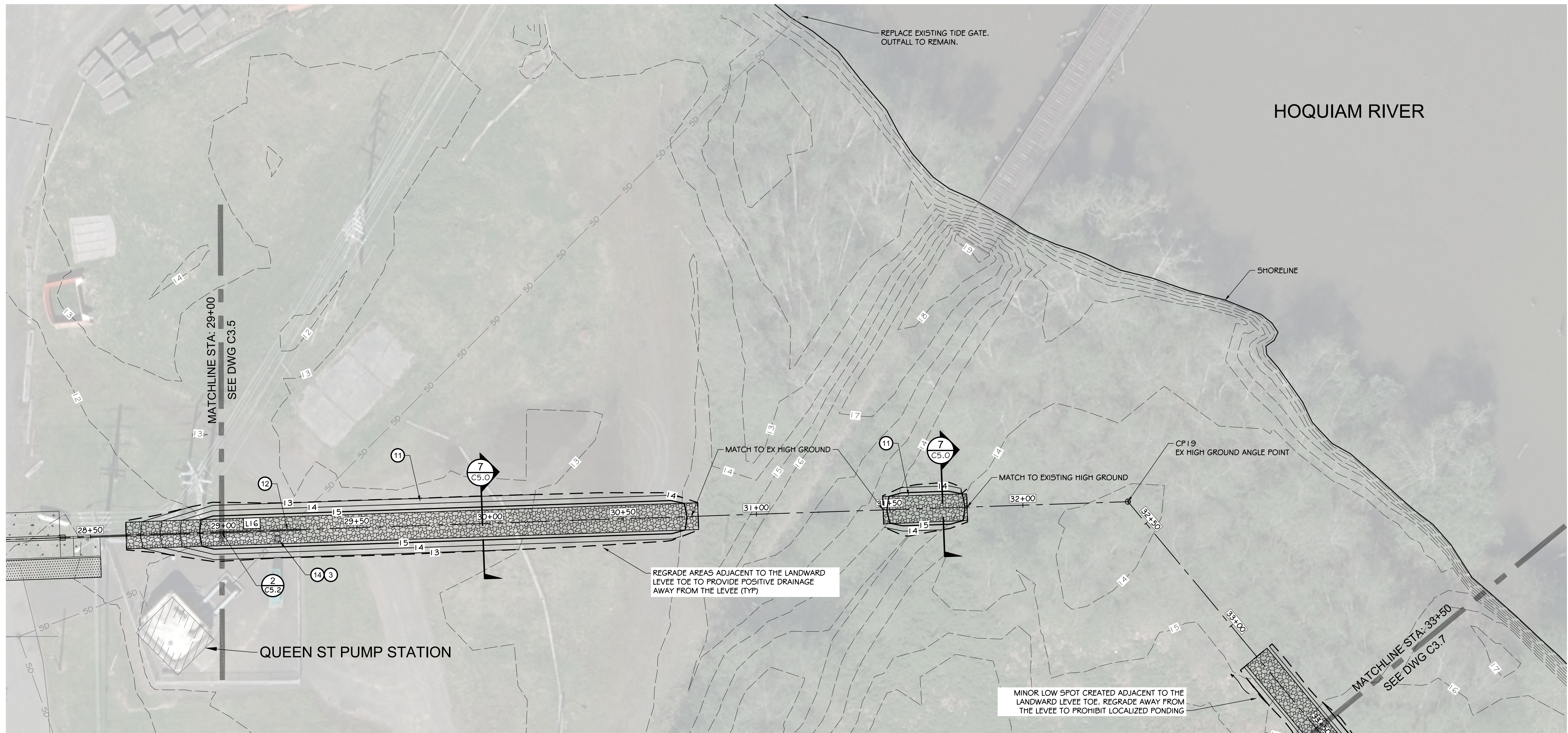
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<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p>	<p>LEVEE PLAN</p>
<p>CLOMR PLAN SET</p>	<p>C3.5</p>
<p>SHEET 12 OF 58</p>	<p>REVISION</p>

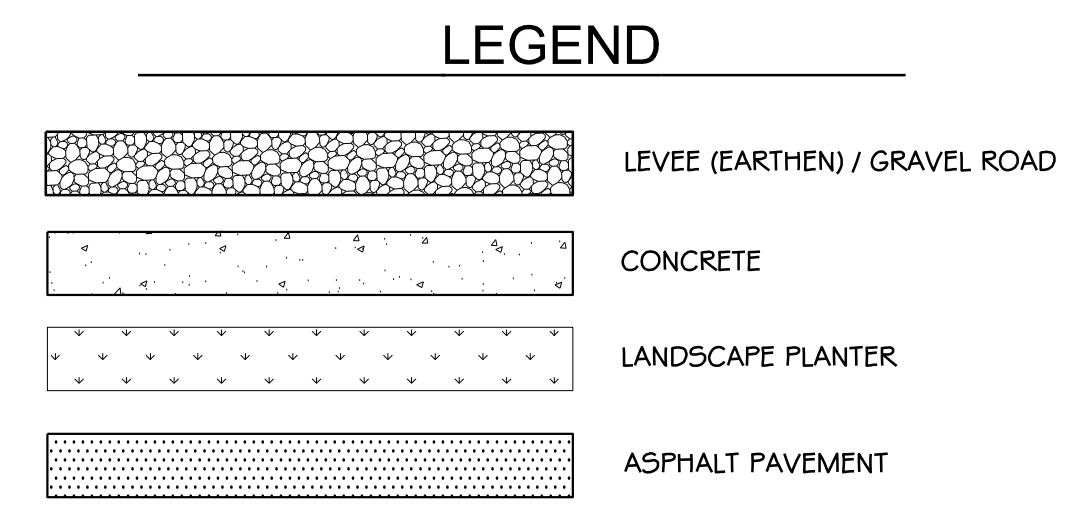
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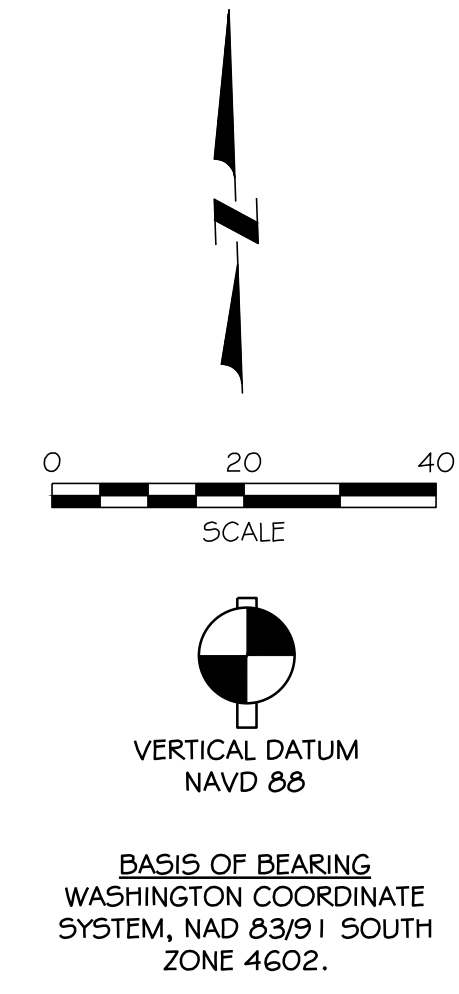
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CHECKED BY: SDS	APPROVED BY: MRS		



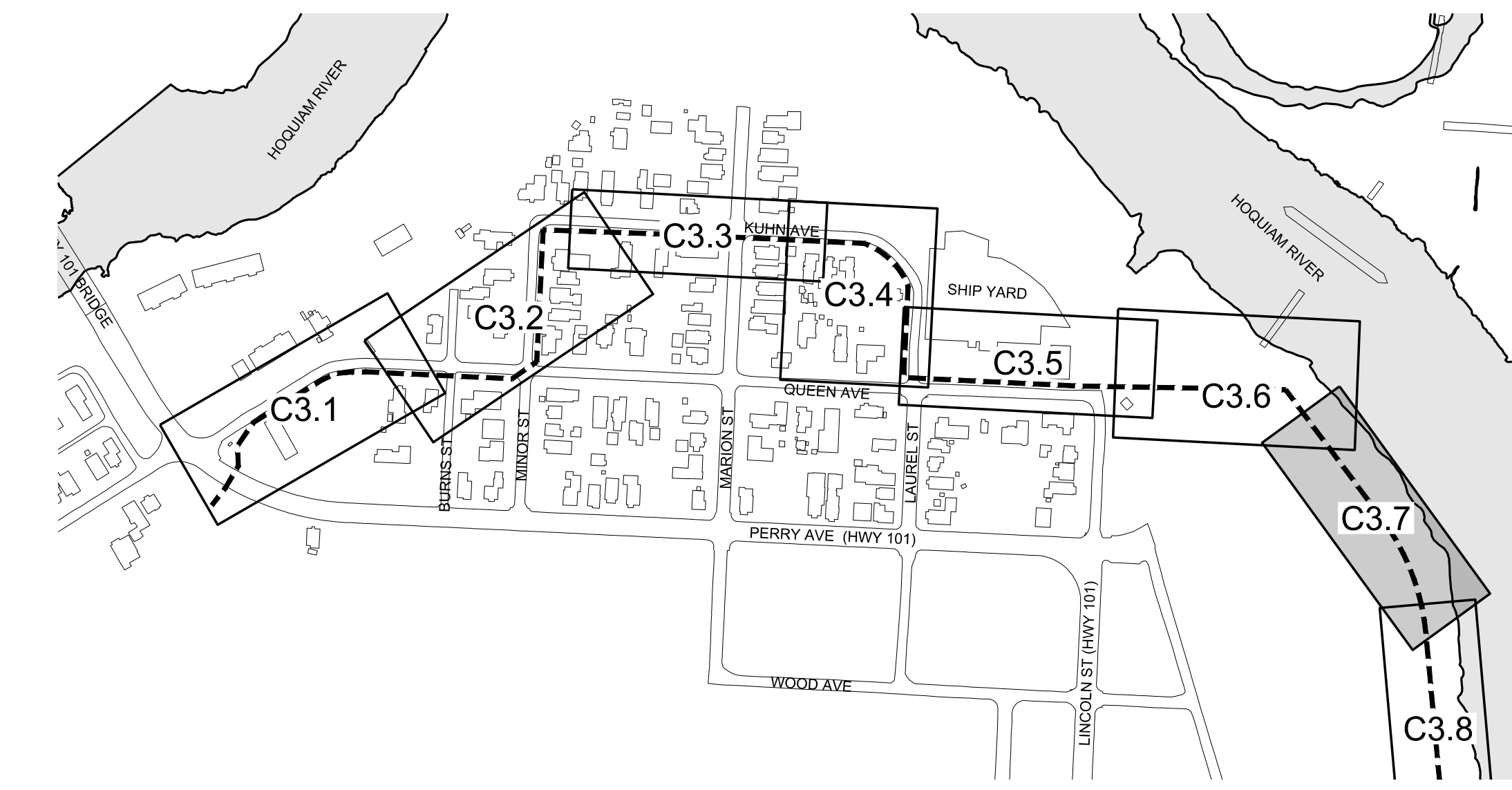
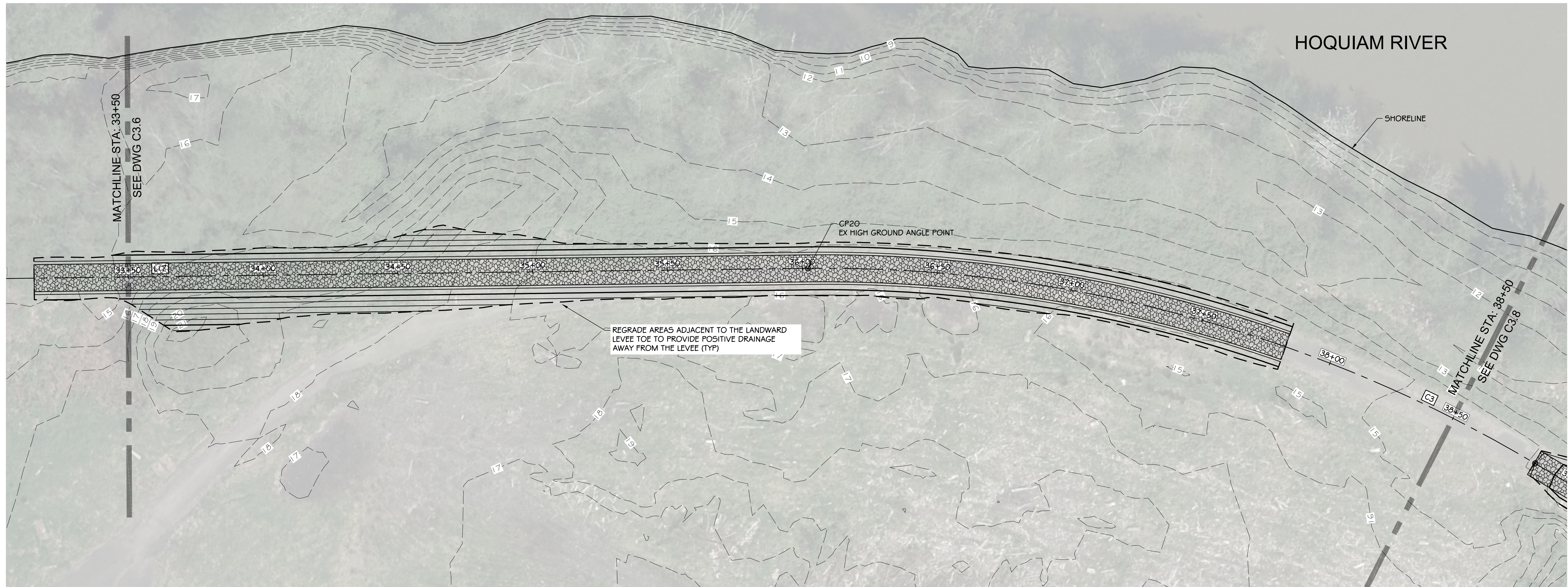
HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L16	477.40'	S88° 56' 08"E	19	623,632.00	796,223.39
L17	362.60'	S36° 43' 22"E			



- CONSTRUCTION NOTES:**
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NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON		LEVEE PLAN	
CLOMR PLAN SET			
C3.6		SHEET 13 OF 58	
DESIGNED BY NILA SDS	CHECKED BY SDS	DATE 12-30-2020	JOB NO. 10181900007
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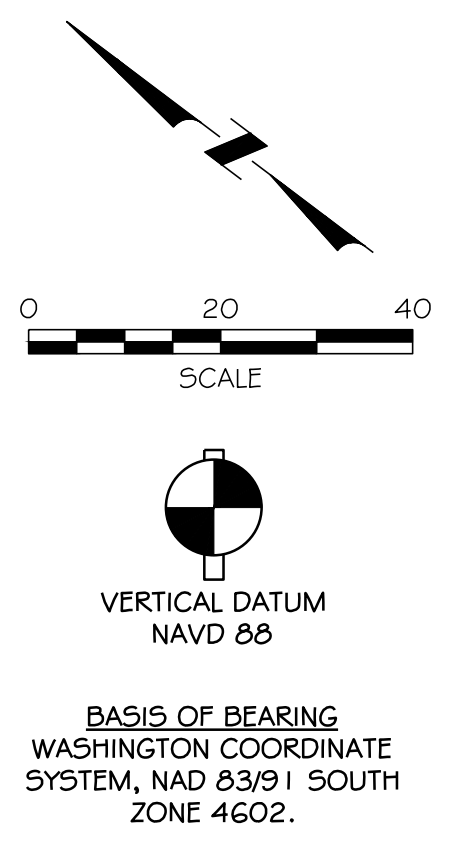


HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L17	362.60'	536° 43' 22"E	20	623,341.36	796,440.20	C3	515.00'	282.79'	031°27'40"
			21	623,080.65	796,540.24				

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
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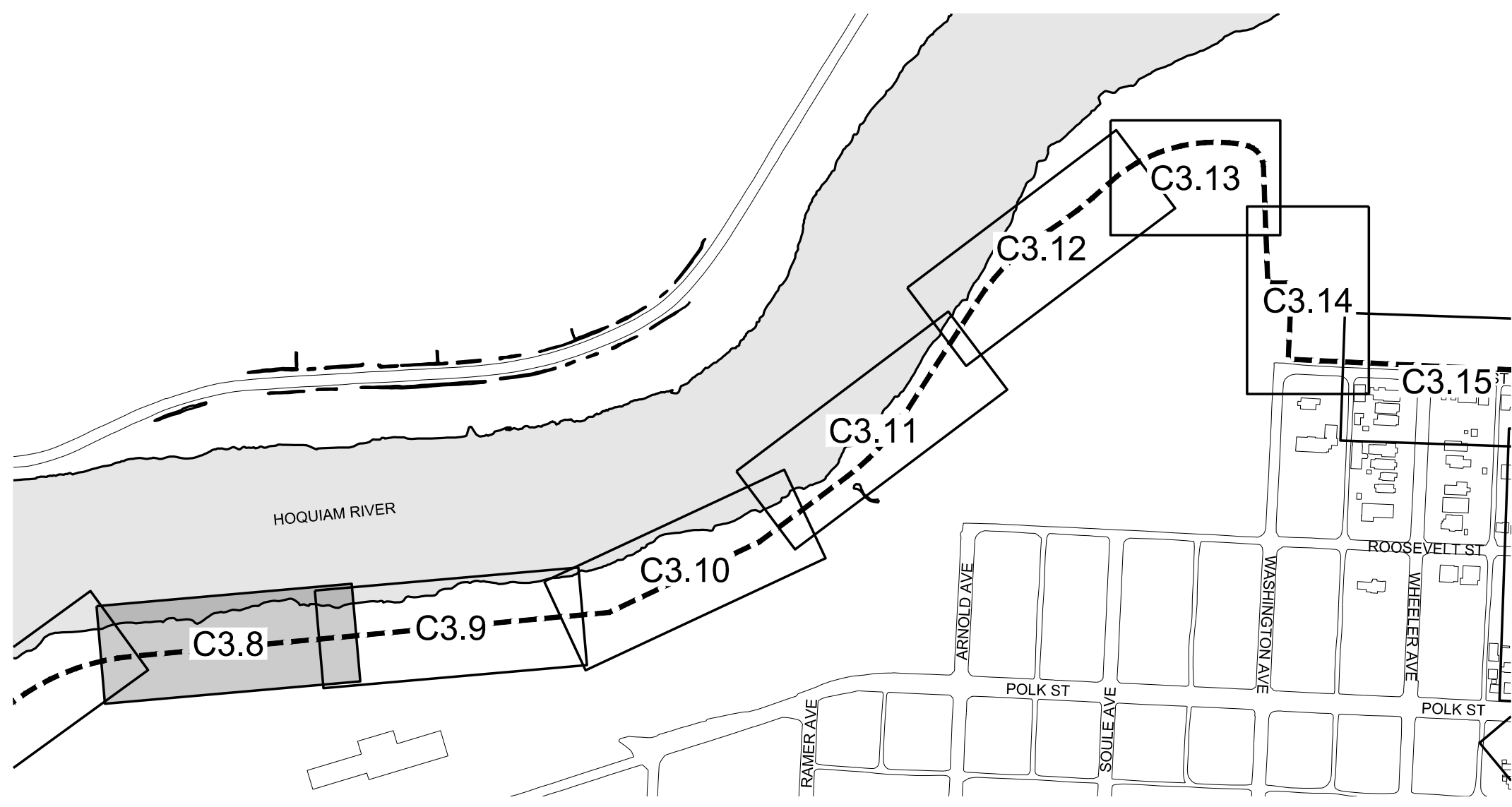
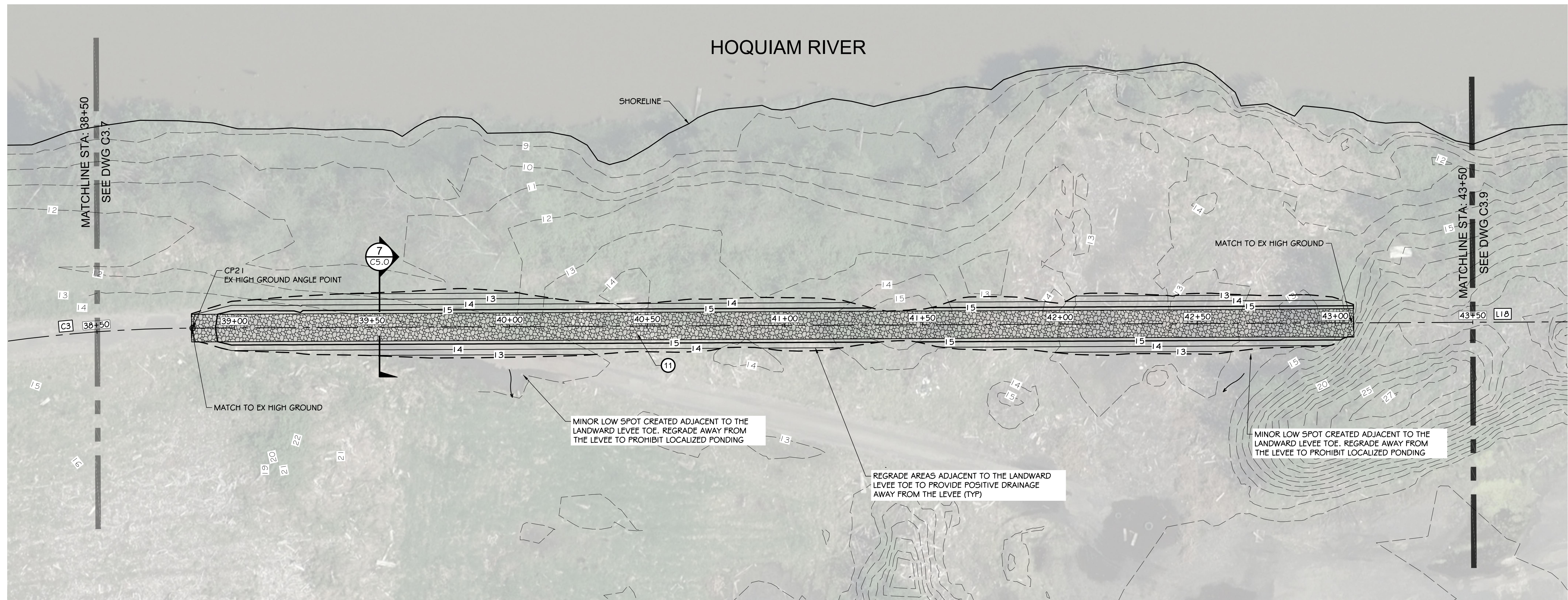
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APPROVED BY:			

NORTH SHORE LEVEE WEST SEGMENT
 CLOMR PLANS
 HOQUIAM, WASHINGTON
LEVEE PLANS



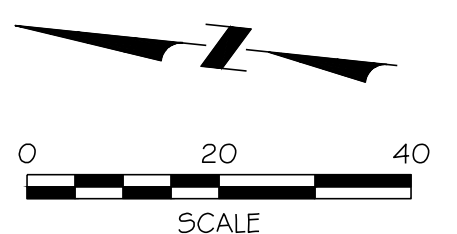
KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L18	1,061.19'	S05° 15' 42"E	21	623,080.65	796,540.24	C3	515.00'	282.79'	031°27'40"

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
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 - 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



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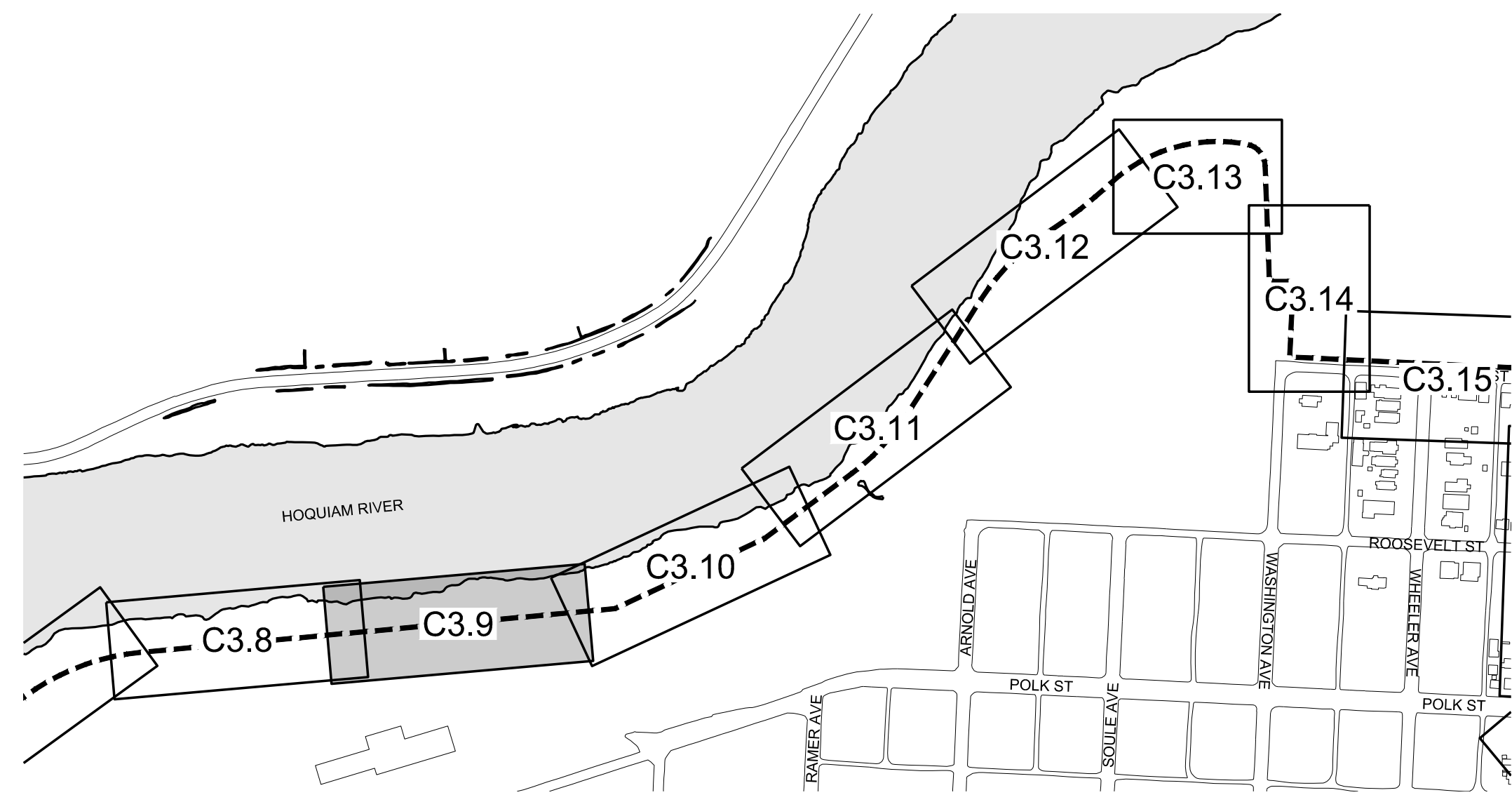
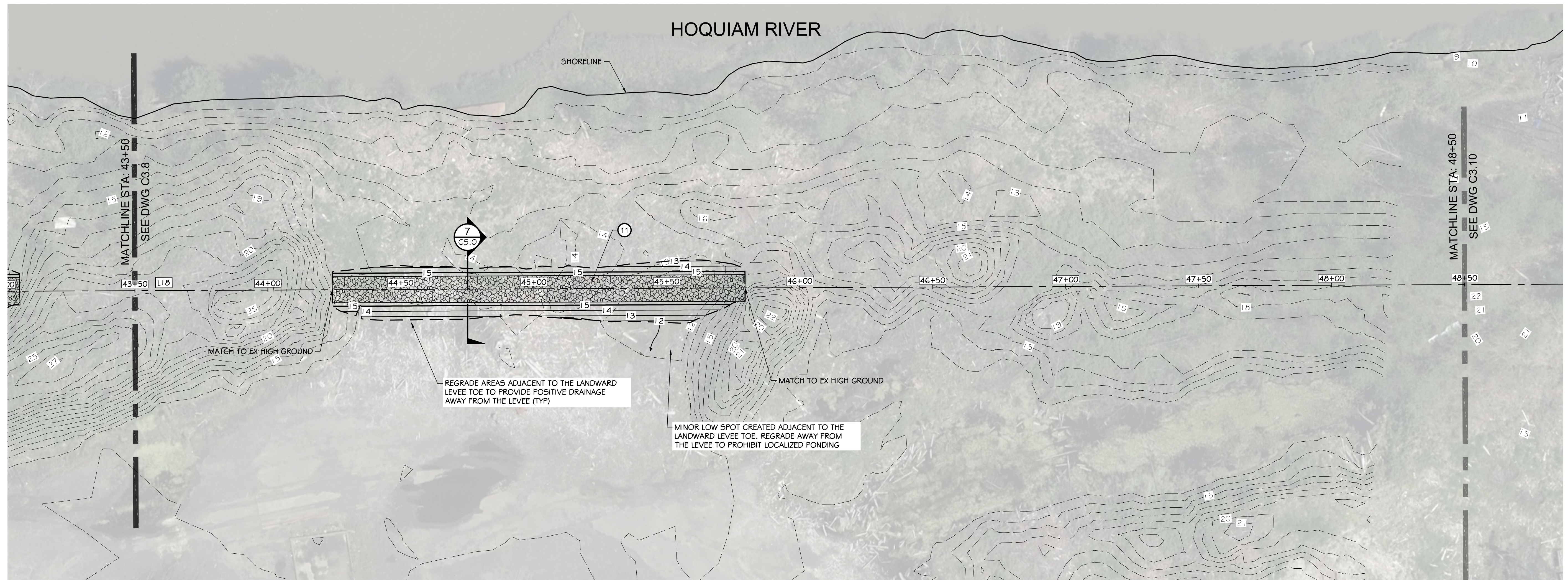
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DESIGNED BY NLA	DESIGNED BY SDS	DATE 12-30-2020	JOB NO. 10181900007
CHECKED BY SDS	APPROVED BY MRS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

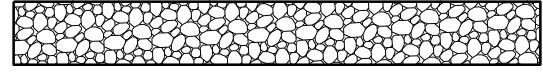
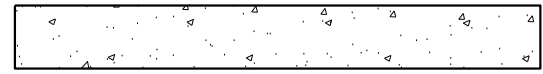
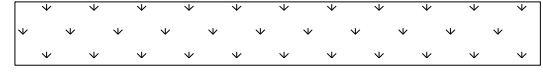

CLOMR PLAN SET
C3.8
SHEET 15 OF 58

HOQUIAM RIVER



KEY MAP
SCALE: 1" = 300'

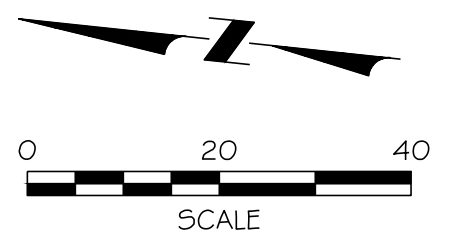
LEGEND

-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

HORIZONTAL CONTROL		
LINE TABLE		
LINE #	LENGTH	BEARING
L18	1,061.19'	505° 15' 42"E

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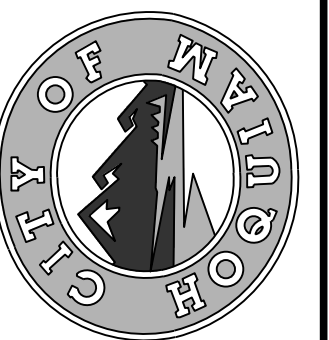
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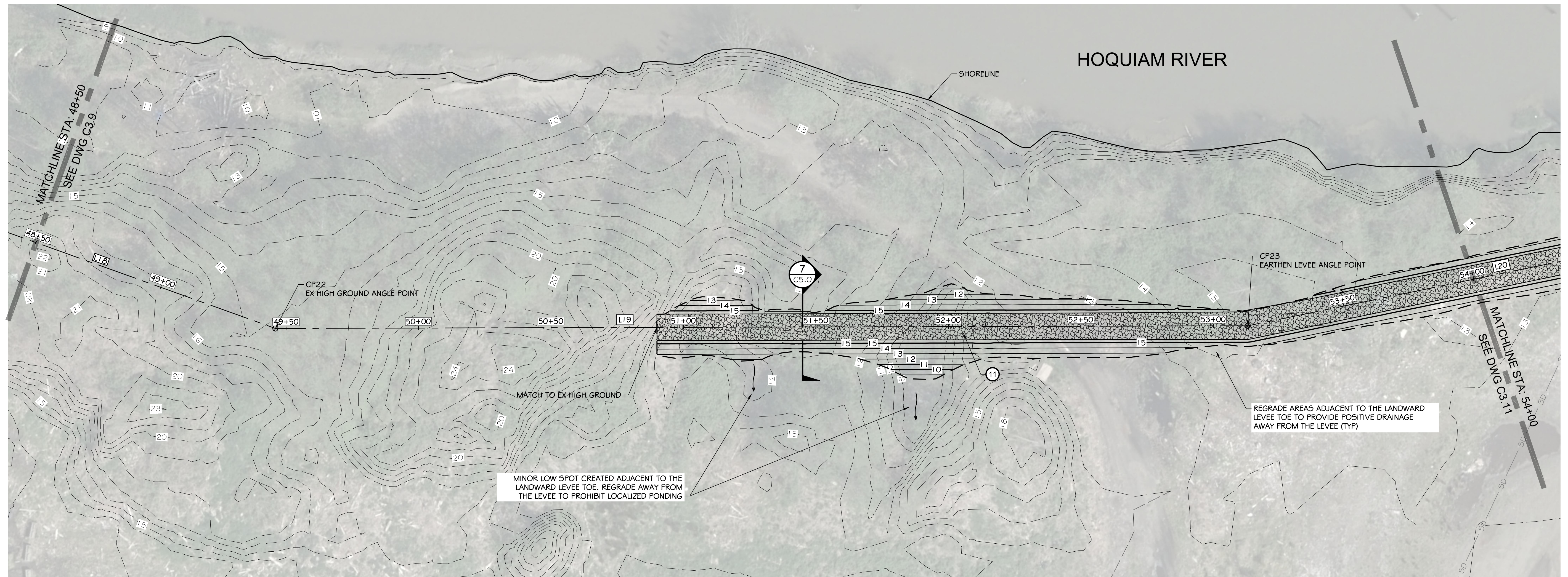
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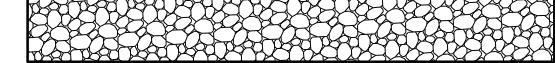
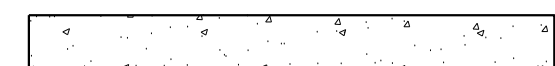
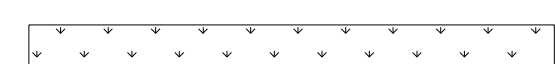
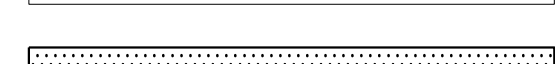
DESIGNED BY NILA SDS	APPROVED BY MRS MRS	DATE 12-30-2020	JOB NO. 10181900007
DRAWN BY SDS	CHECKED BY SDS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

PLOTTED: Dec 31, 2020 - 9:39:12:012 PLOTTED BY: bkakel

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C3.6 THRU C3.10 - LEVEE PLANS



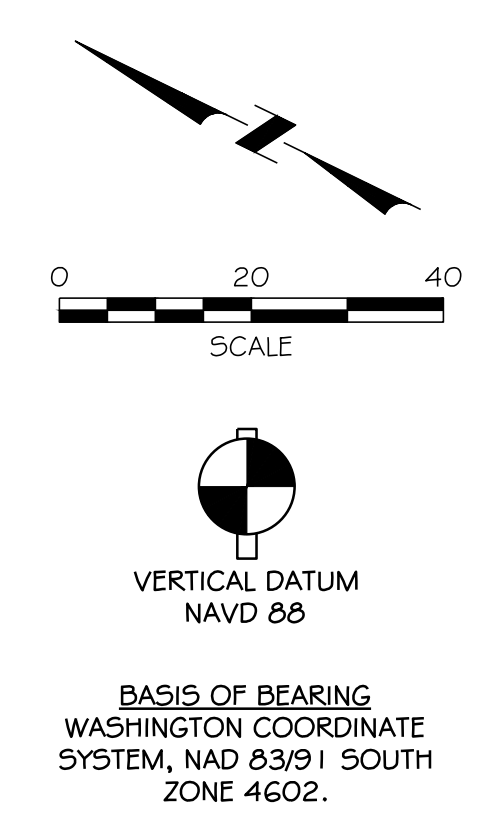
-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

HORIZONTAL CONTROL

LINE TABLE		
LINE #	LENGTH	BEARING
L18	1,061.19'	505° 15' 42"E
L19	366.96'	525° 09' 23"E
L20	243.84'	536° 38' 30"E

CONSTRUCTION NOTES:

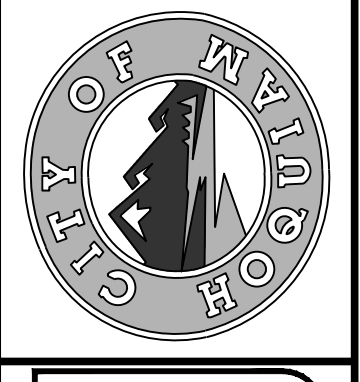
- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
- 3 CONNECT TO EXISTING UTILITY
- 4 CEMENT CONCRETE SIDEWALK
- 5 LANDSCAPE PLANTER
- 6 CEMENT CONCRETE CURB
- 7 ASPHALT PAVEMENT
- 8 SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
- 9 CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
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- 11 EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
- 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
- 13 CEMENT CONCRETE ADA RAMP
- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



NO	DATE	BY	CHKD	APPR	REVISION



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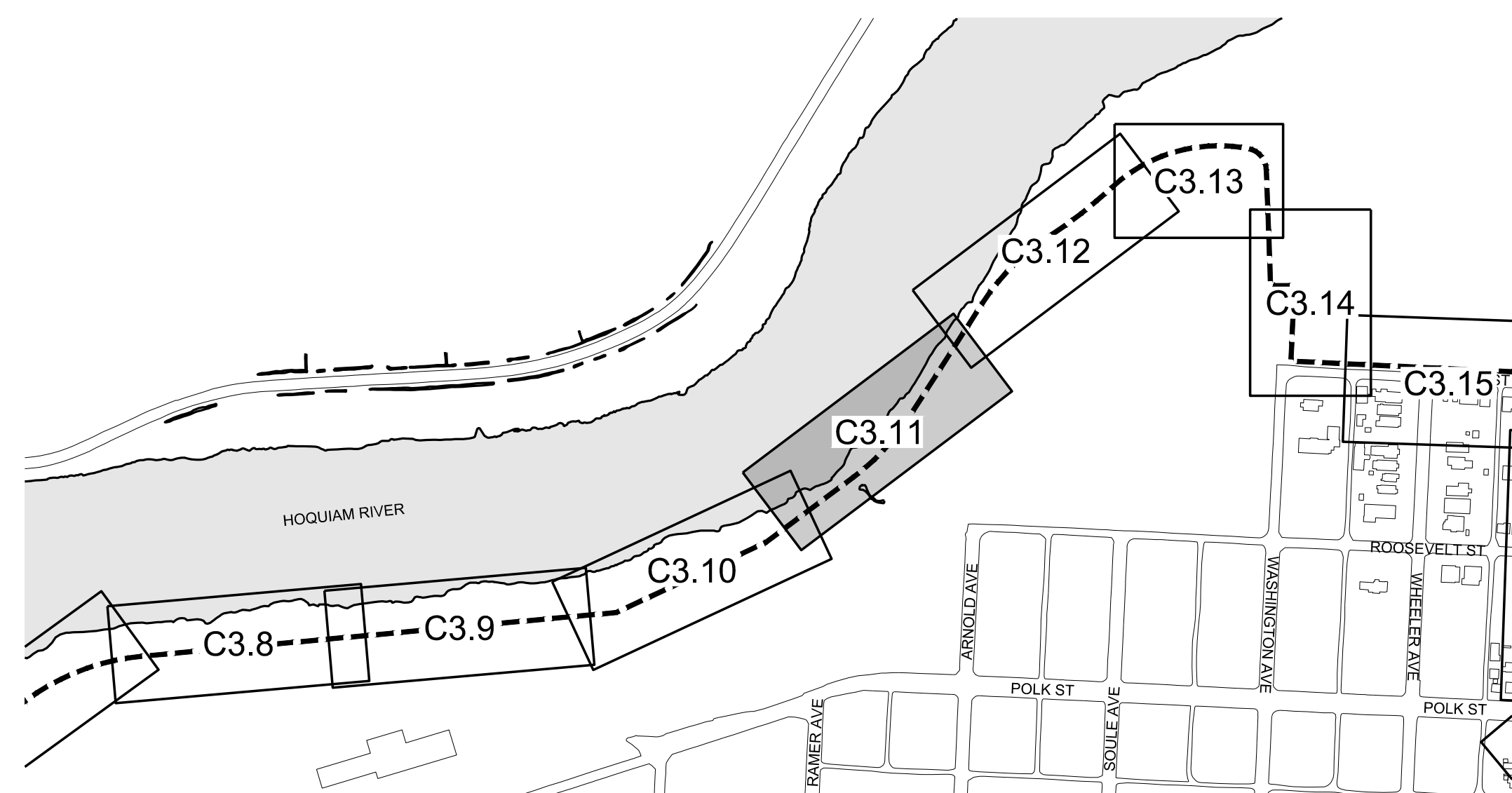
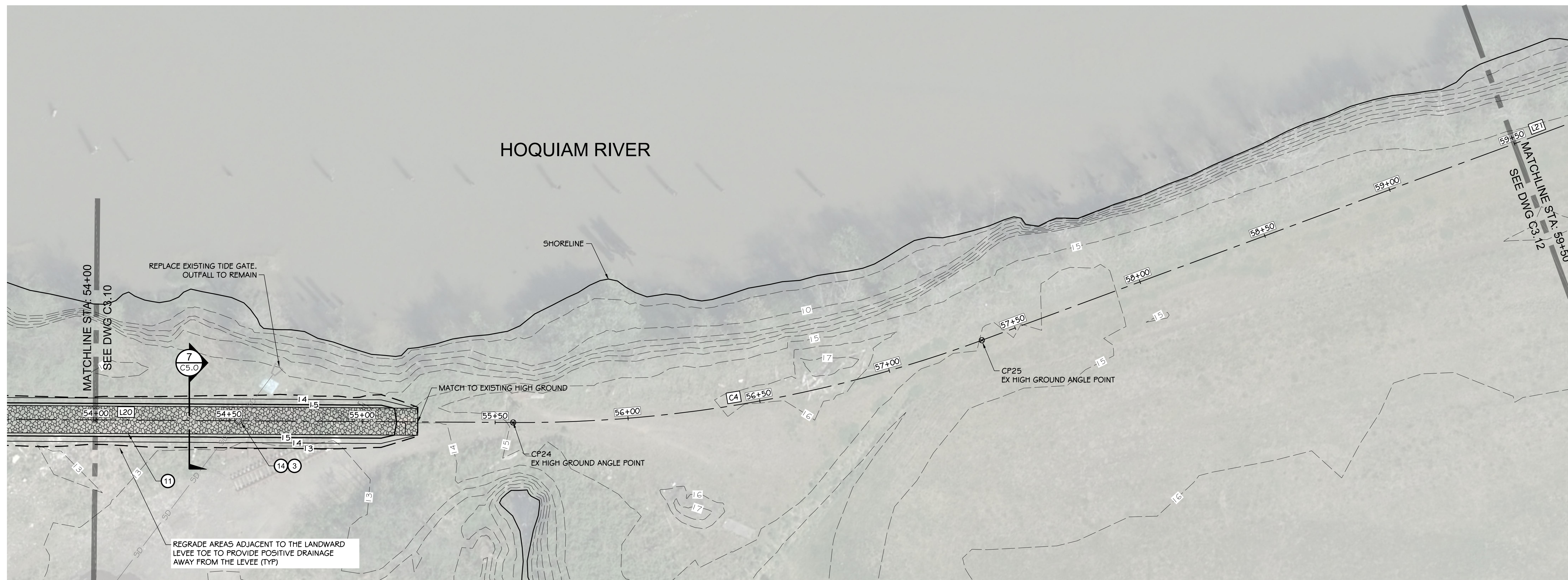
DESIGNED BY: SDS	DATE: 12-30-2020
CHECKED BY: MRS	JOB NO: 10181900007
DRAWN BY: NILA	
APPROVED BY: SDS	

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
 HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.10
 SHEET 17 OF 58

BASIS OF BEARING
 WASHINGTON COORDINATE
 SYSTEM, NAD 83/91 SOUTH
 ZONE 4602.



KEY MAP
SCALE: 1" = 300'

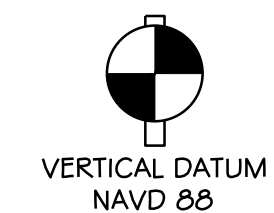
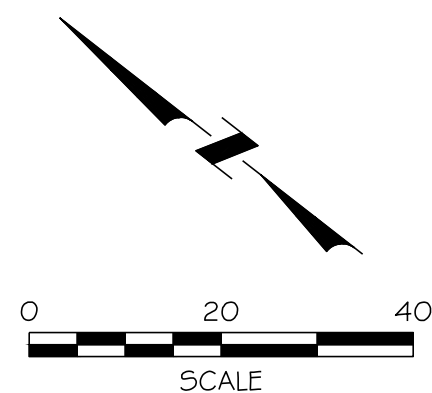
HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L20	243.84'	536° 38' 30"E	24	621,496.13	796,939.07	C4	500.00'	179.83'	020°36'26"
L21	305.33'	557° 14' 55"E	25	621,374.02	797,069.76				

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
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- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



BASIS OF BEARING
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ZONE 4602.

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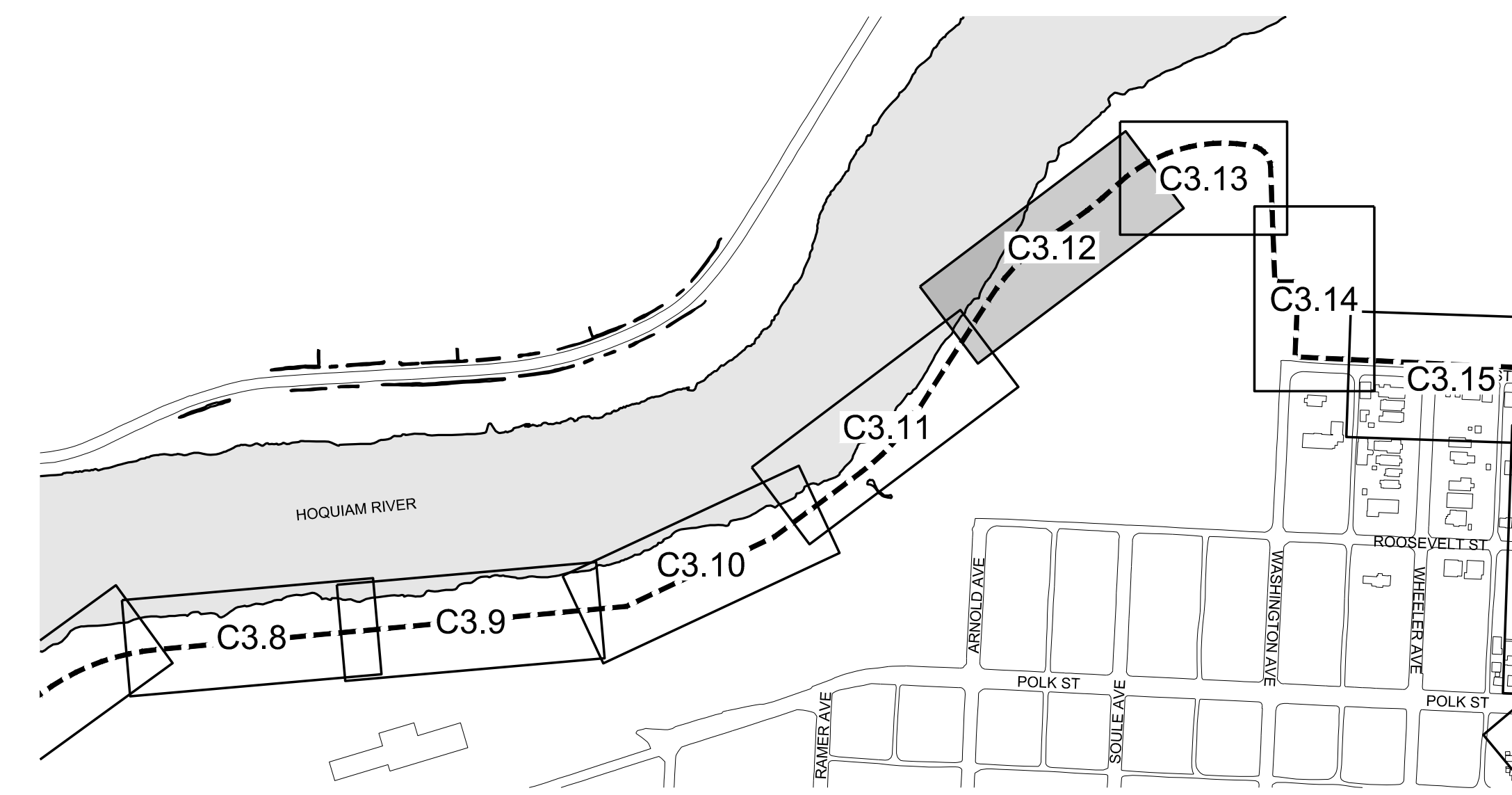
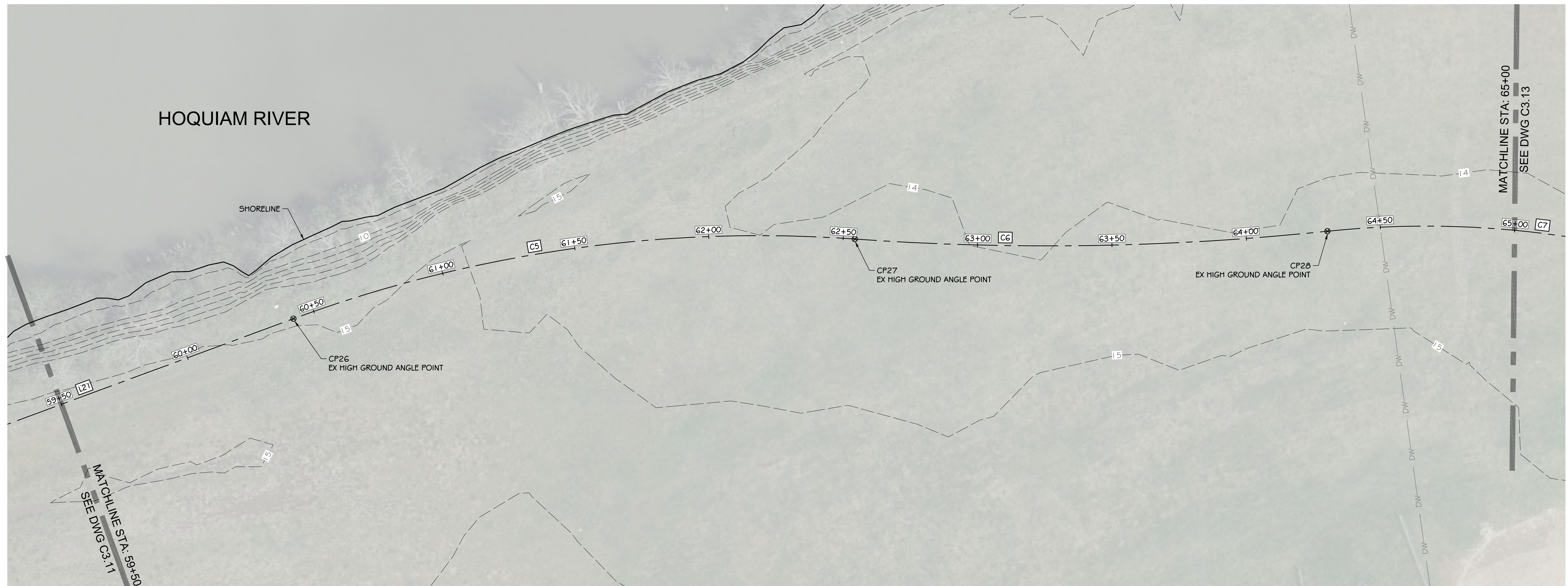
CALL
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WORKING DAYS
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DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	CHECKED BY	MRS
APPROVED BY	SDS	JOB NO.	10181900007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.11
SHEET 18 OF 58



KEY MAP
SCALE: 1" = 300'

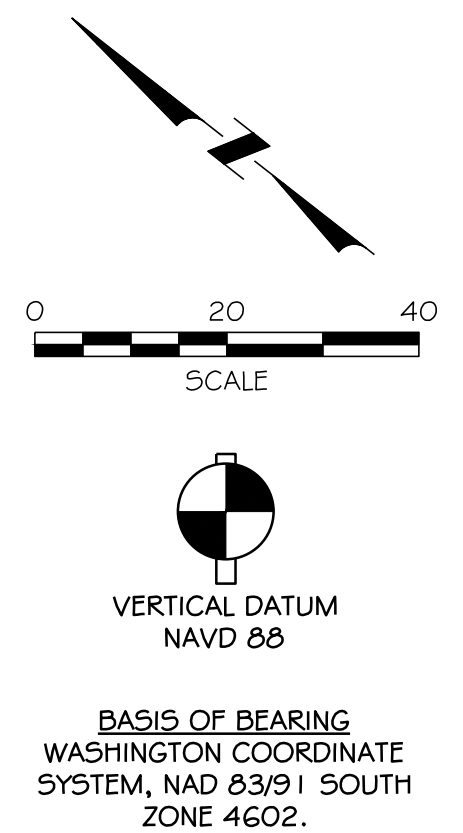
HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L21	305.33'	557° 14' 55"E	26	621,208.84	797,326.55	C5	500.00'	212.40'	024°20'23"
			27	621,059.98	797,475.82	C6	1,000.00'	175.95'	010°04'52"
			28	620,921.41	797,583.89	C7	350.00'	319.72'	052°20'20"

LEGEND

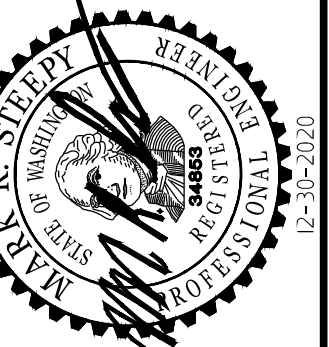
- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

CONSTRUCTION NOTES:

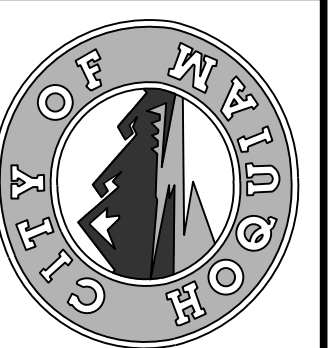
- 1 SAWCUT / MATCH EXISTING
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- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



NO	DATE	BY	CHKD	APPR	REVISION



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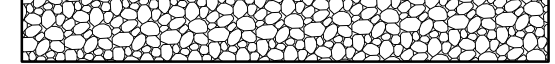
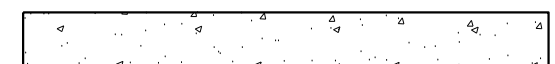
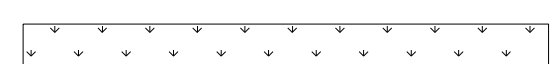
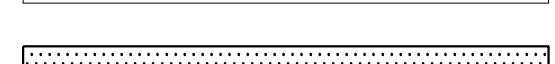
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DESIGNED BY SDS	APPROVED BY MRS	DATE 12-30-2020	JOB NO. 10181900007
DRAWN BY NLA	CHECKED BY SDS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLANS

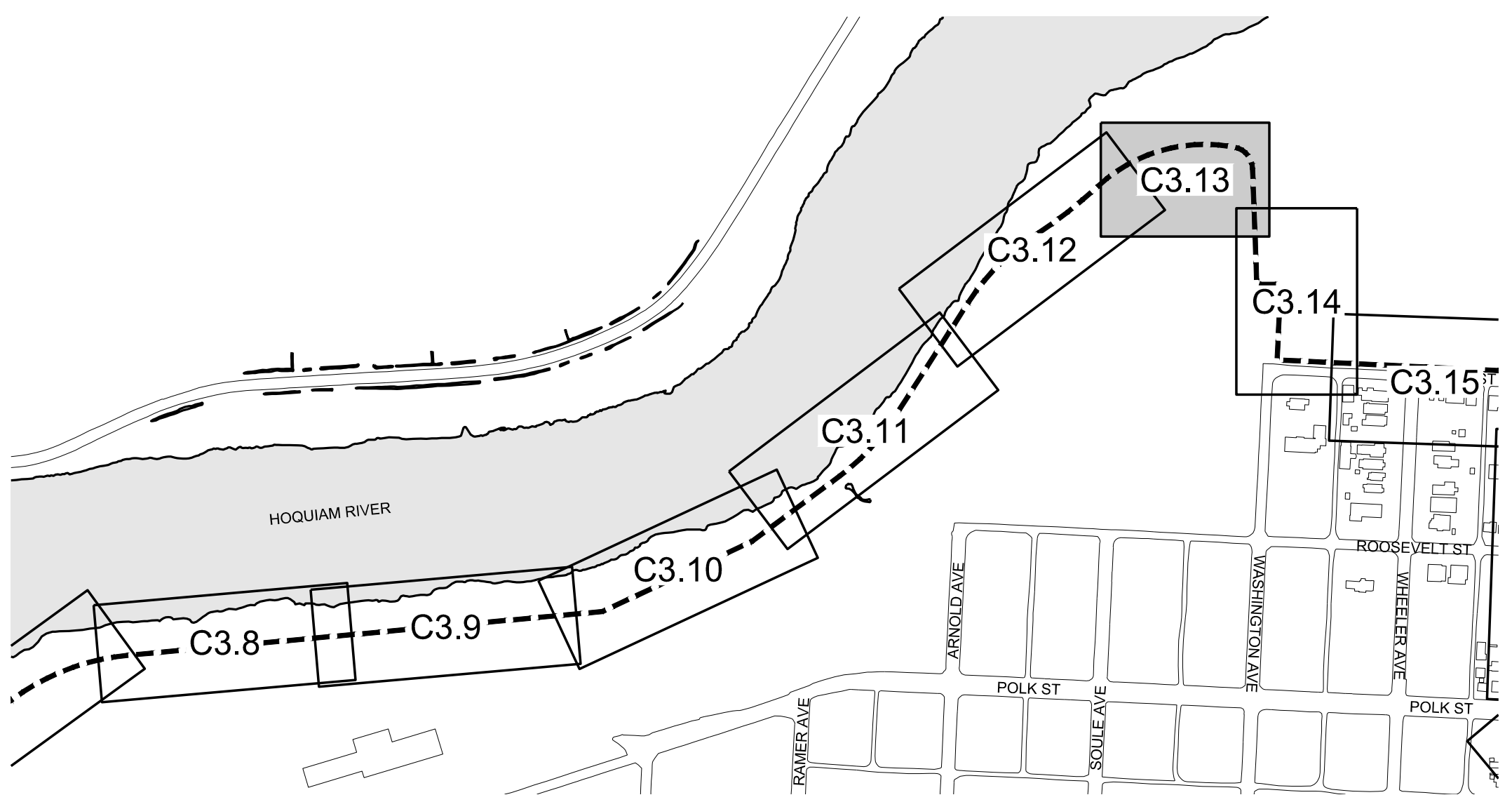


LEGEND

-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

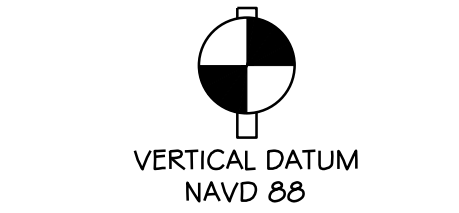
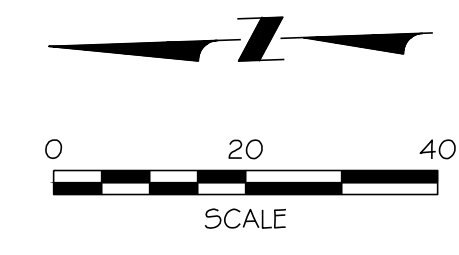
CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
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- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L22	8.10'	S09° 20' 55"W	29	620,625.90	797,673.22	C7	350.00'	319.72'	052°20'20"
L23	248.76'	S87° 54' 14"W	30	620,617.91	797,671.91	C8	50.00'	68.55'	078°33'19"
			31	620,576.07	797,624.40				

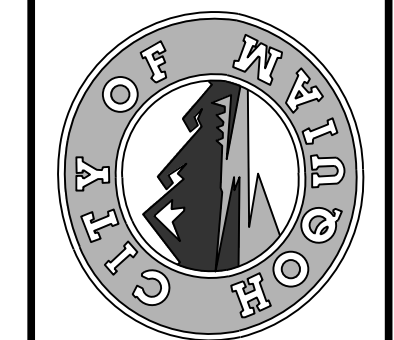


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SYSTEM, NAD 83/91 SOUTH
ZONE 4602.

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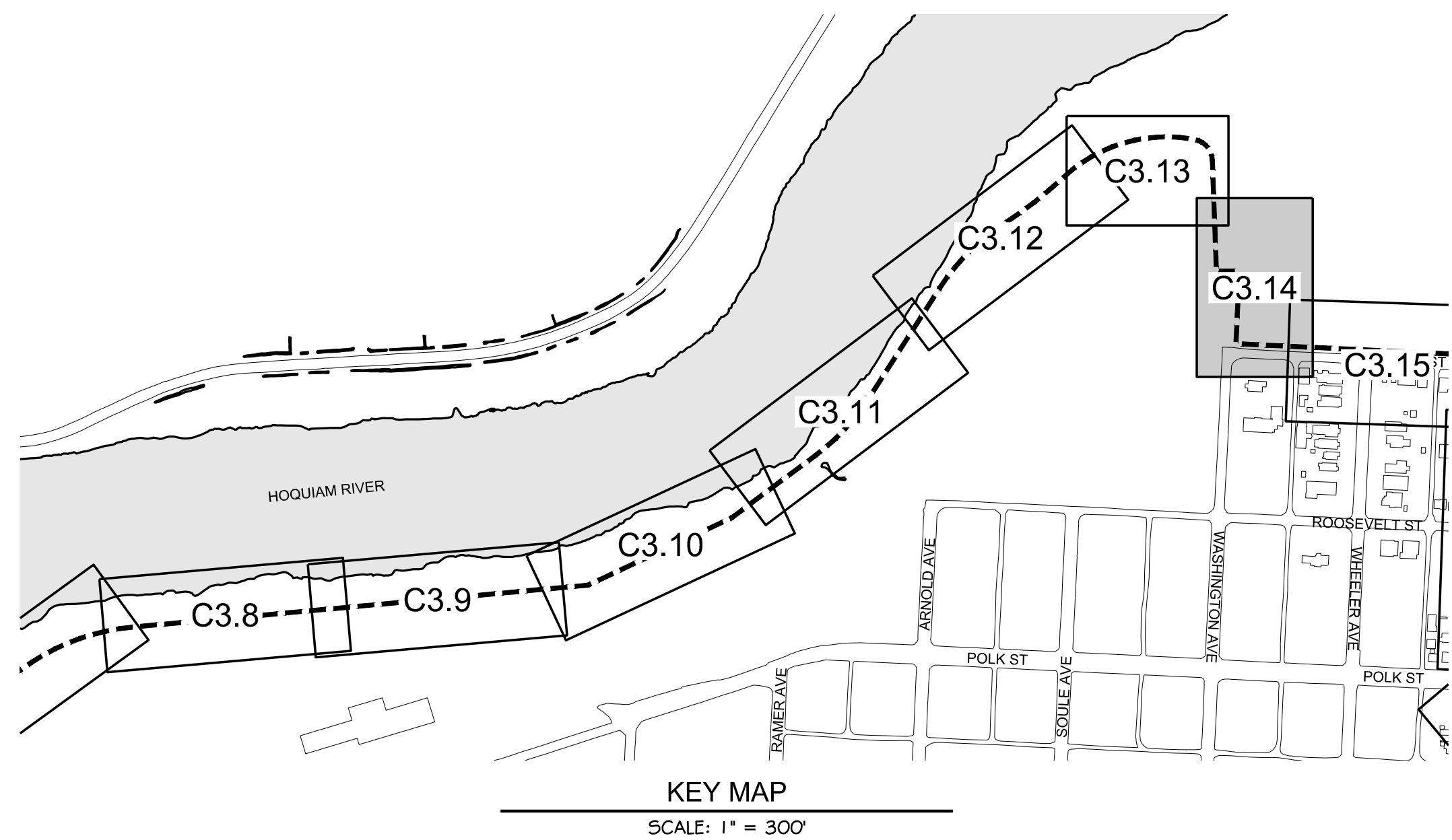
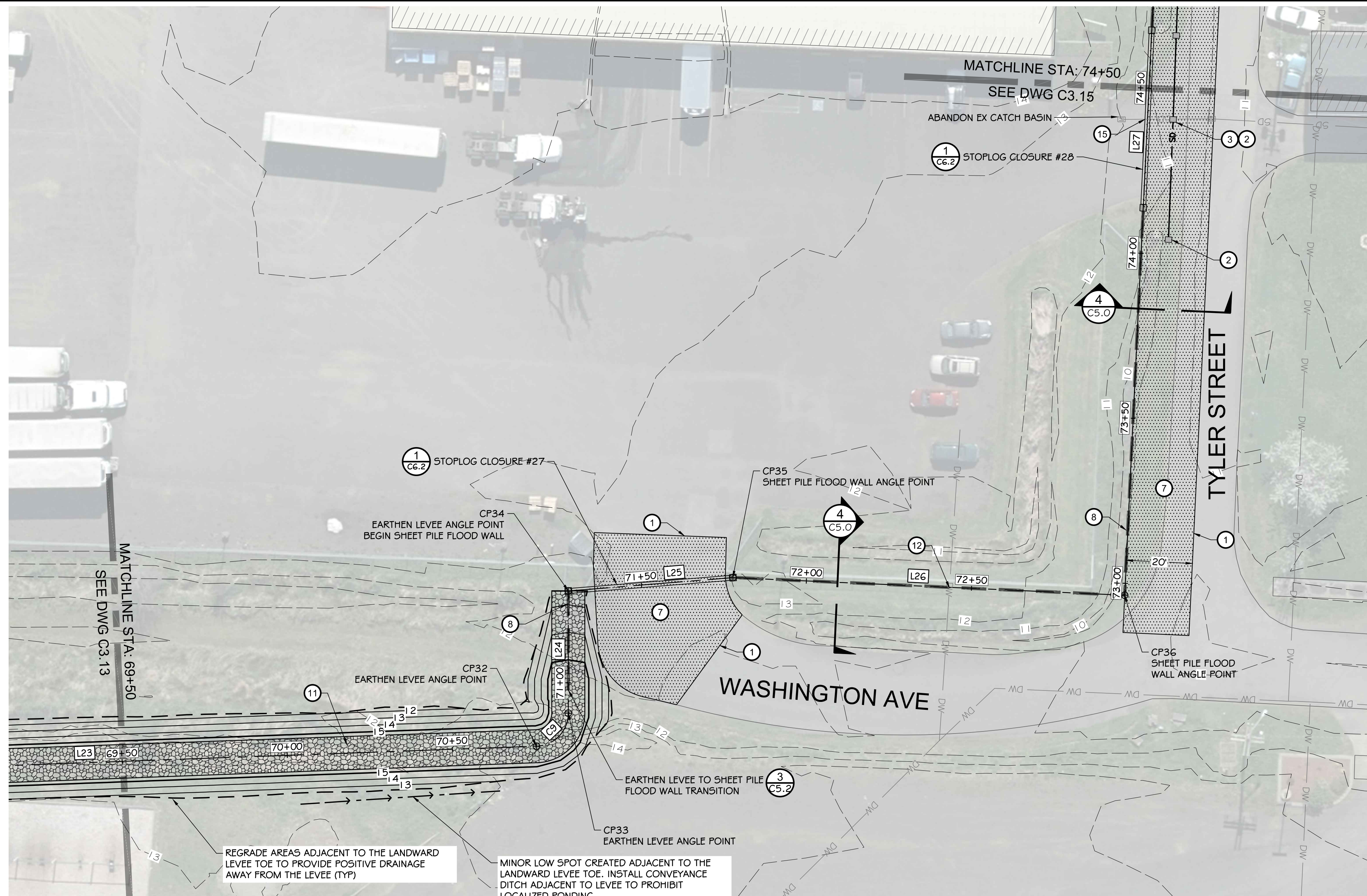
CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811

DESIGNED BY: SDS	DATE: 12-30-2020
CHECKED BY: MRS	JOB NO: 10181900007
DRAWN BY: NILA	
APPROVED BY: SDS	

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

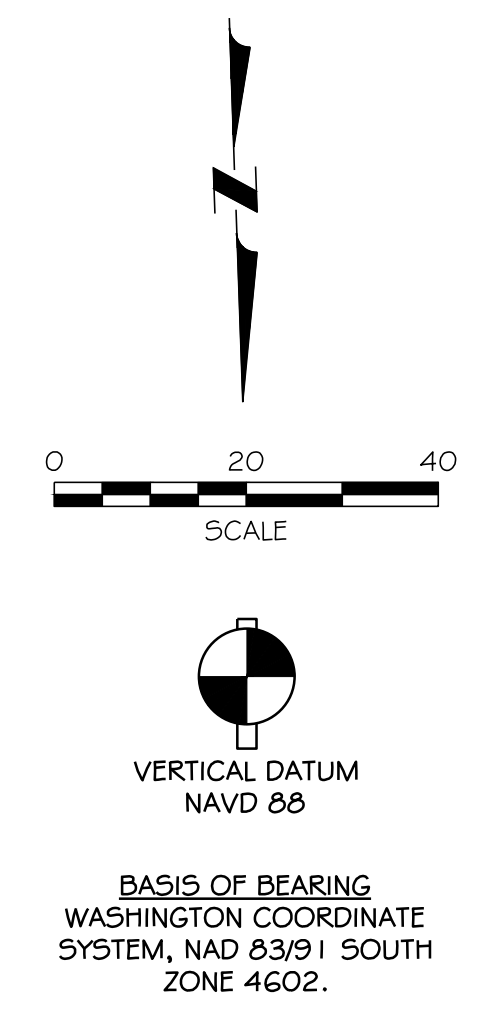
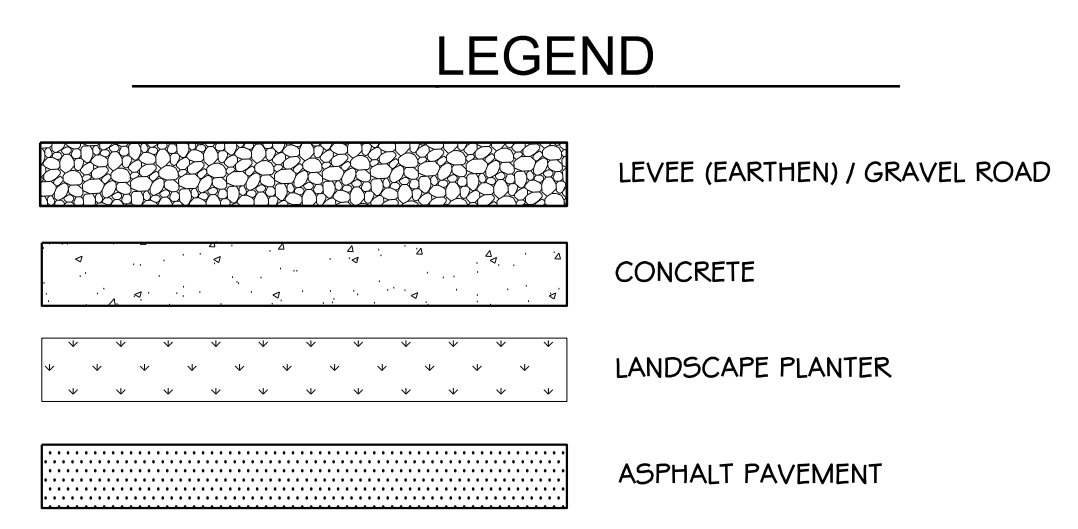
CLOMR PLAN SET

C3.13
SHEET 20 OF 58

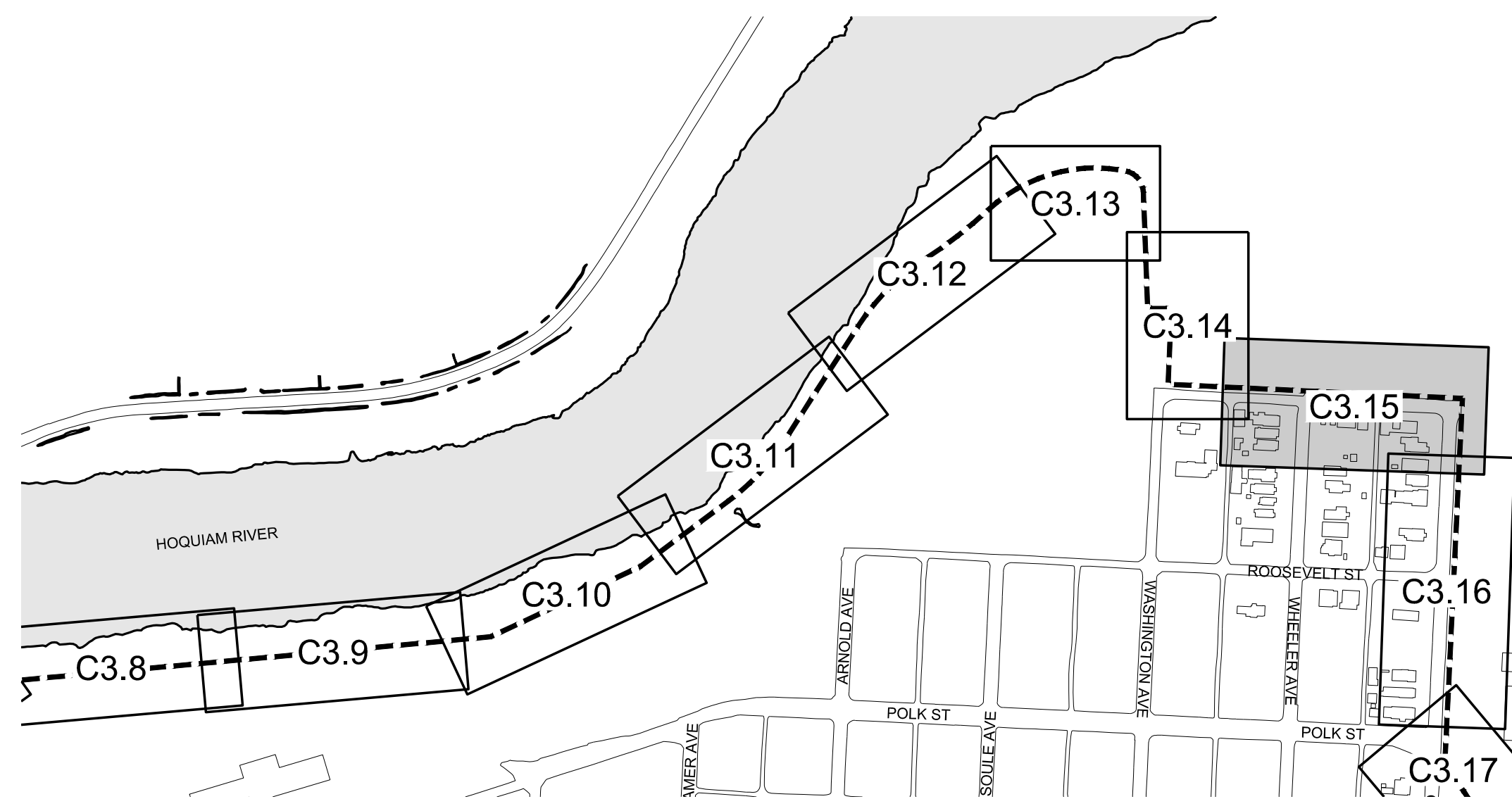


HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L23	248.76'	S87° 54' 14"W	32	620,566.97	797,375.80	C9	10.00'	15.34'	087°54'14"
L24	36.98'	S00° 00' 00"E	33	620,556.97	797,366.17				
L25	49.97'	S85° 21' 48"W	34	620,520.00	797,366.17				
L26	118.67'	N87° 26' 02"W	35	620,515.96	797,316.37				
L27	653.76'	S02° 44' 29"W	36	620,521.27	797,197.82				

- CONSTRUCTION NOTES:**
- SAWCUT / MATCH EXISTING
 - CATCH BASIN / SD IMPROVEMENTS
 - CONNECT TO EXISTING UTILITY
 - CEMENT CONCRETE SIDEWALK
 - LANDSCAPE PLANTER
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 - CEMENT CONCRETE ADA RAMP
 - STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - CUT AND CAP EXISTING STORM DRAINAGE LINE



DESIGNED BY NLA SDS		CHECKED BY SDS		DATE 12-30-2020		JOB NO. 10181900007	
DRAWN BY NLA		APPROVED BY MRS					
CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811		NO		DATE		REVISION	
NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON LEVEE PLAN		CLOMR PLAN SET		C3.14		SHEET 21 OF 58	



KEY MAP
SCALE: 1" = 300'

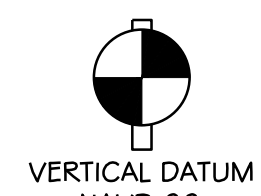
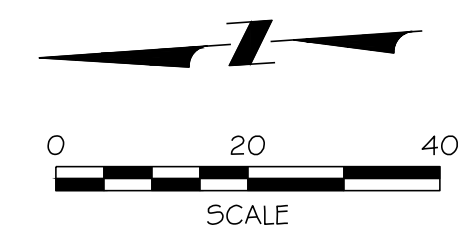
HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L27	653.76'	S02° 44' 29"W	37	619,868.26	797,166.55
L28	812.35'	N87° 14' 51"W			

LEGEND

	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
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- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



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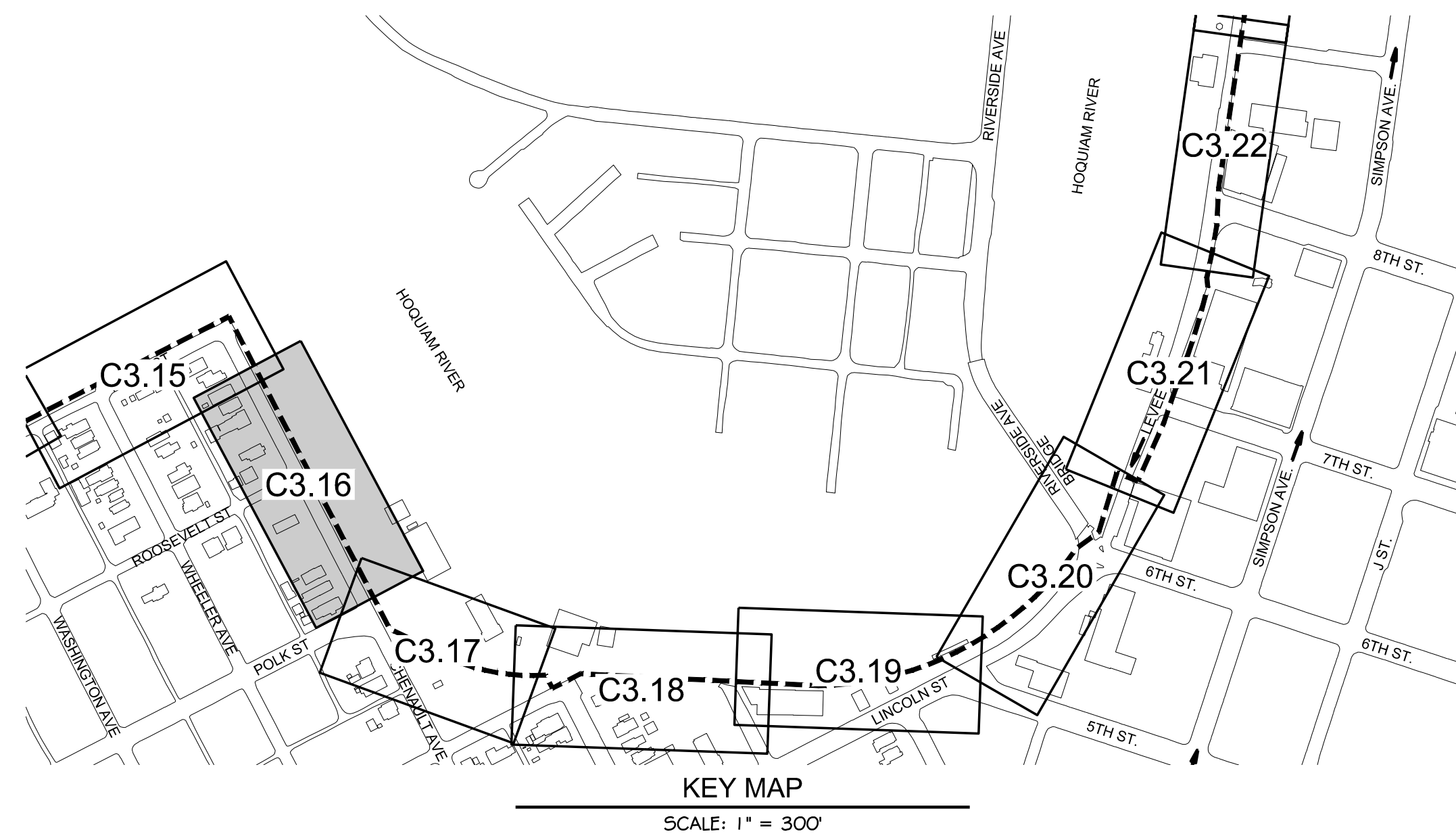
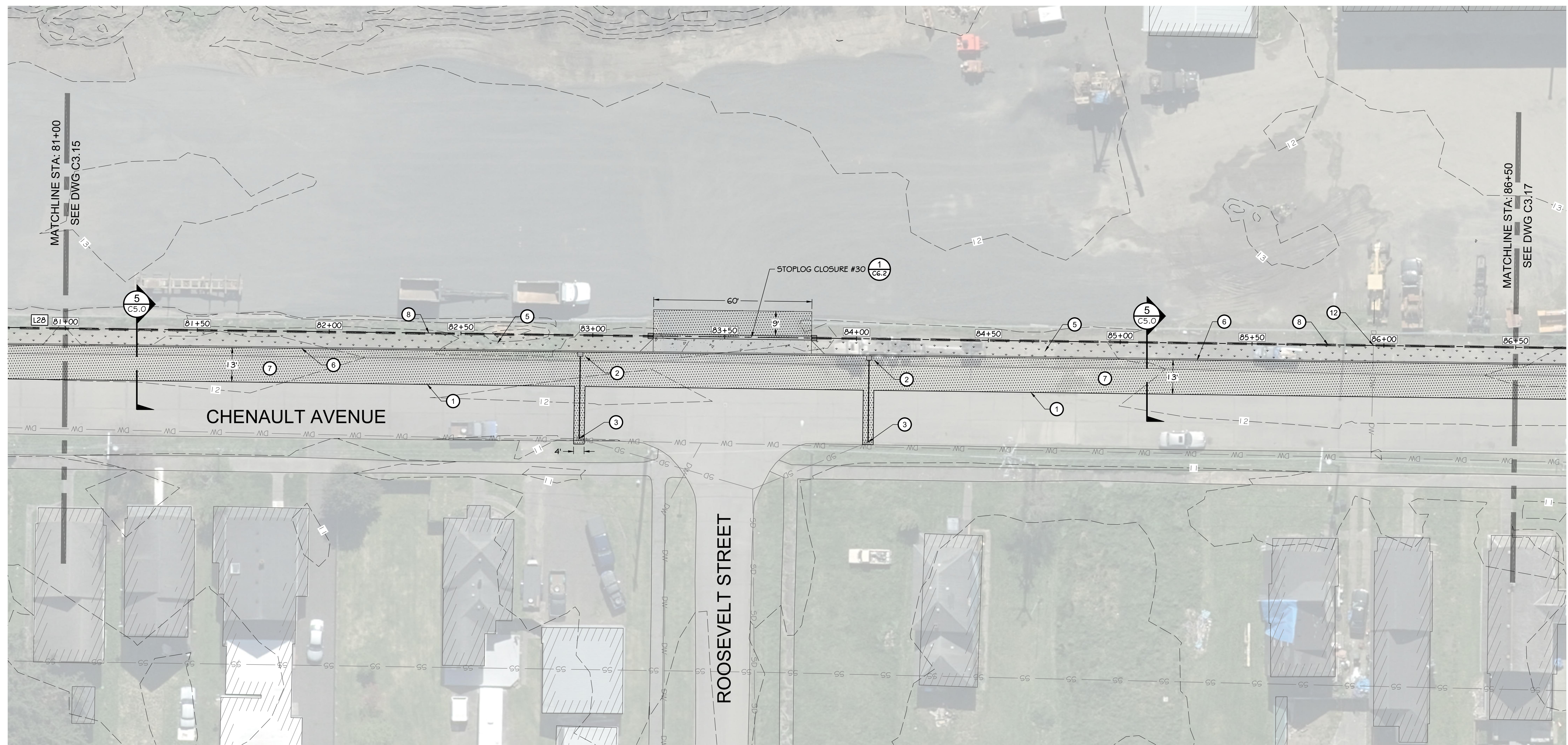
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DESIGNED BY	SDS	MRS	DATE	12-30-2020	JOB NO.	10181900007
DRAWN BY	NLA	SDS	CHECKED BY	SDS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

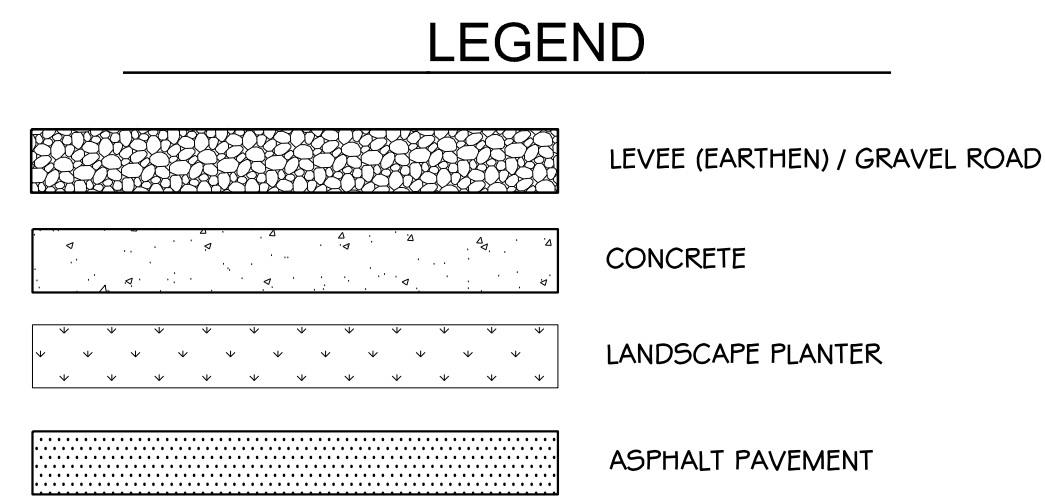
C3.15
SHEET 22 OF 58



HORIZONTAL CONTROL

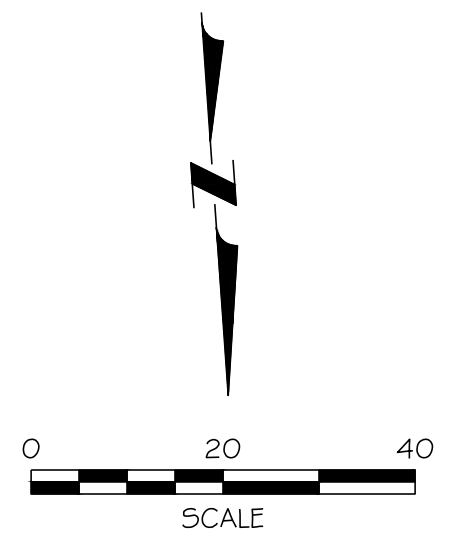
LINE TABLE

LINE #	LENGTH	BEARING
L28	812.35'	N87° 14' 51"W



CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
- 3 CONNECT TO EXISTING UTILITY
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- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



VERTICAL DATUM
NAVD 88

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DESIGNED BY	SDS	DATE	12-30-2020
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CHECKED BY	SDS	JOB NO.	10181900007

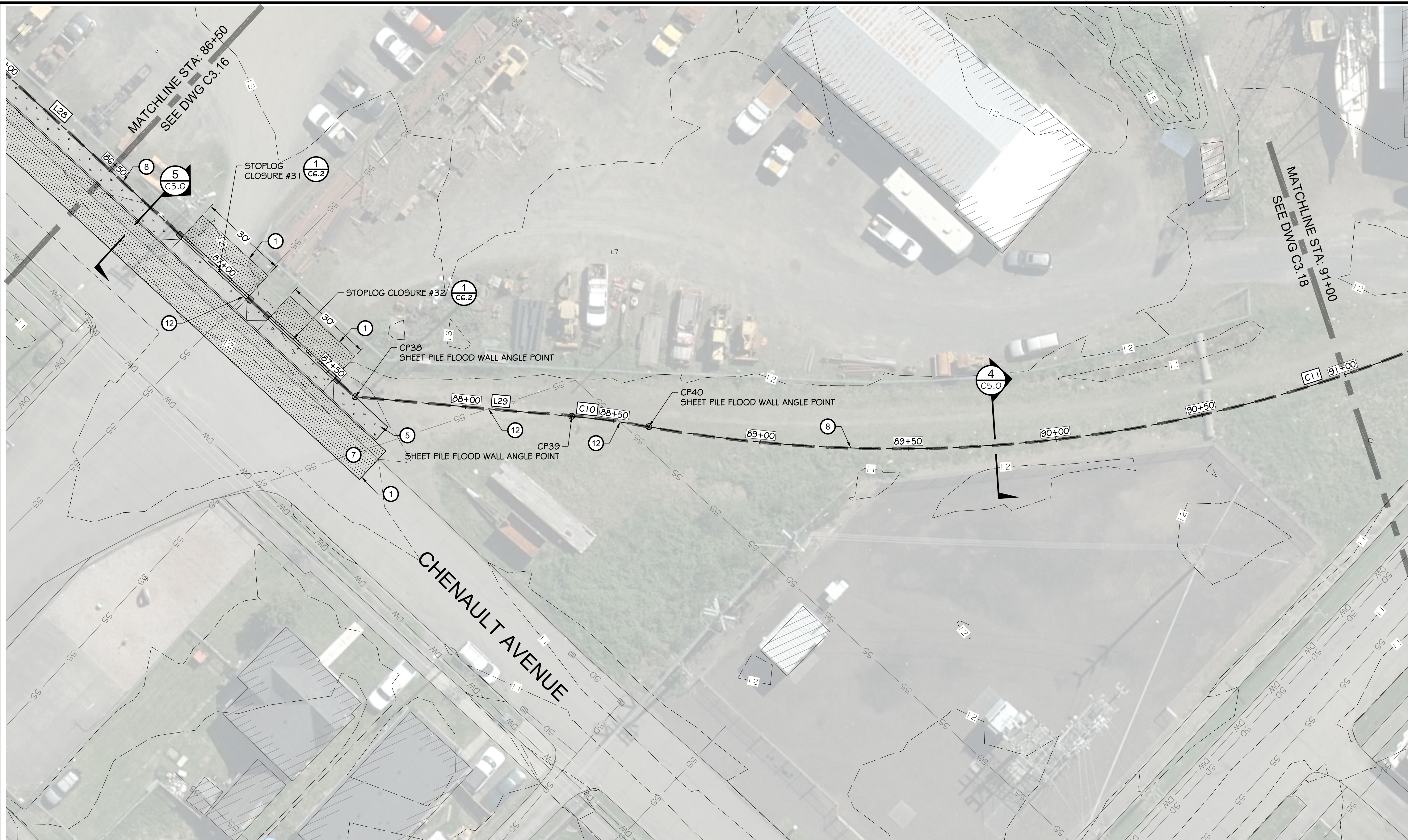
**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN**

CLOMR PLAN SET

C3.16
SHEET 23 OF 58

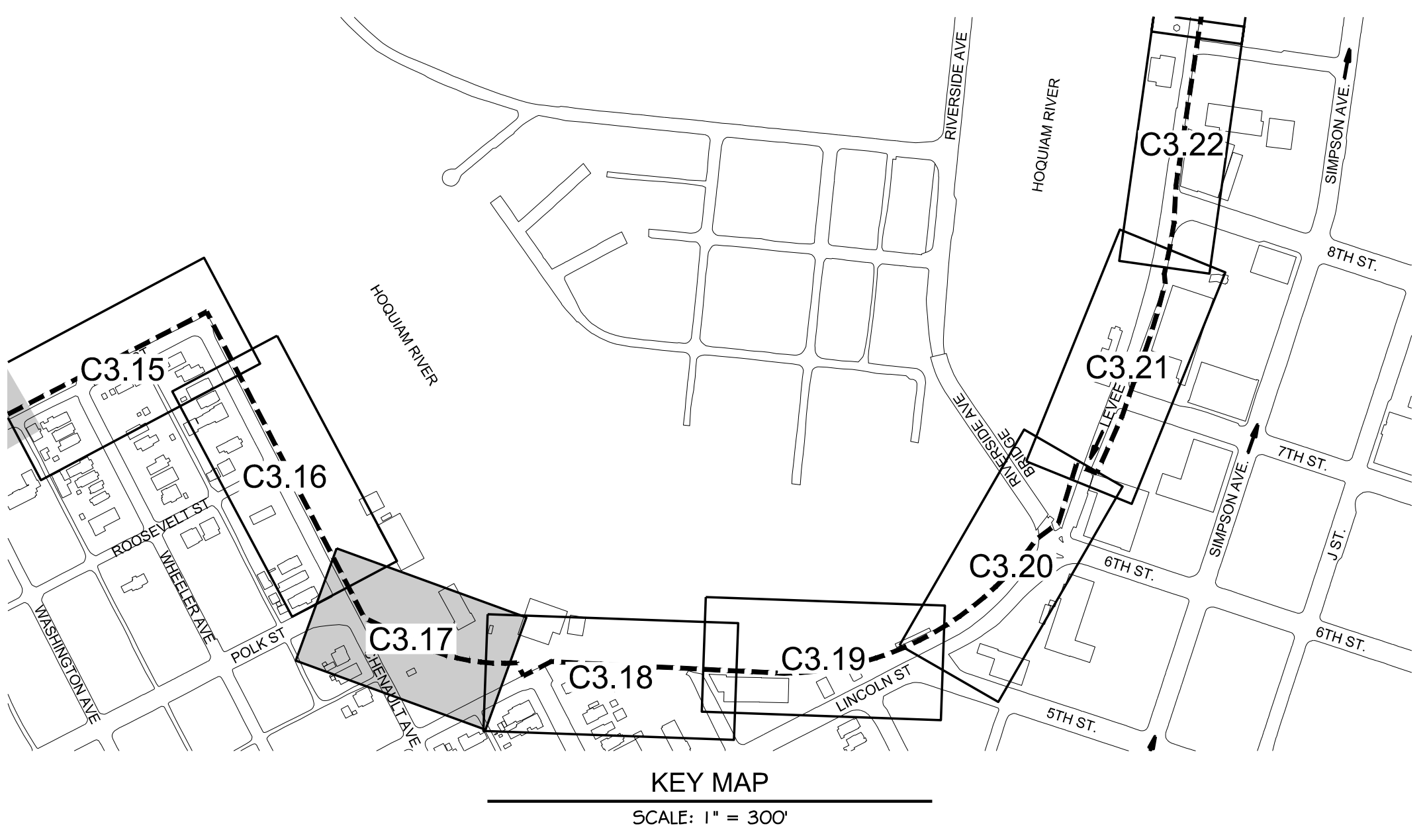
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FILE: I:\2019\1018\900007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C3.16 - LEVEE PLANS



LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT



HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L28	812.35'	N87° 14' 51"W	38	619,907.27	796,355.14	C10	300.00'	26.24'	005°00'43"
L29	73.36'	S55° 09' 31"W	39	619,865.36	796,294.93	C11	472.00'	281.90'	034°13'11"
			40	619,851.32	796,272.76				

- CONSTRUCTION NOTES:**
- 1 SAWCUT / MATCH EXISTING
 - 2 CATCH BASIN / SD IMPROVEMENTS
 - 3 CONNECT TO EXISTING UTILITY
 - 4 CEMENT CONCRETE SIDEWALK
 - 5 LANDSCAPE PLANTER
 - 6 CEMENT CONCRETE CURB
 - 7 ASPHALT PAVEMENT
 - 8 SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - 9 CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - 10 ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - 11 EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - 13 CEMENT CONCRETE ADA RAMP
 - 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - 15 CUT AND CAP EXISTING STORM DRAINAGE LINE

0 20 40
SCALE

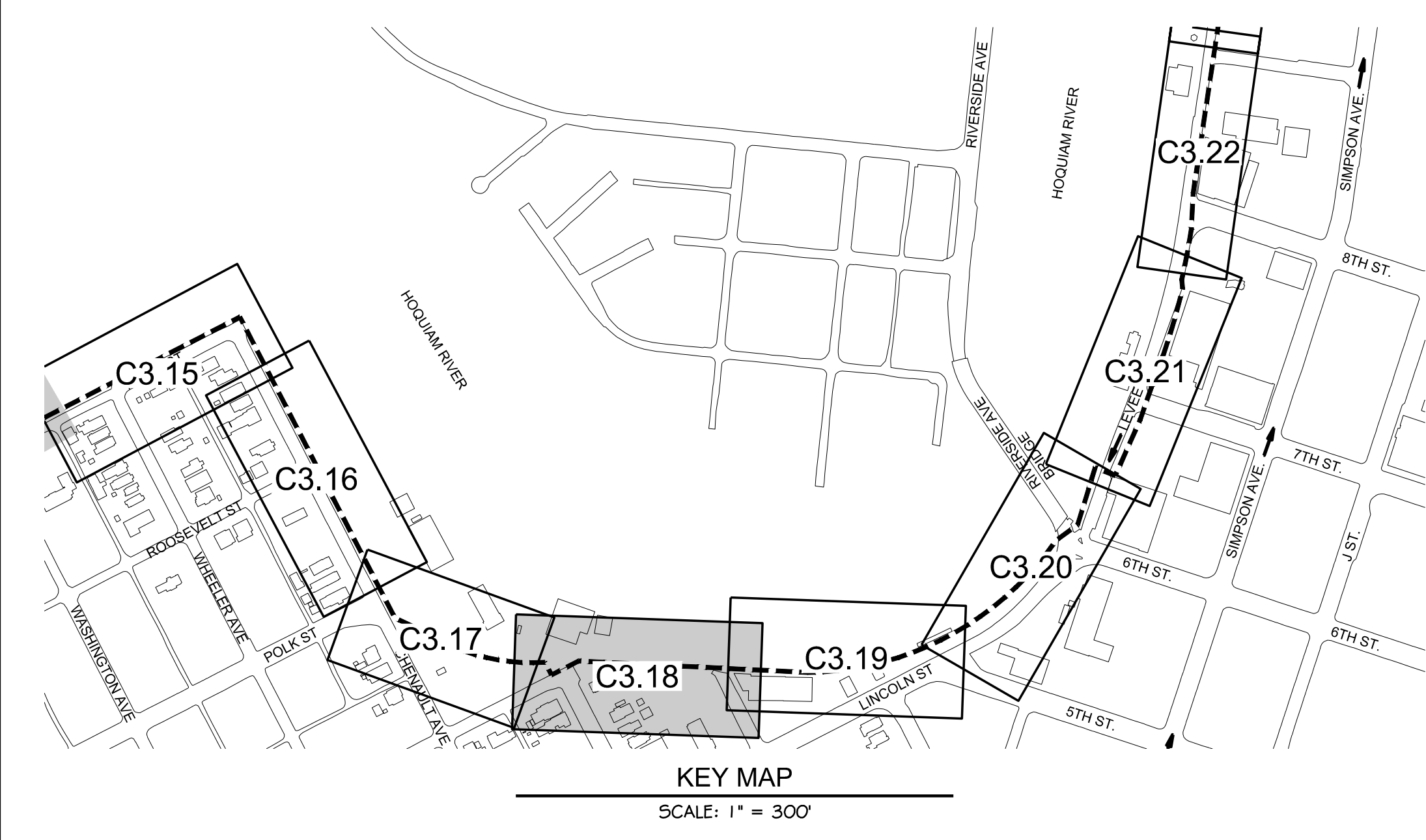
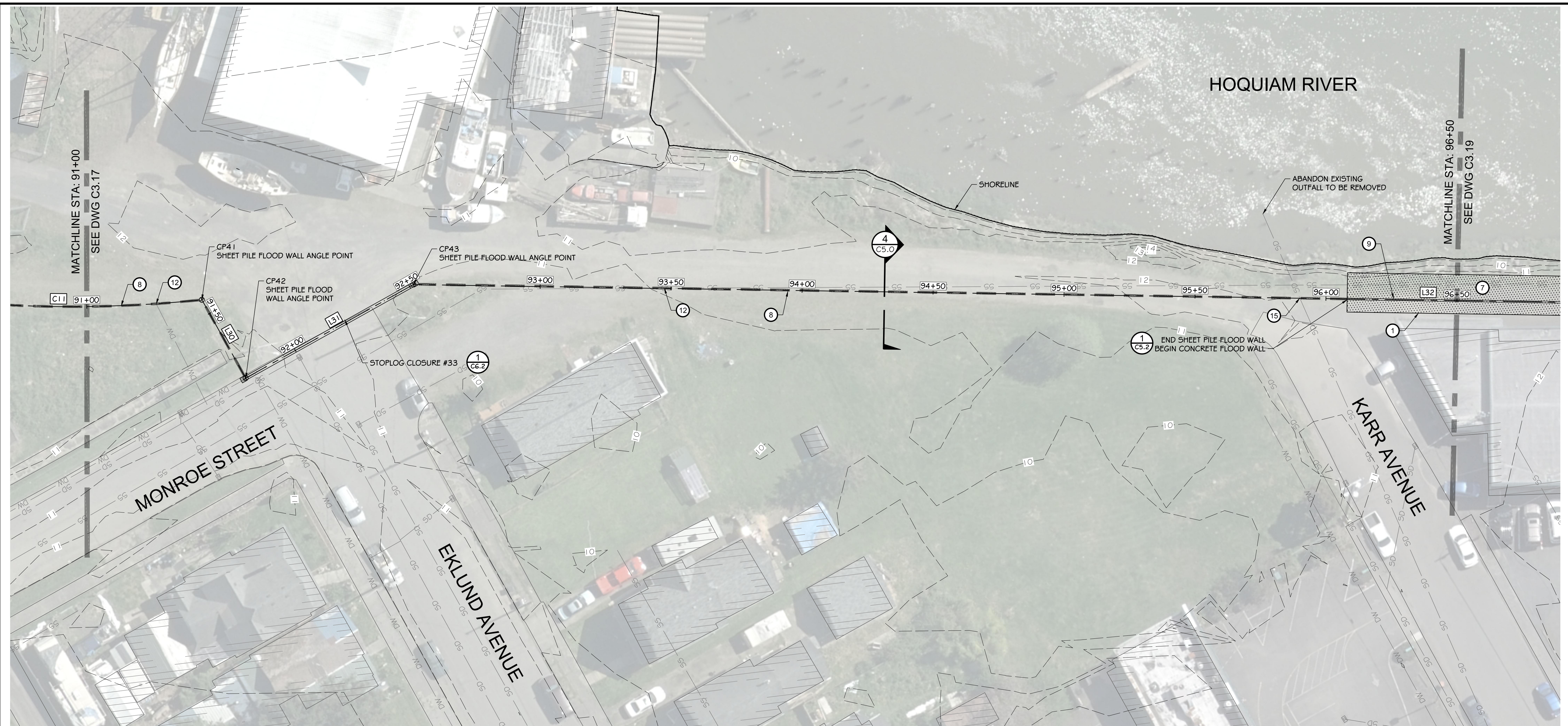
VERTICAL DATUM
NAVD 88

BASIS OF BEARING
WASHINGTON COORDINATE
SYSTEM, NAD 83/91 SOUTH
ZONE 4602.

DESIGNED BY NLA SDS		APPROVED BY MRS DATE 12-30-2020		JOB NO. 10181900007	
DRAWN BY SDS		CHECKED BY SDS		DATE 12-30-2020	
CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811					
NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON		LEVEE PLAN		CLOMR PLAN SET	
C3.17		SHEET 24 OF 58		REVISION	

PLOTTED: Dec 29, 2020 - 11:26:12 PM - PLOTTED BY: Nctea

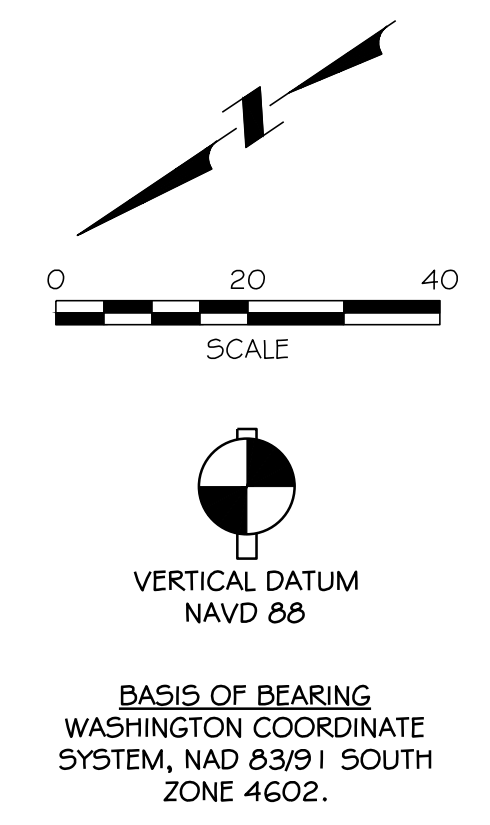
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HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L30	34.28'	N87° 12' 54"W	41	619,648.41	796,083.14	C11	472.00'	281.90'	034°13'11"
L31	73.27'	S02° 49' 12"W	42	619,650.07	796,048.90				
L32	550.51'	S32° 52' 54"W	43	619,576.89	796,045.29				

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

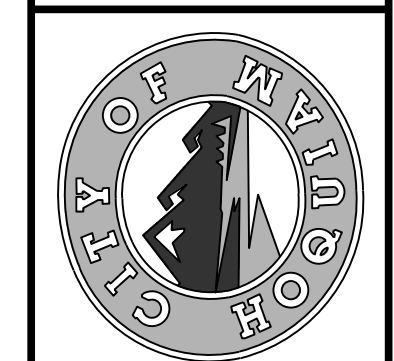
- CONSTRUCTION NOTES:**
- SAWCUT / MATCH EXISTING
 - CATCH BASIN / SD IMPROVEMENTS
 - CONNECT TO EXISTING UTILITY
 - CEMENT CONCRETE SIDEWALK
 - LANDSCAPE PLANTER
 - CEMENT CONCRETE CURB
 - ASPHALT PAVEMENT
 - SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - CEMENT CONCRETE ADA RAMP
 - STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - CUT AND CAP EXISTING STORM DRAINAGE LINE



NO	DATE	BY	CHKD	APPR	REVISION



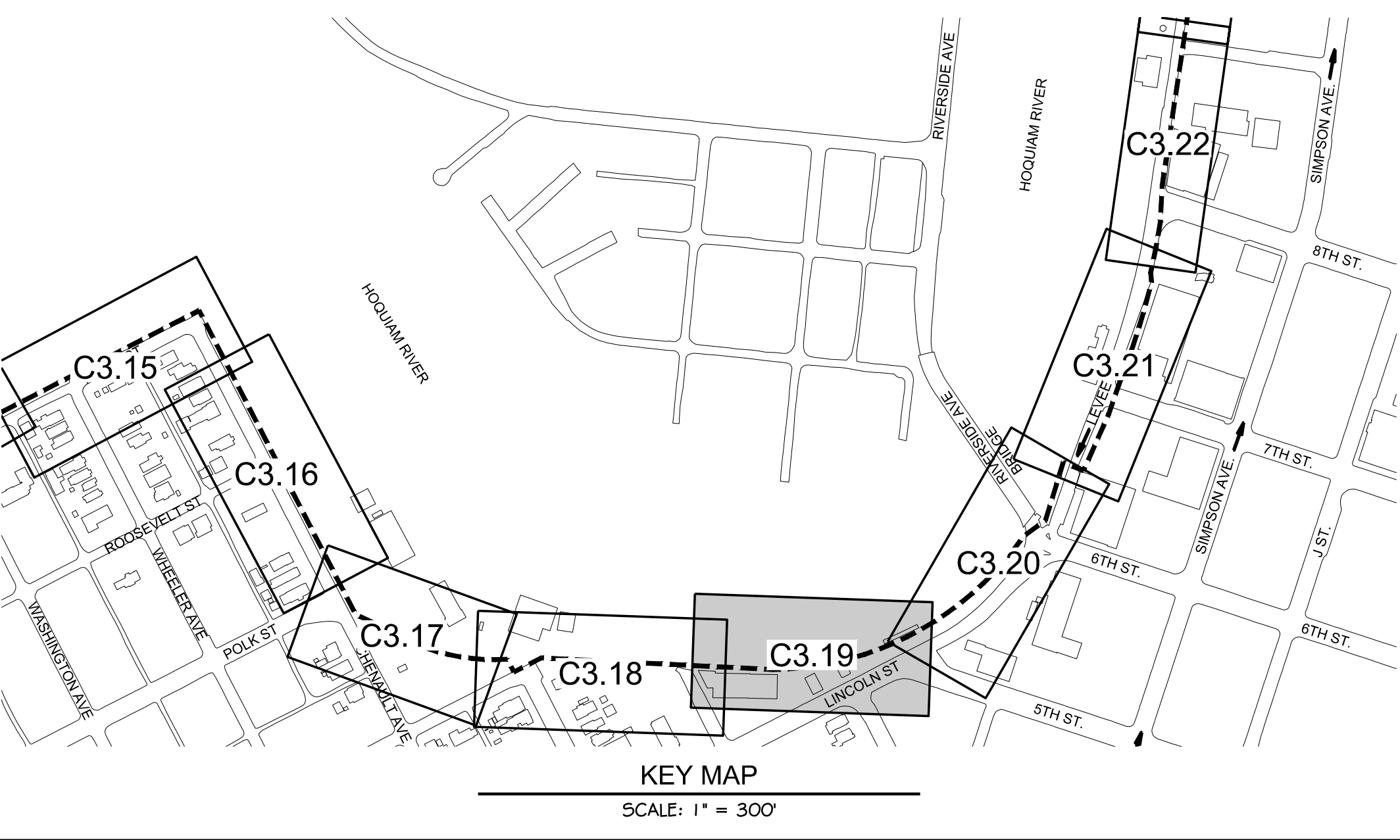
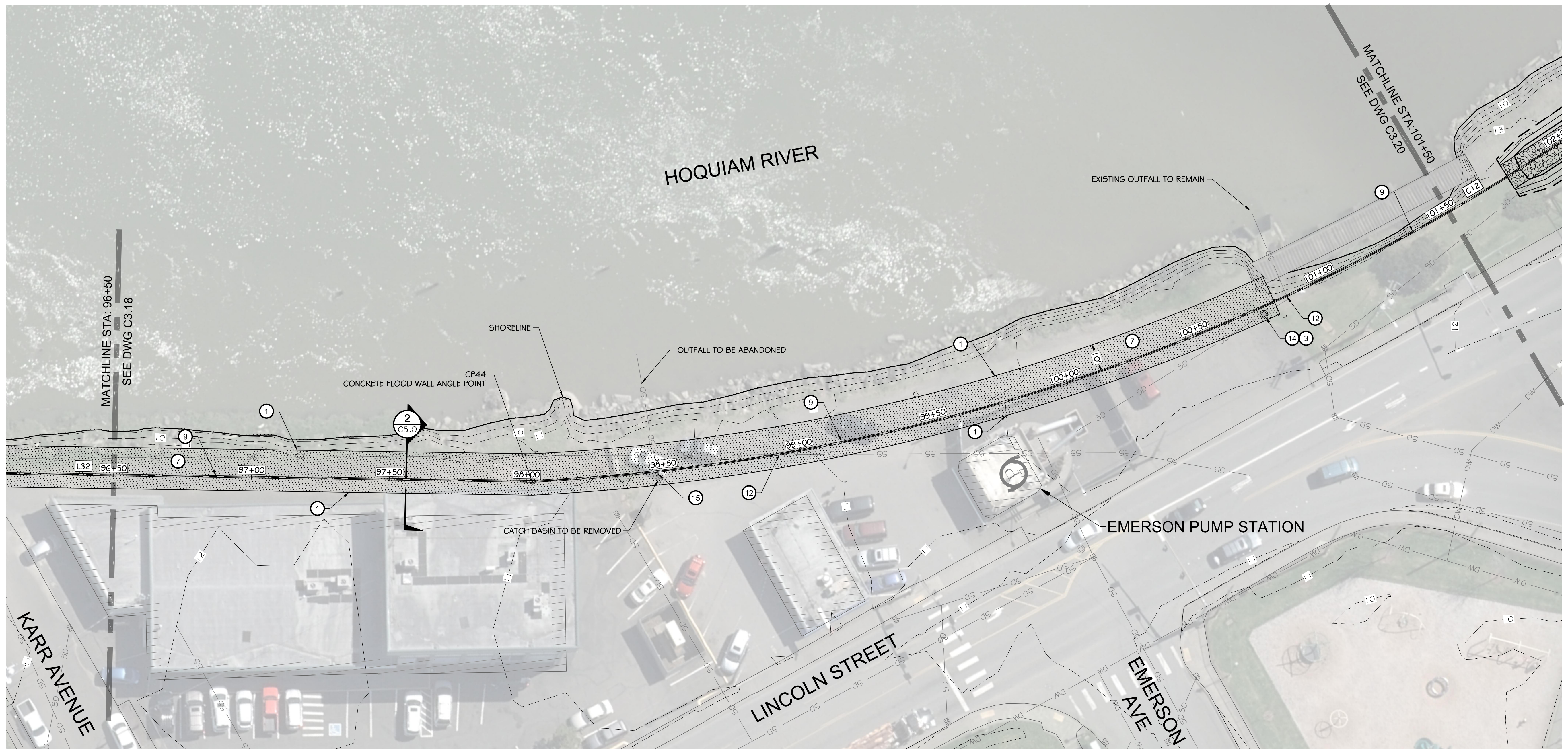
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CALL
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 LOCATE TWO (2)
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 BEFORE YOU
 DIG
 811

DESIGNED BY: SDS
 CHECKED BY: MRS
 DATE: 12-30-2020
 JOB NO.: 1018190007

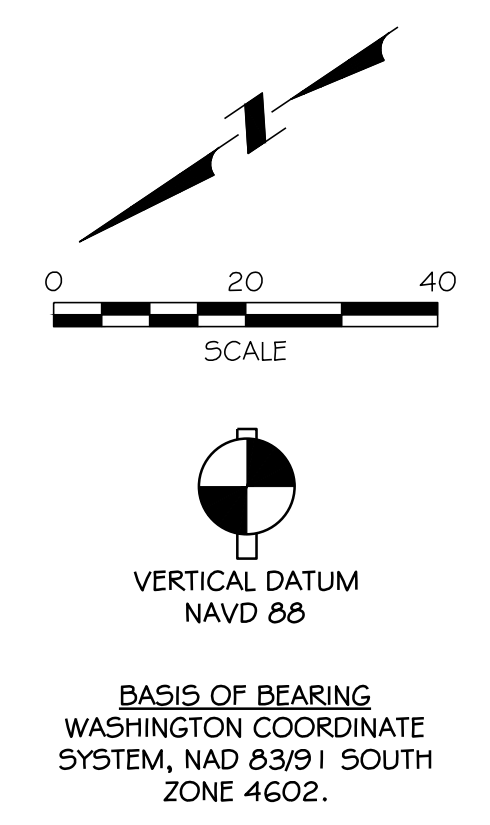
NORTH SHORE LEVEE WEST SEGMENT
 CLOMR PLANS
 HOQUIAM, WASHINGTON
LEVEE PLAN
 CLOMR PLAN SET
C3.18
 SHEET 25 OF 58



HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L32	550.51'	S32° 52' 54"W	44	619,114.58	795,746.42	C12	738.00'	700.03'	054°20'52"

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

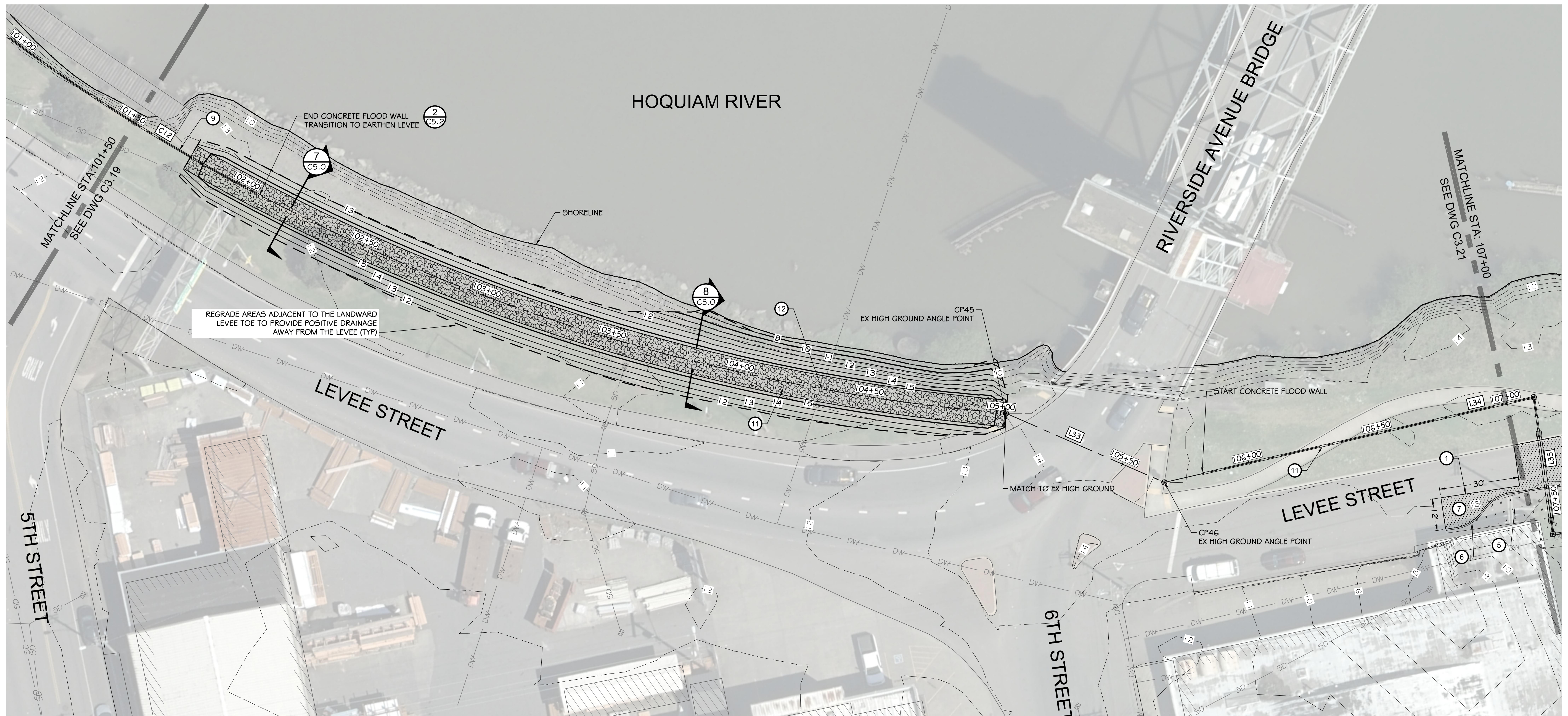
- CONSTRUCTION NOTES:**
- SAWCUT / MATCH EXISTING
 - CATCH BASIN / SD IMPROVEMENTS
 - CONNECT TO EXISTING UTILITY
 - CEMENT CONCRETE SIDEWALK
 - LANDSCAPE PLANTER
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 - SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - CEMENT CONCRETE ADA RAMP
 - STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - CUT AND CAP EXISTING STORM DRAINAGE LINE



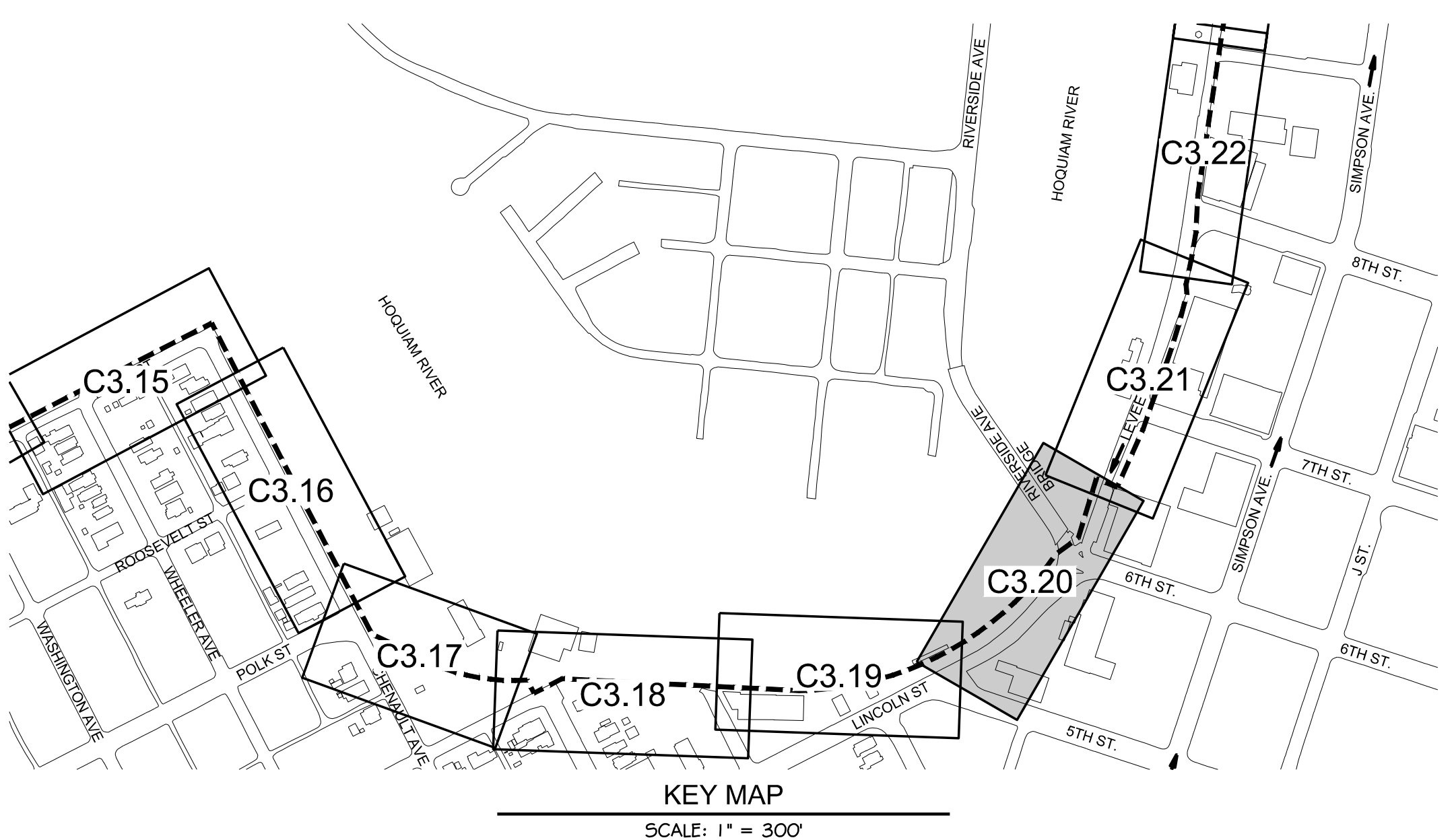
NORTH SHORE LEVEE WEST SEGMENT		CLOMR PLAN SET	
CLOMR PLANS		HOQUIAM, WASHINGTON	
LEVEE PLAN		CLOMR PLAN SET	
C3.19		SHEET 26 OF 58	

DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	CHECKED BY	MRS
CHECKED BY	SDS	DATE	12-30-2020
JOB NO.	1018190007	NO.	
BY	CHD/APP	DATE	
REVISION		NO.	

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REGRADE AREAS ADJACENT TO THE LANDWARD LEVEE TOE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE LEVEE (TYP)

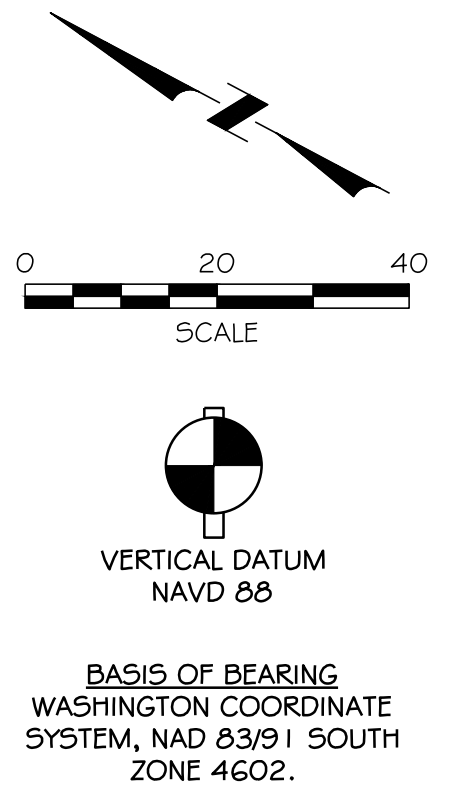


KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L33	65.20'	S06° 24' 35"E	45	618,440.91	795,722.74	C12	738.00'	700.03'	054°20'52"
L34	143.09'	S43° 00' 00"E	46	618,376.12	795,730.02				
			47	618,271.47	795,827.60				
			48	618,239.35	795,786.47				

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
- SAWCUT / MATCH EXISTING
 - CATCH BASIN / SD IMPROVEMENTS
 - CONNECT TO EXISTING UTILITY
 - CEMENT CONCRETE SIDEWALK
 - LANDSCAPE PLANTER
 - CEMENT CONCRETE CURB
 - ASPHALT PAVEMENT
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 - ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - CEMENT CONCRETE ADA RAMP
 - STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - CUT AND CAP EXISTING STORM DRAINAGE LINE

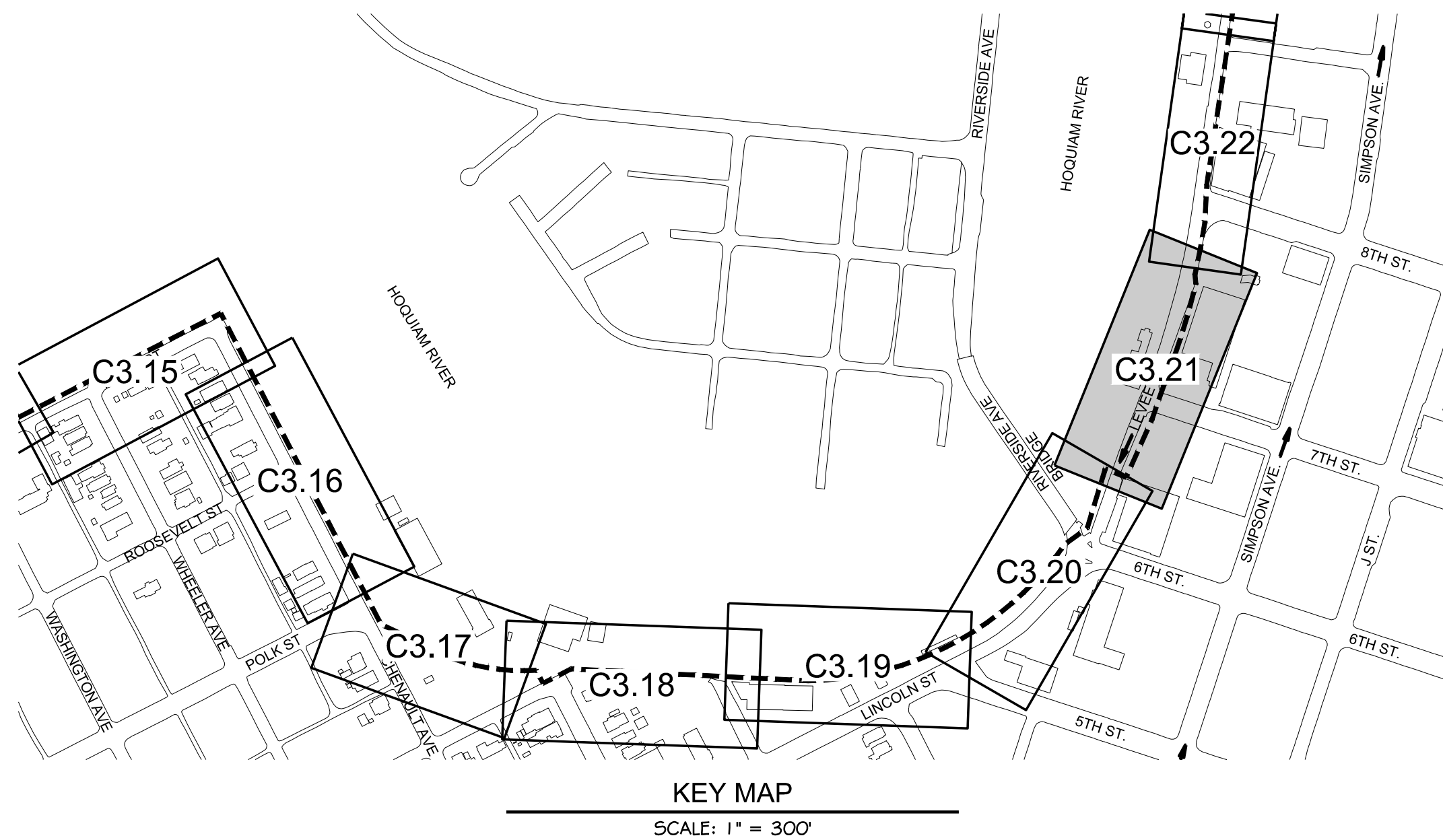
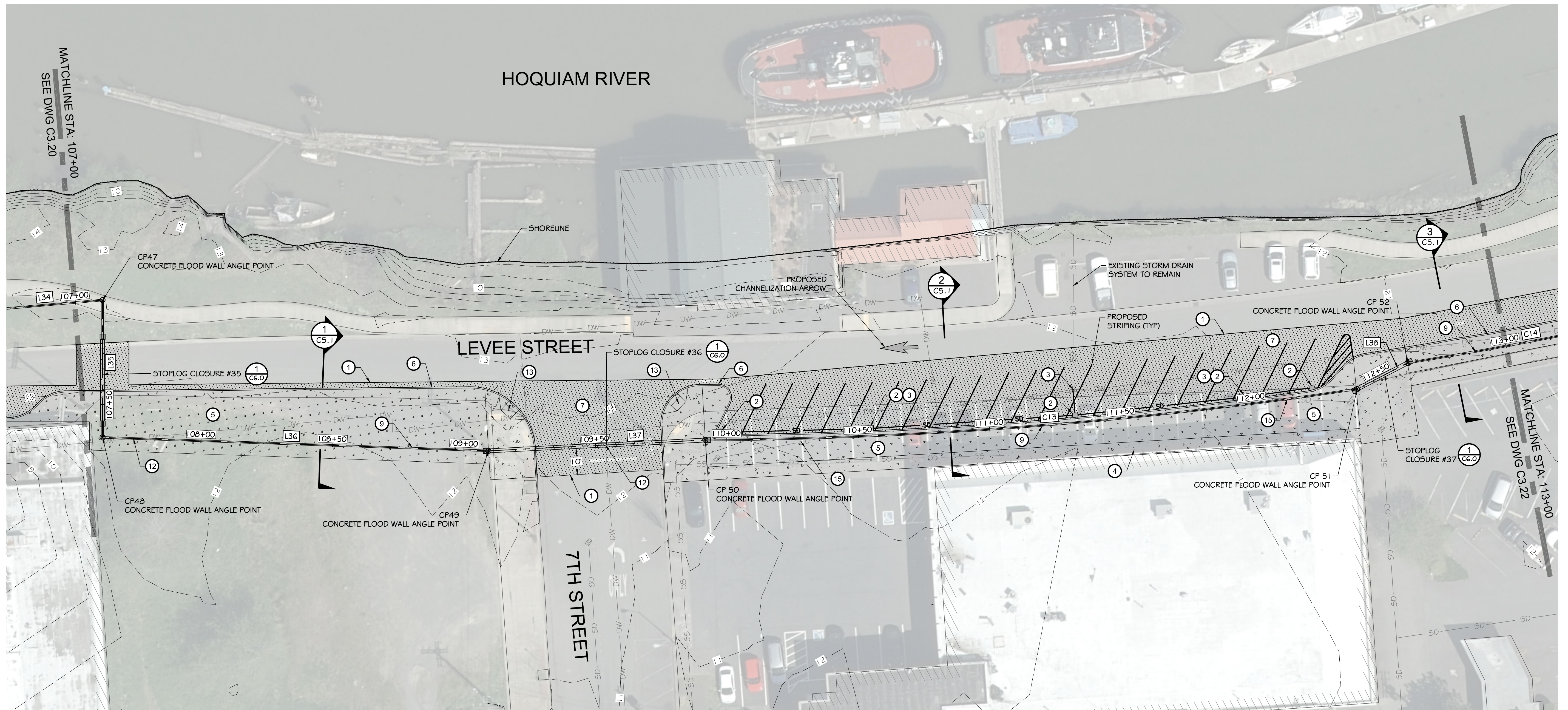


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WASHINGTON COORDINATE
SYSTEM, NAD 83/91 SOUTH
ZONE 4602.

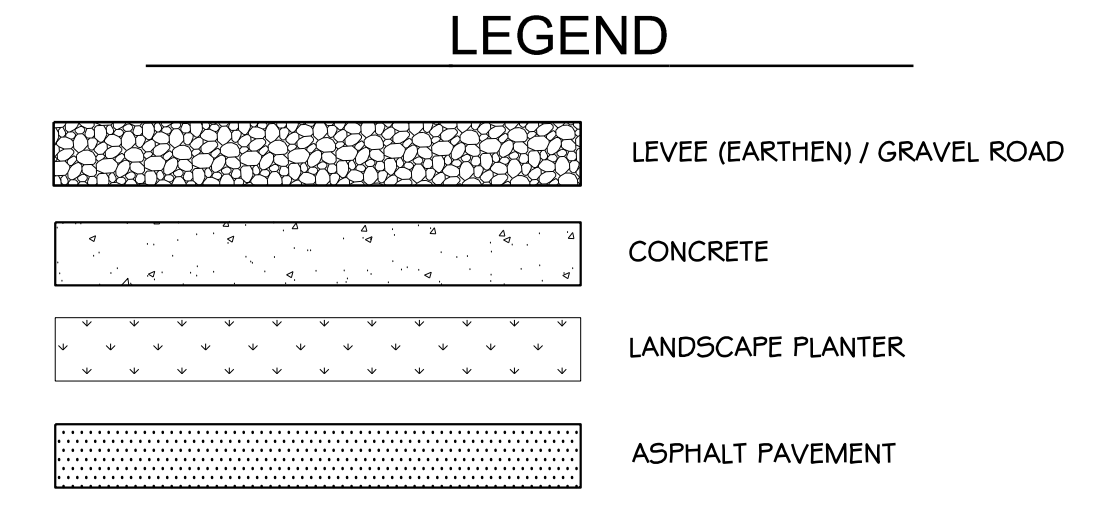
NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON		LEVEE PLAN	
CLOMR PLAN SET			
C3.20		SHEET 27 OF 58	
DESIGNED BY NLA	CHECKED BY SDS	DATE 12-30-2020	JOB NO. 10181900007
APPROVED BY MRS	DATE 12-30-2020	BY C/D/APPR	REVISION
613 Westland Square Loop Suite 100 Lacey, WA 98503 360.292.7230 www.kpff.com			

PLOTTED: Dec 29, 2020 - 11:20:12 PM PLOTTED BY: Noctua

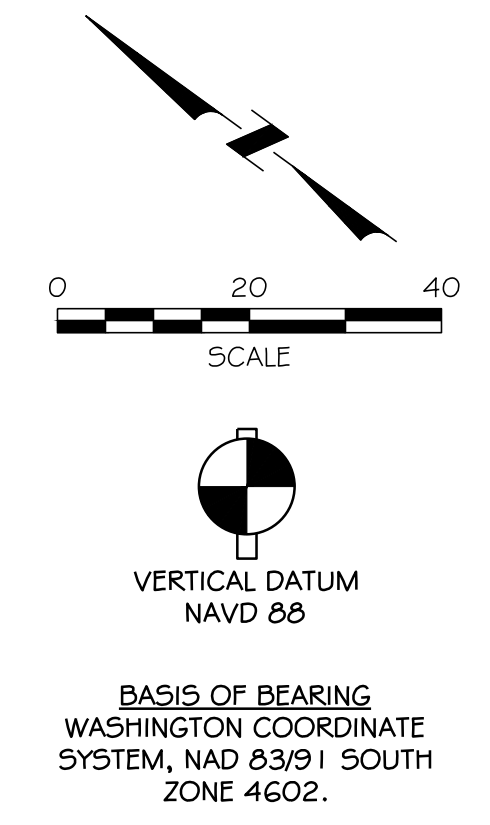
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HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L34	143.09'	543° 00' 00"E	53	617,785.69	796,207.14	C13	1,740.00'	248.63'	008° 11' 13"
L35	52.19'	552° 00' 28"W	54	617,738.33	796,280.58	C14	1,670.00'	122.98'	004° 13' 09"
L36	146.74'	536° 00' 37"E							
L37	82.48'	540° 50' 22"E							
L38	21.59'	565° 20' 46"E							



- CONSTRUCTION NOTES:**
- ① SAWCUT / MATCH EXISTING
 - ② CATCH BASIN / SD IMPROVEMENTS
 - ③ CONNECT TO EXISTING UTILITY
 - ④ CEMENT CONCRETE SIDEWALK
 - ⑤ LANDSCAPE PLANTER
 - ⑥ CEMENT CONCRETE CURB
 - ⑦ ASPHALT PAVEMENT
 - ⑧ SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - ⑨ CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - ⑩ ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - ⑪ EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - ⑫ PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - ⑬ CEMENT CONCRETE ADA RAMP
 - ⑭ STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - ⑮ CUT AND CAP EXISTING STORM DRAINAGE LINE



**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN**

DESIGNED BY: NILA	DATE: 12-30-2020
CHECKED BY: SDS	JOB NO.: 10181900007
APPROVED BY: MRS	

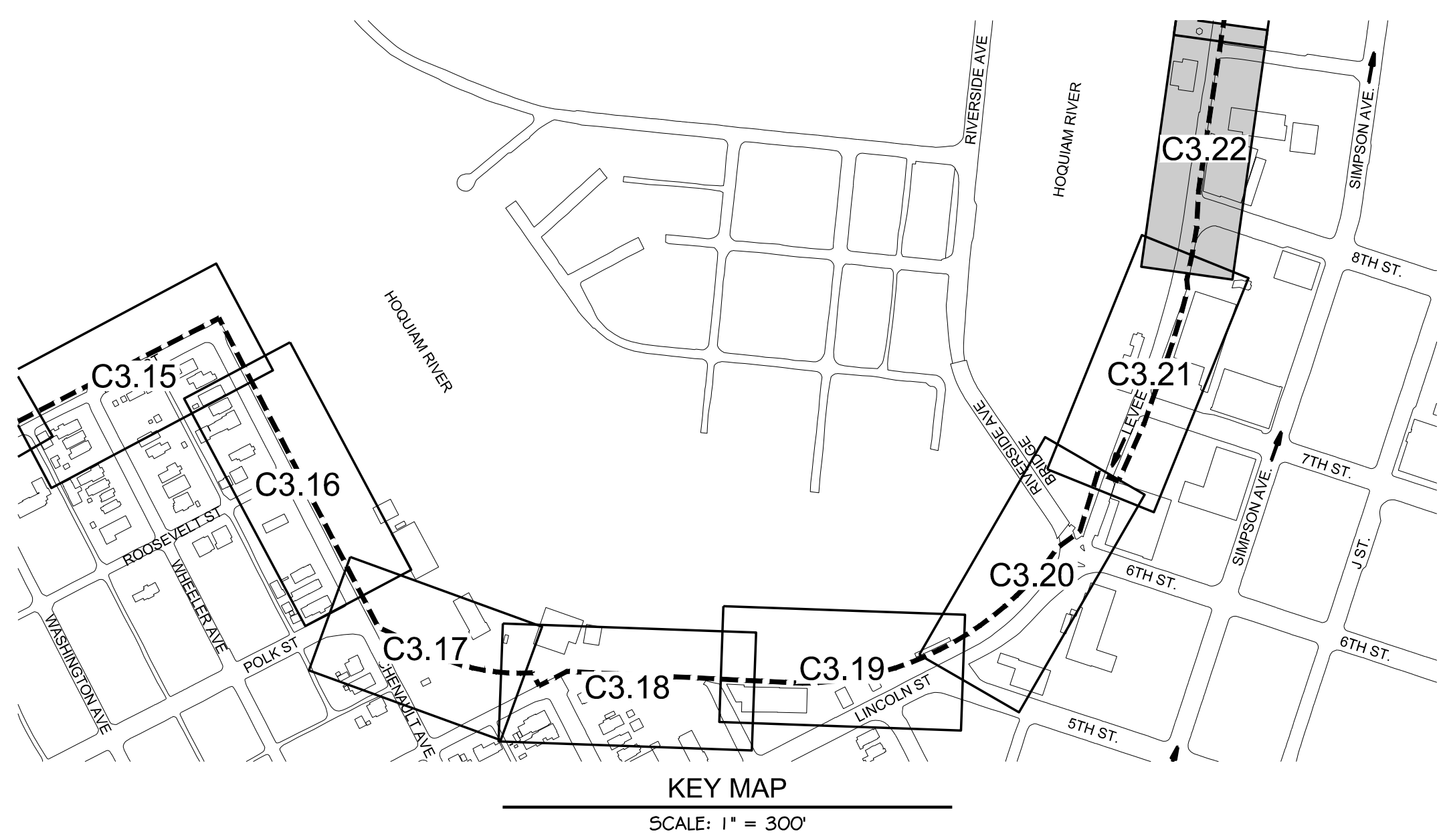
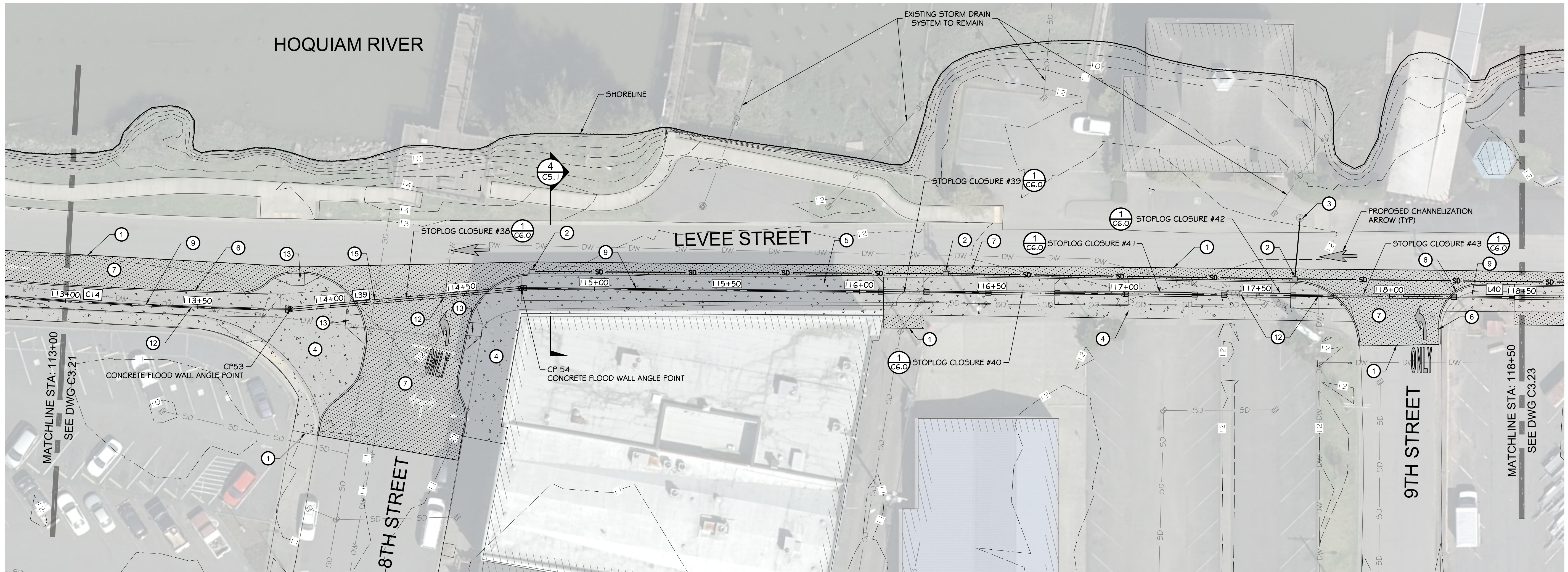
C3.21
SHEET 28 OF 58

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CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811

NO	DATE	BY	CHD/APPR	REVISION

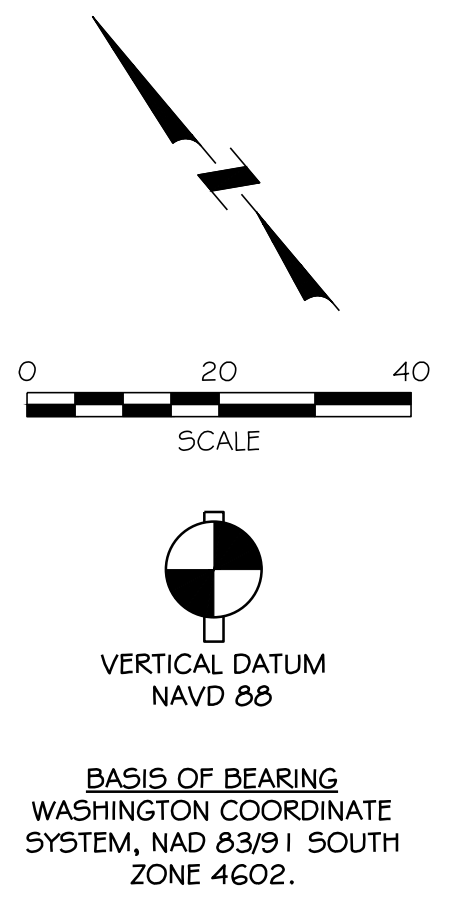


HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L39	87.39'	55° 10' 47"E	53	617,785.69	796,207.14	C14	1,670.00'	122.98'	004° 13' 09"
L40	454.37'	55° 1' 28' 25"E	54	617,738.33	796,280.58				

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
- 1 SAWCUT / MATCH EXISTING
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 - 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p>	<p>LEVEE PLAN</p>
<p>CLOMR PLAN SET</p>	
<p>C3.22</p>	
<p>SHEET 29 OF 58</p>	

DESIGNED BY: SDS
DRAWN BY: NILA

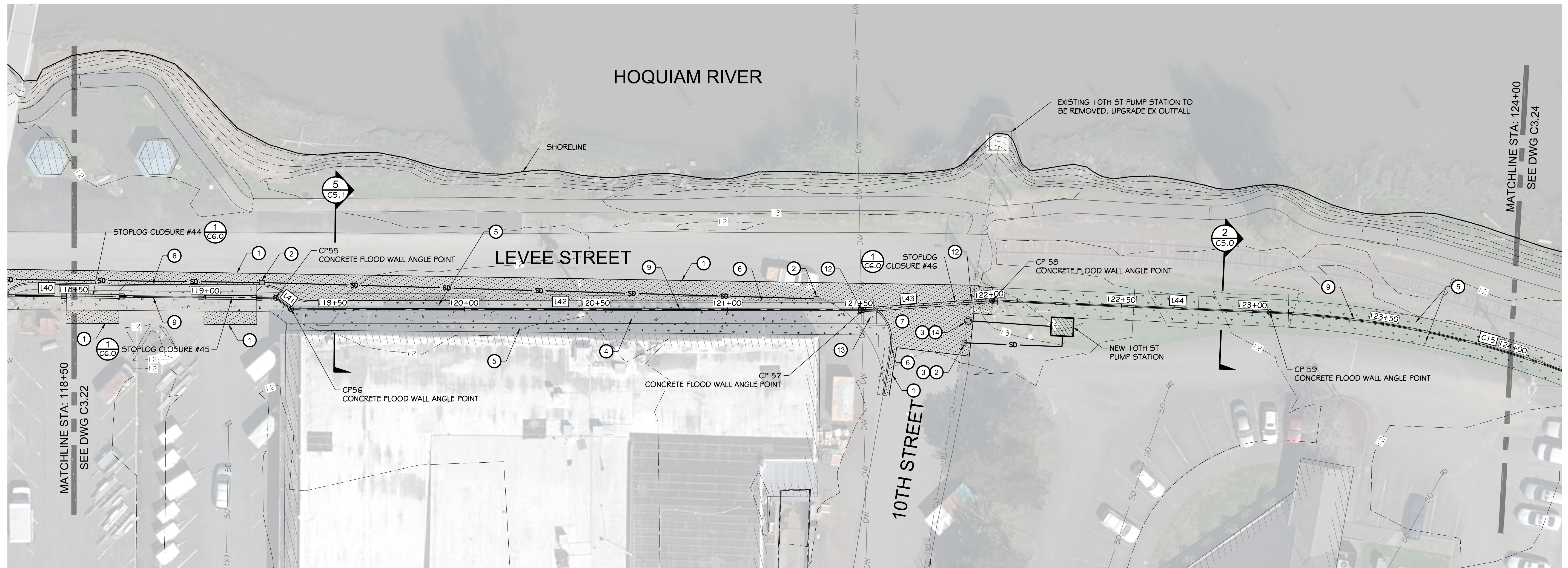
CHECKED BY: MRS
APPROVED BY: SDS

DATE: 12-30-2020
JOB NO.: 10181900007

CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811

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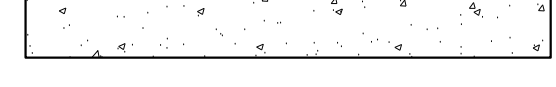
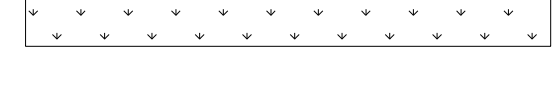
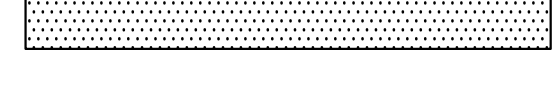
NO.	DATE	BY	CHKD	APPR	REVISION



MATCHLINE STA: 124+00
SEE DWG C3.24

MATCHLINE STA: 118+50
SEE DWG C3.22

LEGEND

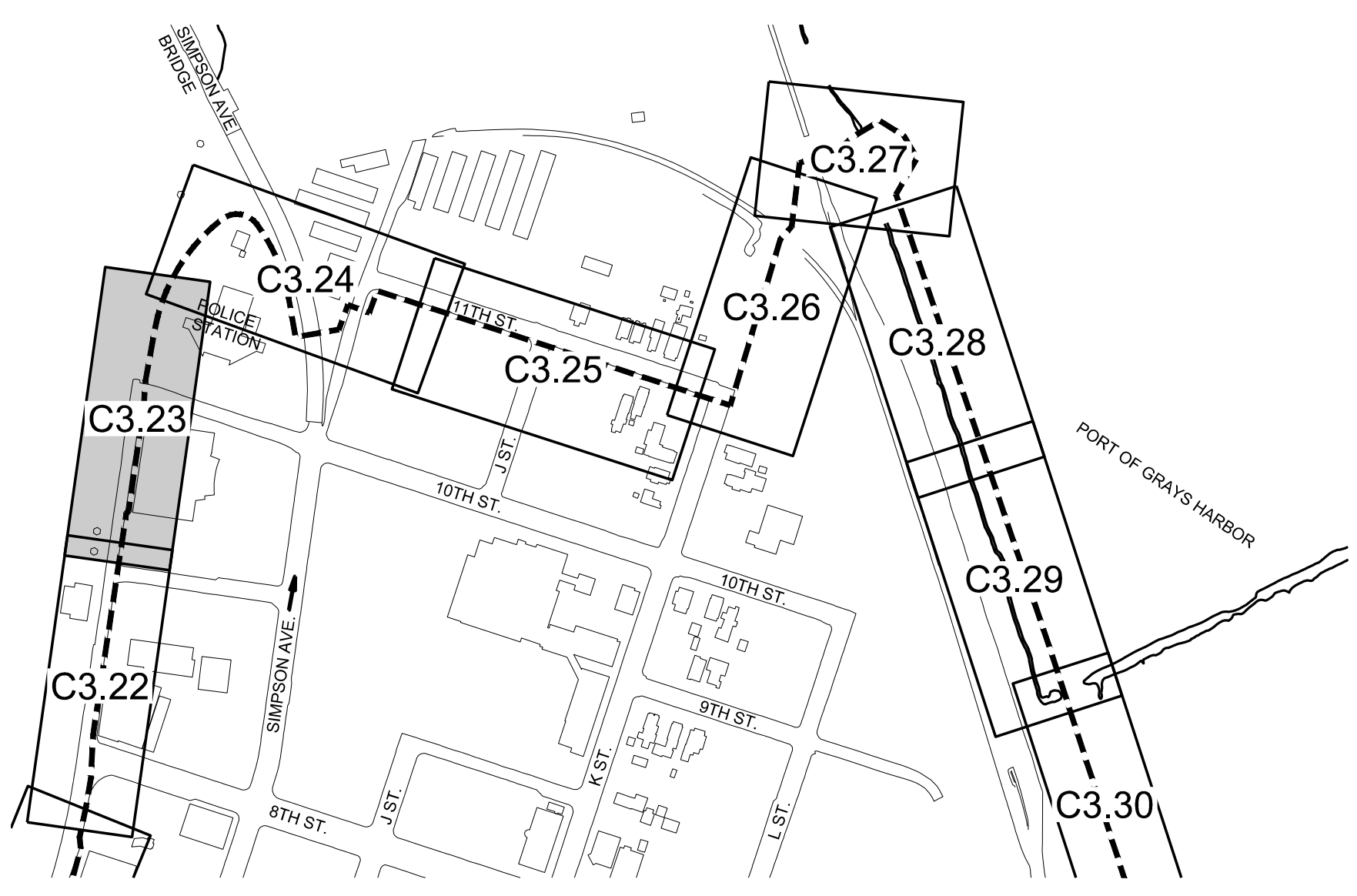
-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

CONSTRUCTION NOTES:

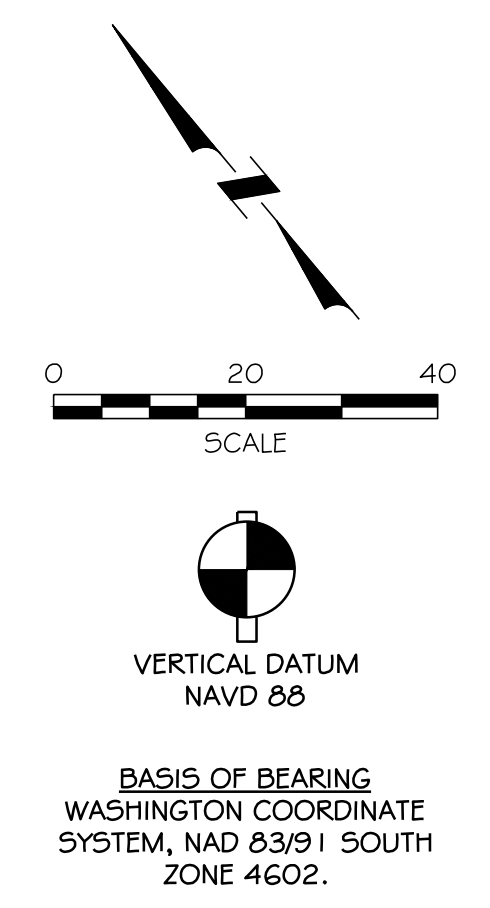
- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
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- 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
- 13 CEMENT CONCRETE ADA RAMP
- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE

HORIZONTAL CONTROL

LINE TABLE			POINT TABLE		CURVE TABLE				
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L40	454.37'	S51° 28' 25"E	55	617,455.31	796,636.05	C15	365.00'	267.25'	041°57'04"
L41	7.26'	S15° 27' 42"E	56	617,448.32	796,637.98				
L42	217.80'	S51° 56' 40"E	57	617,314.06	796,809.48				
L43	48.94'	S56° 01' 54"E	58	617,286.72	796,850.07				
L44	105.77'	S49° 37' 01"E	59	617,218.18	796,930.64				

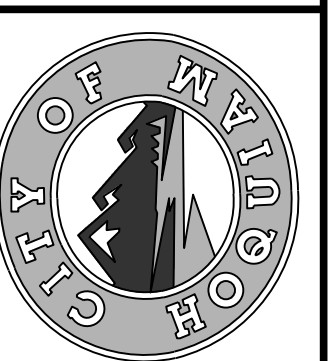
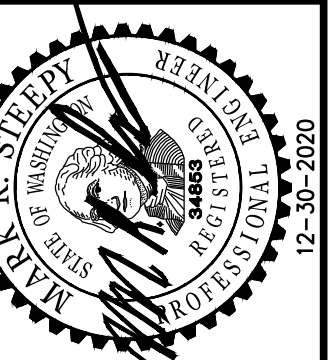


KEY MAP
SCALE: 1" = 300'



BASIS OF BEARING
WASHINGTON COORDINATE
SYSTEM, NAD 83/91 SOUTH
ZONE 4602.

NO	DATE	BY	CHKD	APPR	REVISION



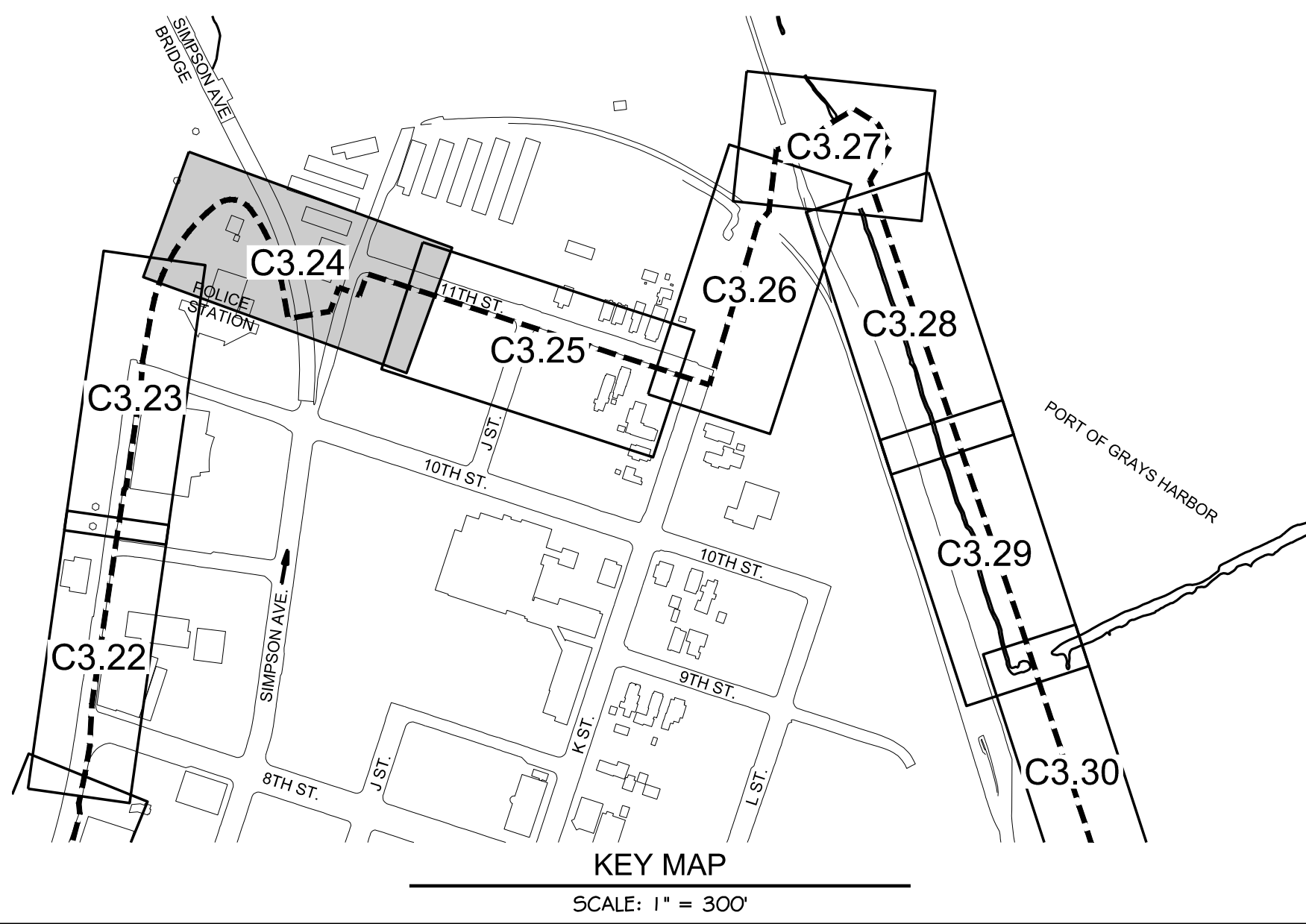
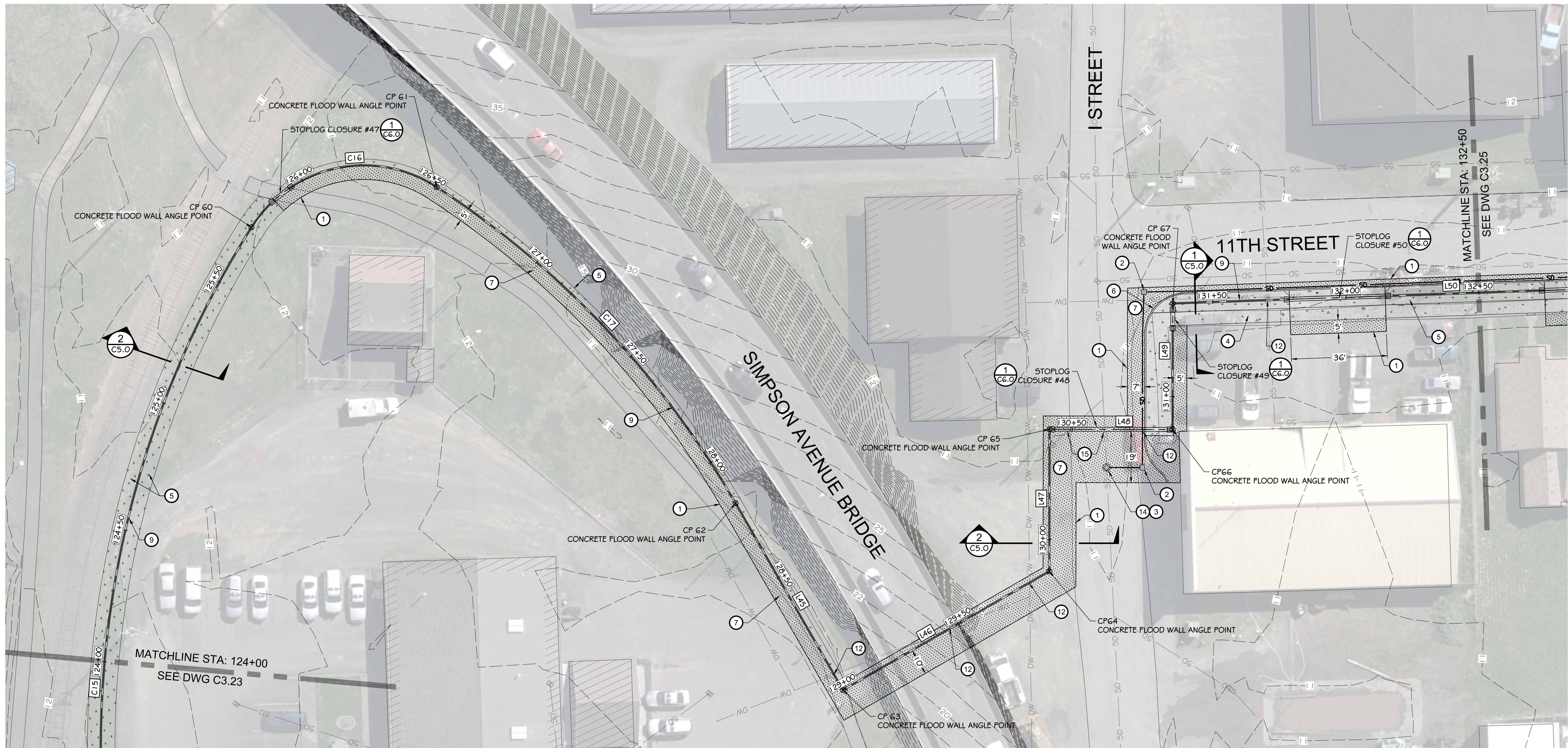
CALL
UNDERGROUND
LOCATE TWO (2)
WORKING DAYS
BEFORE YOU
DIG
811

DESIGNED BY NLA	DESIGNED BY SDS	DATE 12-30-2020	JOB NO. 10181900007
CHECKED BY SDS	APPROVED BY MRS		

**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN**

CLOMR PLAN SET

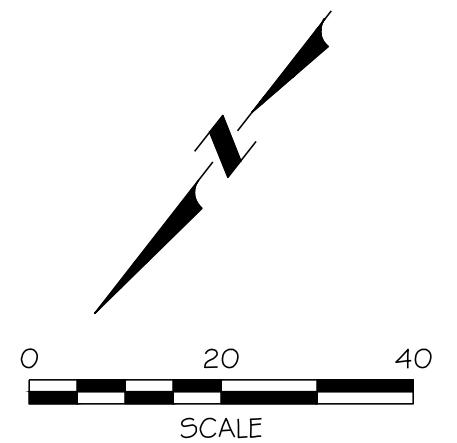
C3.23
SHEET 30 OF 58



HORIZONTAL CONTROL									
LINE TABLE			POINT TABLE			CURVE TABLE			
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING	CURVE #	RADIUS	LENGTH	Δ DELTA
L45	80.88'	N69° 54' 22"W	60	616,988.84	797,055.90	C15	365.00'	267.25'	041°57'04"
L46	89.39'	S20° 05' 38"W	61	616,932.53	797,012.35	C16	50.00'	79.21'	090°46'07"
L47	53.30'	S39° 54' 22"E	62	616,951.31	796,850.07	C17	350.00'	164.88'	026°59'28"
L48	46.22'	S50° 05' 38"W	63	616,979.09	796,774.11				
L49	47.31'	S39° 54' 22"E	64	616,895.15	796,743.40				
L50	753.19'	S47° 59' 29"W	65	616,854.26	796,777.60				
			66	616,824.61	796,742.14				
			67	616,788.32	796,772.49				

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
- 3 CONNECT TO EXISTING UTILITY
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- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



VERTICAL DATUM
NAVD 88

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DESIGNED BY: NLA
CHECKED BY: SDS
DATE: 12-30-2020
JOB NO.: 10181900007

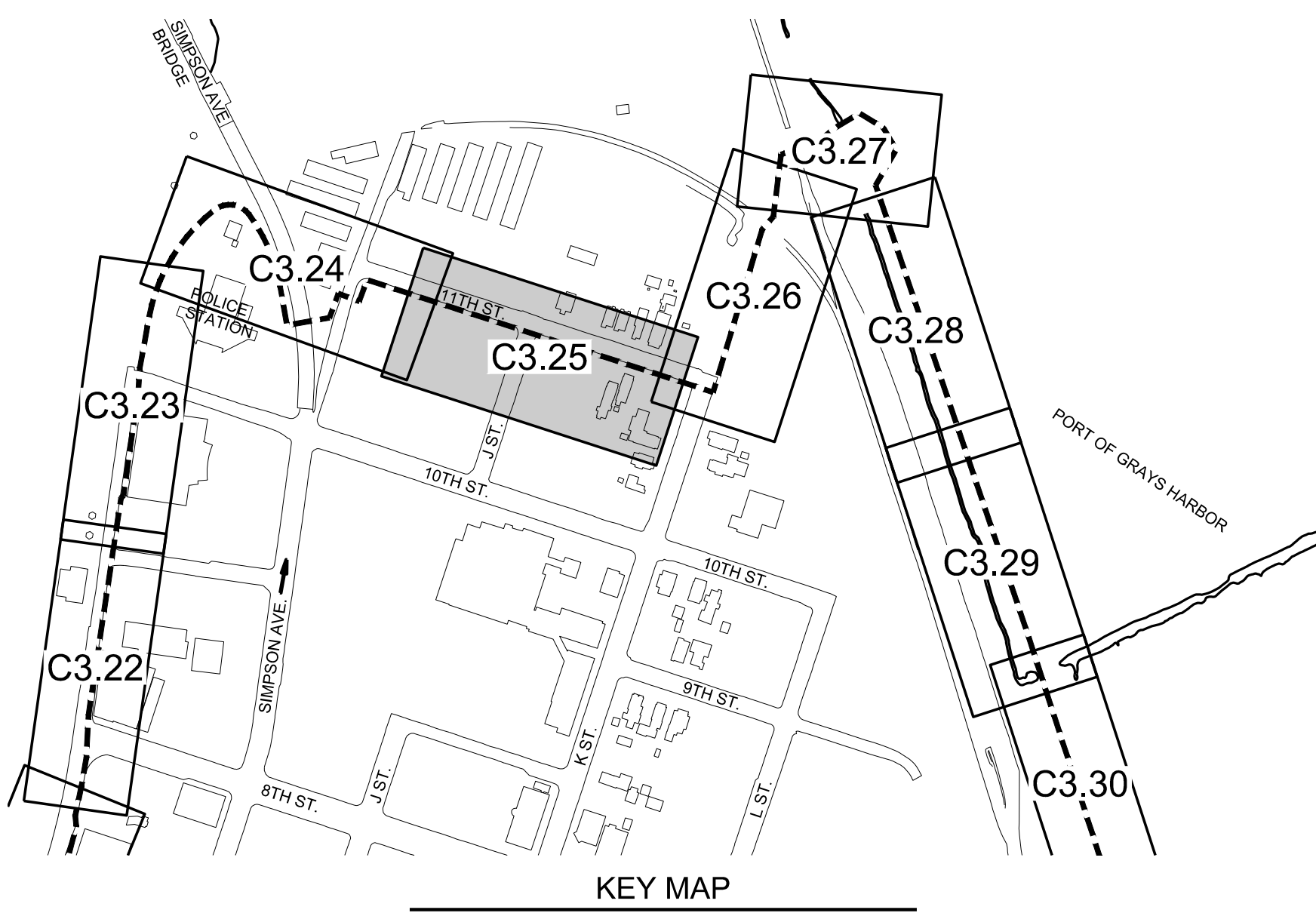
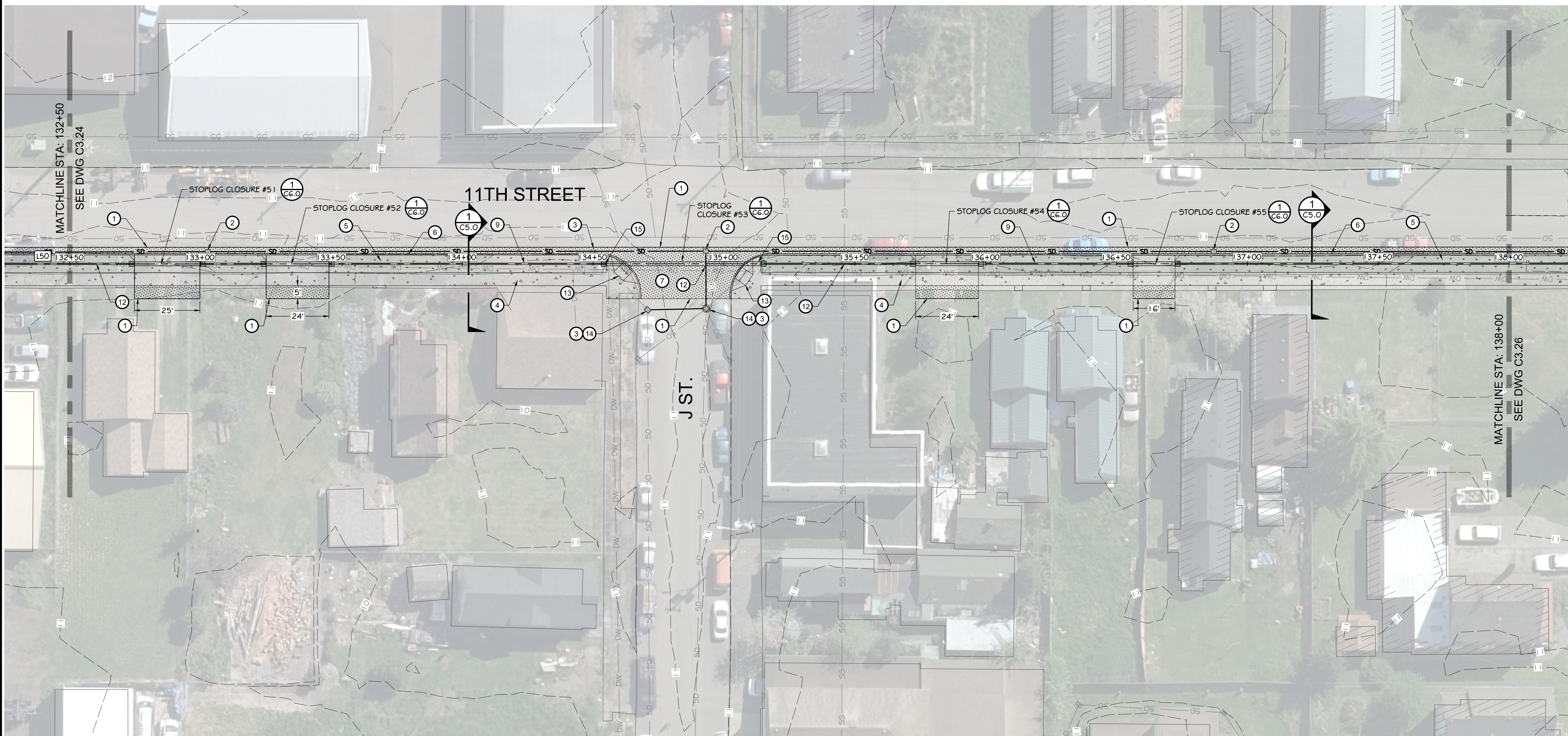
NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.24
SHEET 31 OF 58

PLOTTED: Dec 29, 2020 - 11:30:12a12 - PLOTTED BY: Nat'ea

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C3.25 - LEVEE PLANS



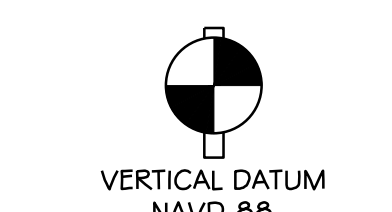
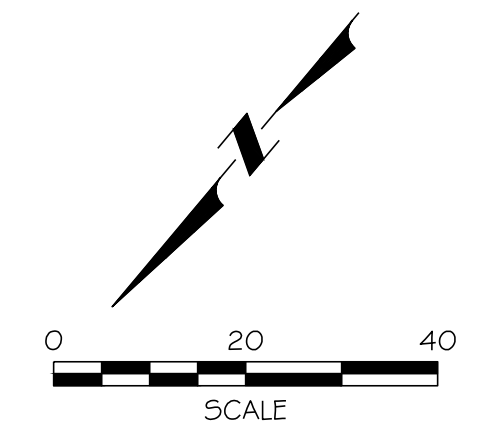
KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL		
LINE TABLE		
LINE #	LENGTH	BEARING
L50	753.19'	S47° 59' 29"W

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
- 2 CATCH BASIN / SD IMPROVEMENTS
- 3 CONNECT TO EXISTING UTILITY
- 4 CEMENT CONCRETE SIDEWALK
- 5 LANDSCAPE PLANTER
- 6 CEMENT CONCRETE CURB
- 7 ASPHALT PAVEMENT
- 8 SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
- 9 CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
- 10 ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
- 11 EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
- 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
- 13 CEMENT CONCRETE ADA RAMP
- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE

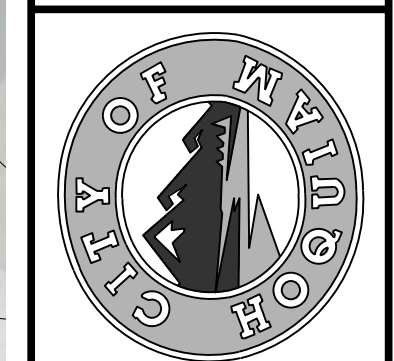


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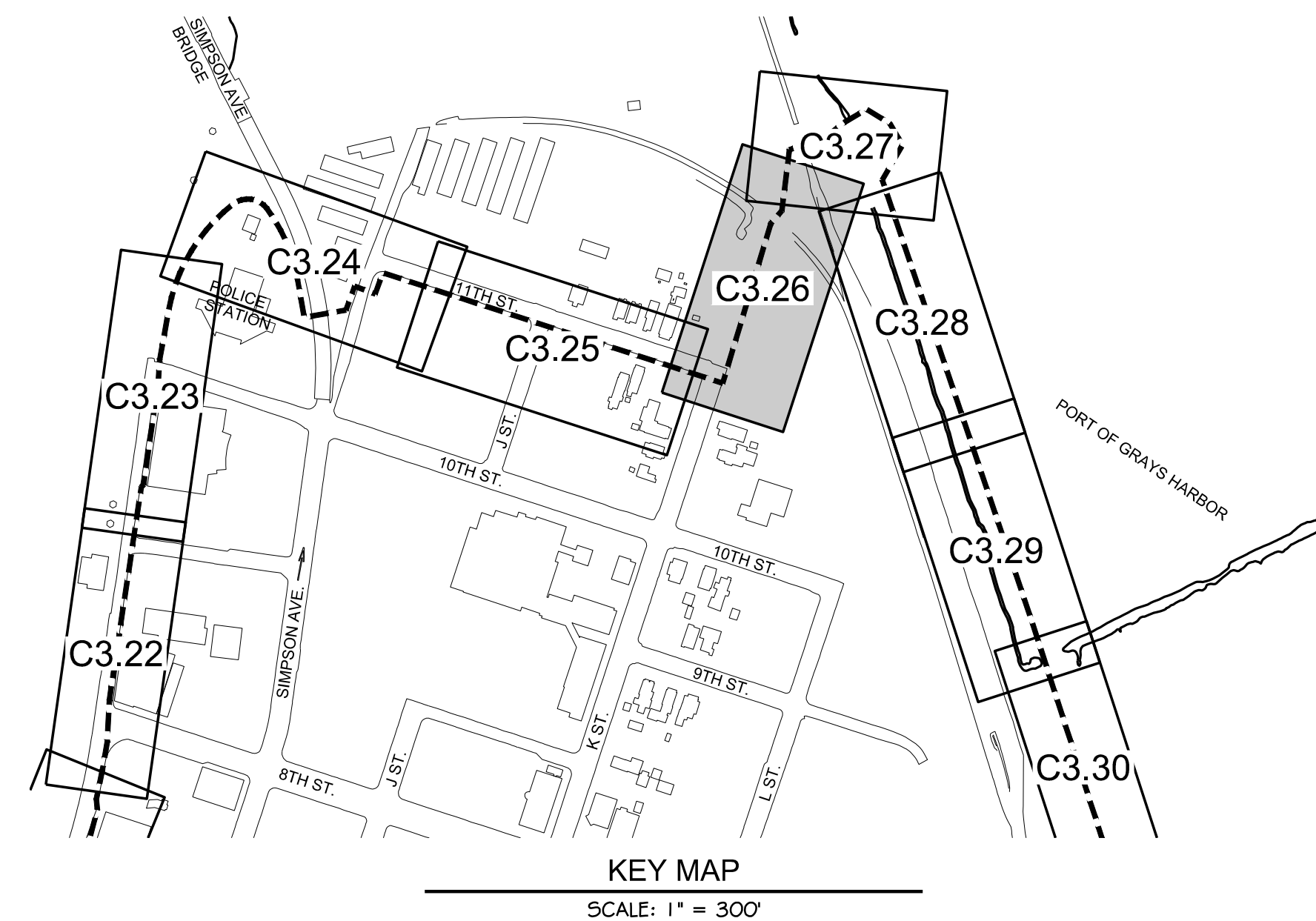
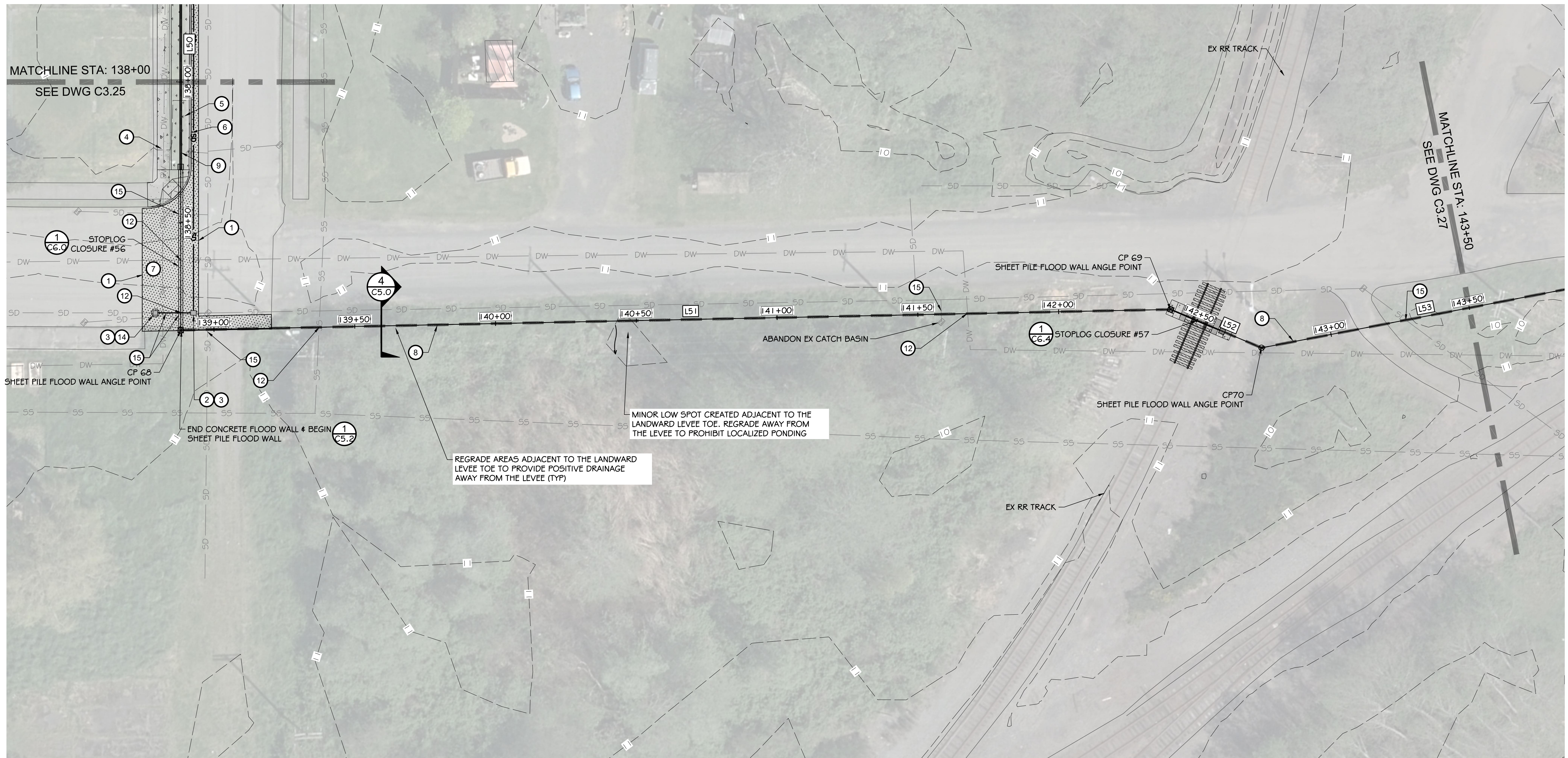
DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	CHECKED BY	MRS
APPROVED BY	SDS	JOB NO.	10181900007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET
C3.25
SHEET 32 OF 58

PLOTTED: Dec 31, 2020 - 9:49:12:02 PLOTTED BY: bkaet

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C3.26 - LEVEE PLANS

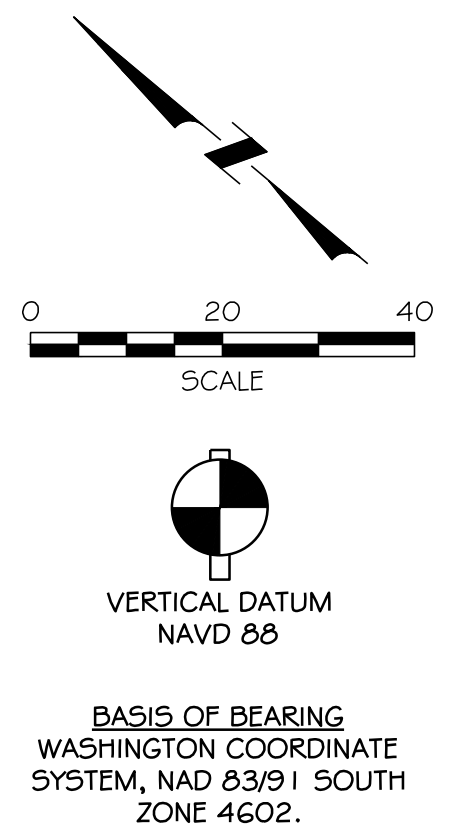


HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L50	753.19'	547° 59' 29"W	68	616,284.25	796,212.84
L51	351.63'	543° 11' 59"E	69	616,027.92	796,453.55
L52	35.06'	519° 05' 44"E	70	615,994.79	796,465.01
L53	129.95'	552° 53' 59"E			

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

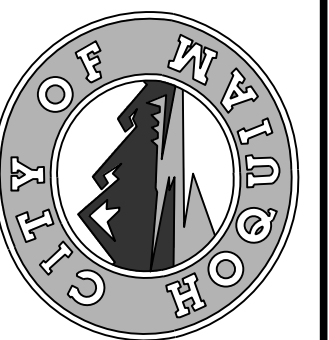
- 1 SAWCUT / MATCH EXISTING
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- 13 CEMENT CONCRETE ADA RAMP
- 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



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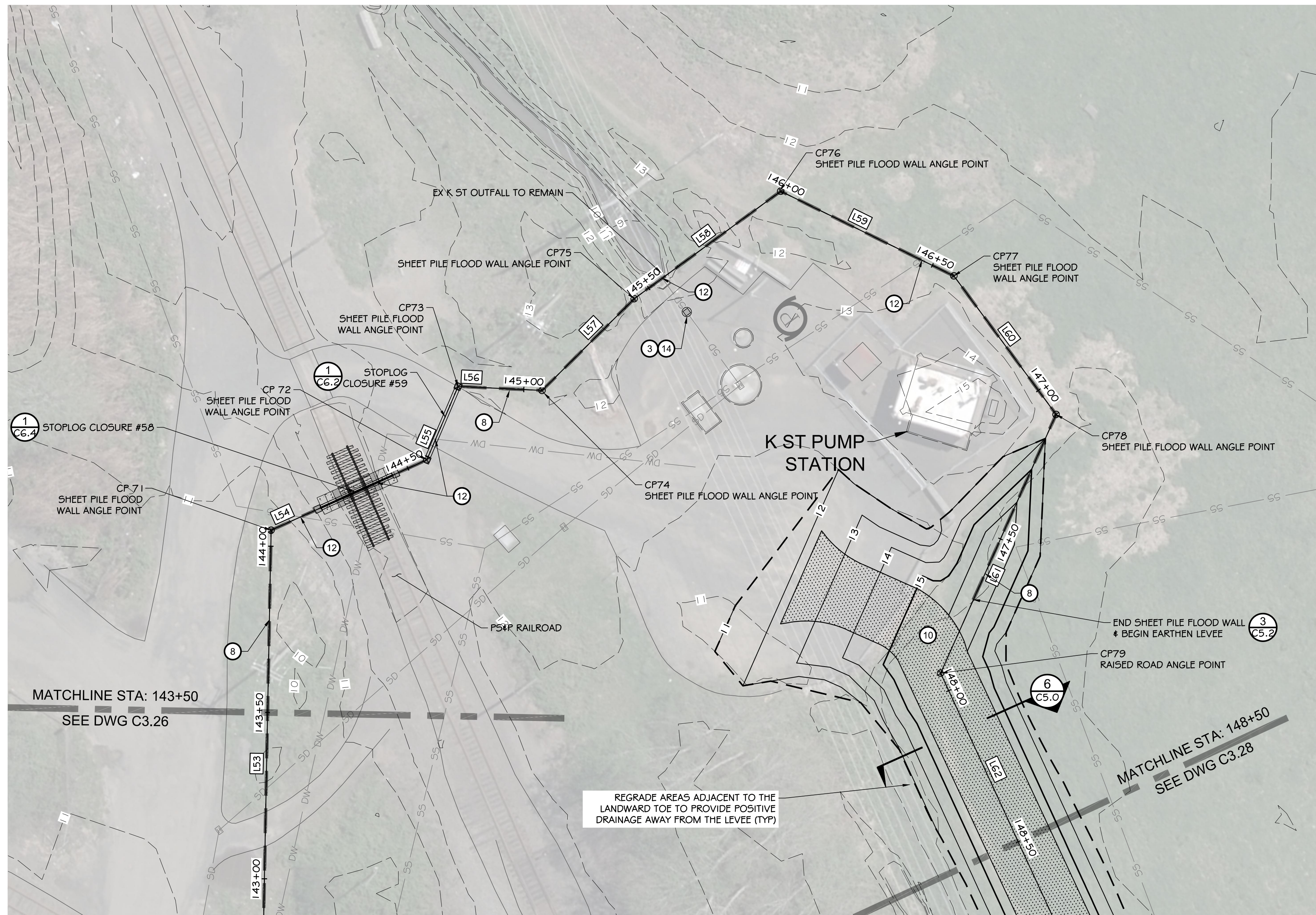
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DRAWN BY	NLA
CHECKED BY	SDS
APPROVED BY	MRS
DATE	12-30-2020
JOB NO.	10181900007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

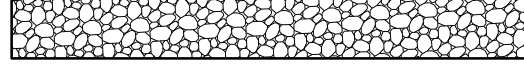

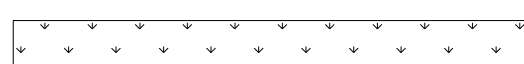

CLOMR PLAN SET

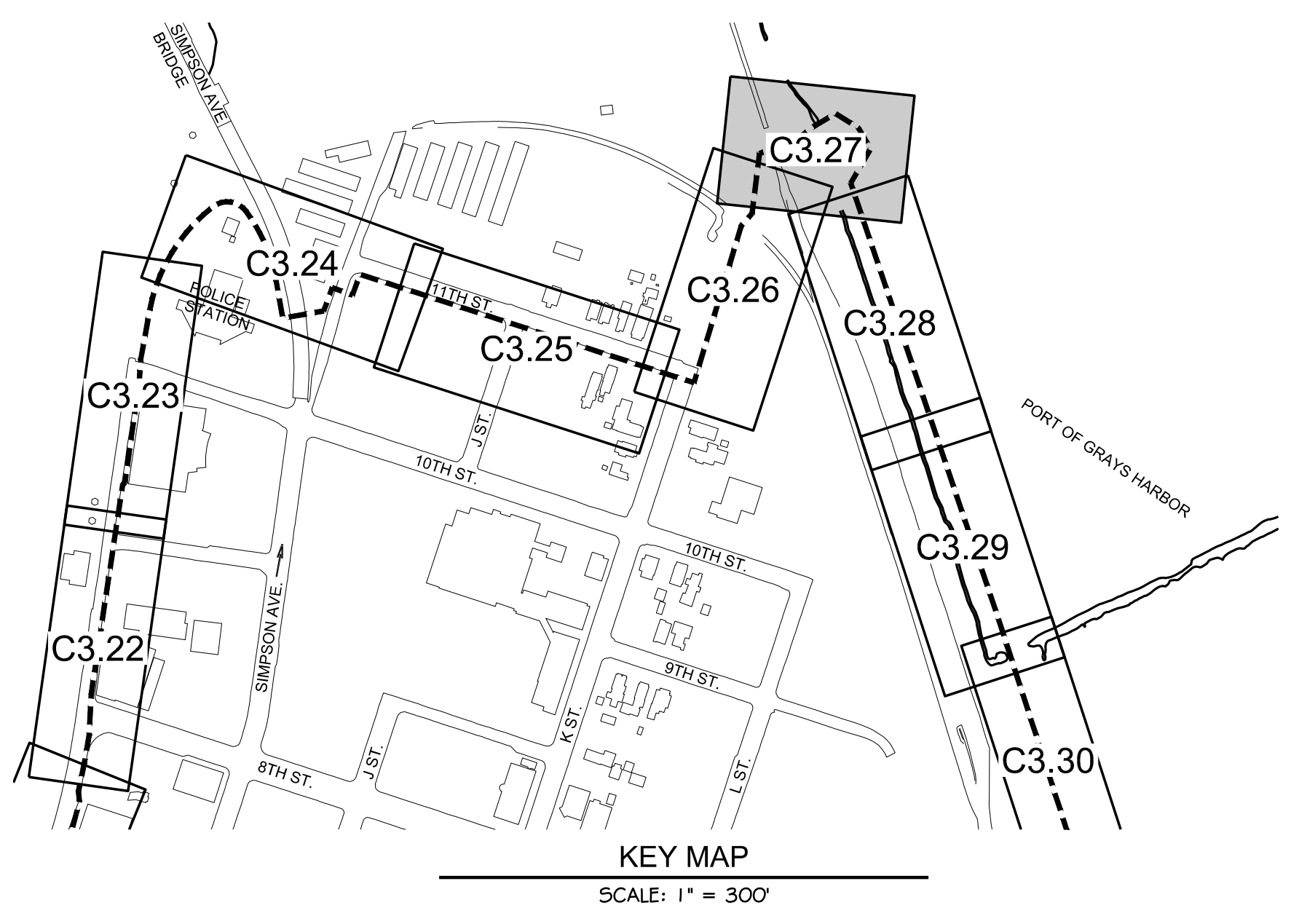
C3.26
SHEET 33 OF 58



REGRADE AREAS ADJACENT TO THE LANDWARD TOE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE LEVEE (TYP)

LEGEND

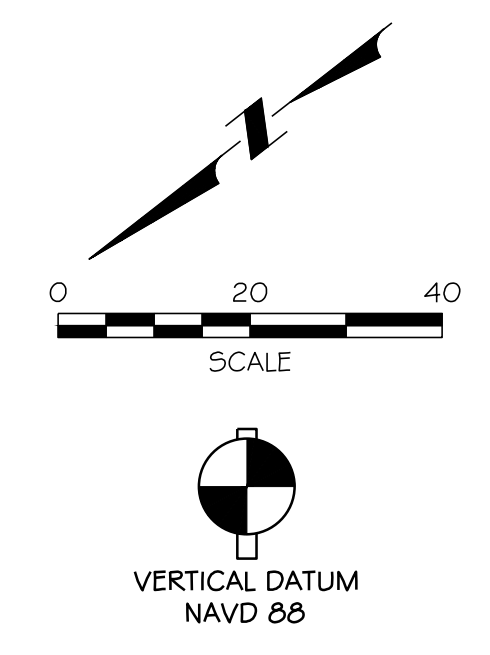
-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT



HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L53	129.95'	S52° 53' 59"E	70	615,994.79	796,465.01
L54	51.40'	S11° 39' 50"W	71	615,916.40	796,568.66
L55	24.00'	S30° 54' 03"E	72	615,866.07	796,558.27
L56	25.29'	S38° 46' 06"W	73	615,845.47	796,570.60
L57	39.09'	S08° 51' 18"E	74	615,825.75	796,554.76
L58	54.66'	S00° 16' 31"E	75	615,787.13	796,560.78
L59	57.98'	S62° 04' 02"W	76	615,732.47	796,561.04
L60	51.77'	S89° 33' 12"W	77	615,705.31	796,509.82
L61	85.19'	N29° 55' 53"W	78	615,704.91	796,458.05
L62	986.13'	N78° 43' 16"W	79	615,778.74	796,415.55

CONSTRUCTION NOTES:

- ① SAWCUT / MATCH EXISTING
- ② CATCH BASIN / SD IMPROVEMENTS
- ③ CONNECT TO EXISTING UTILITY
- ④ CEMENT CONCRETE SIDEWALK
- ⑤ LANDSCAPE PLANTER
- ⑥ CEMENT CONCRETE CURB
- ⑦ ASPHALT PAVEMENT
- ⑧ SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
- ⑨ CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
- ⑩ ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
- ⑪ EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
- ⑫ PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
- ⑬ CEMENT CONCRETE ADA RAMP
- ⑭ STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
- ⑮ CUT AND CAP EXISTING STORM DRAINAGE LINE

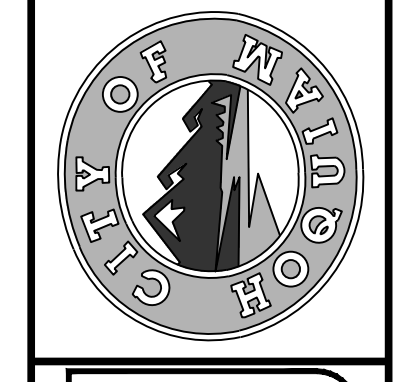


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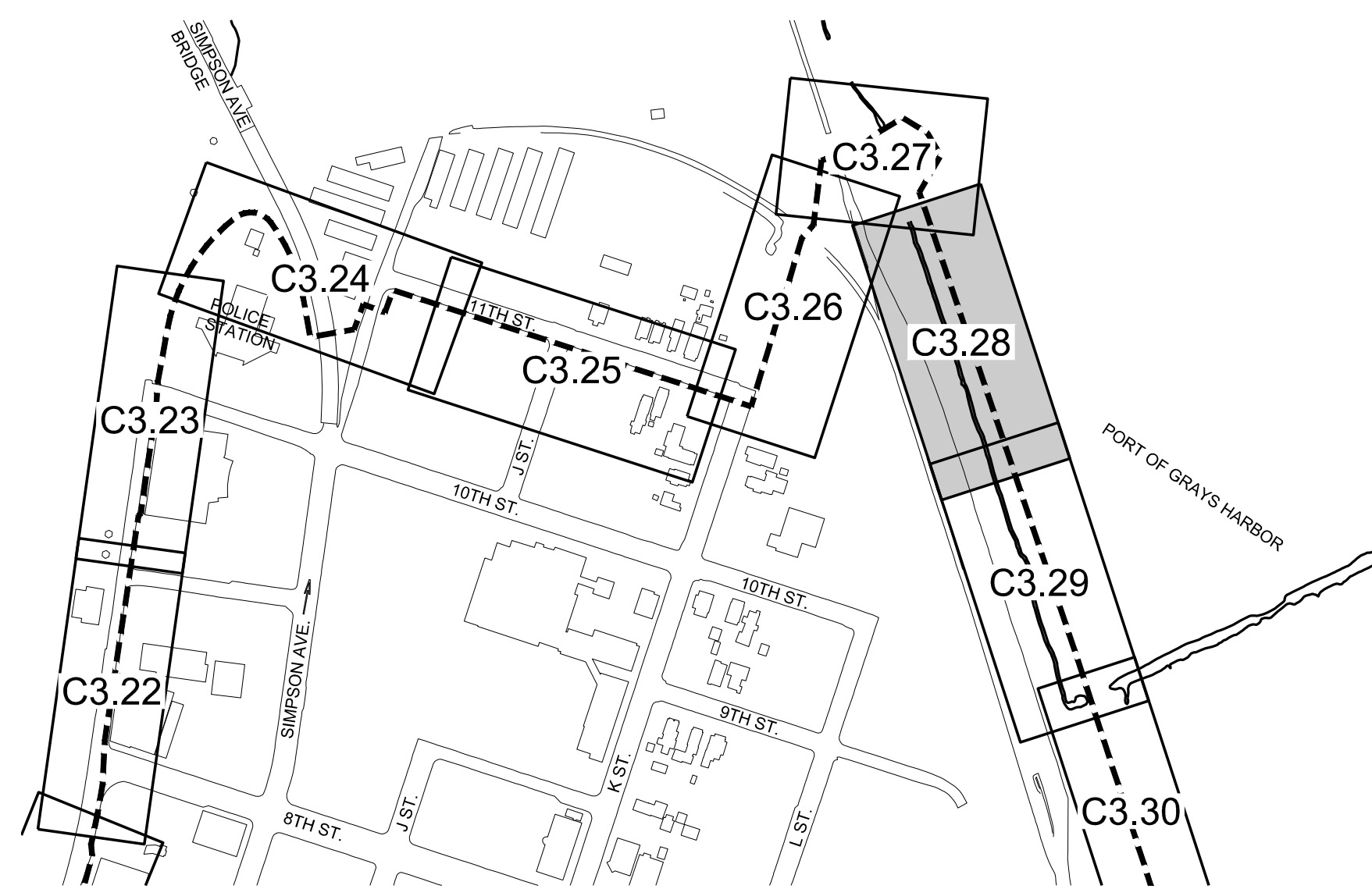
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CHECKED BY: MRS	JOB NO.: 10181900007
DRAWN BY: NILA	
APPROVED BY: SDS	

**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN**

CLOMR PLAN SET

C3.27
SHEET 34 OF 58



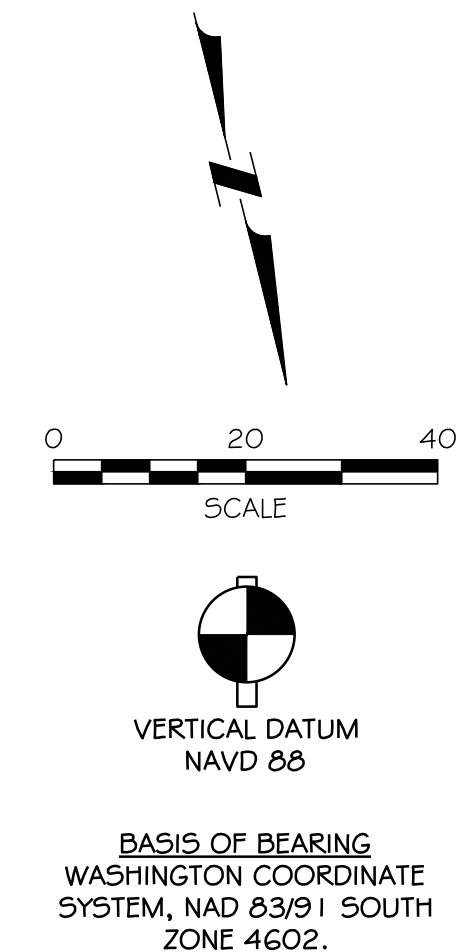
KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL		
LINE TABLE		
LINE #	LENGTH	BEARING
L62	986.13'	N78° 43' 16"W

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

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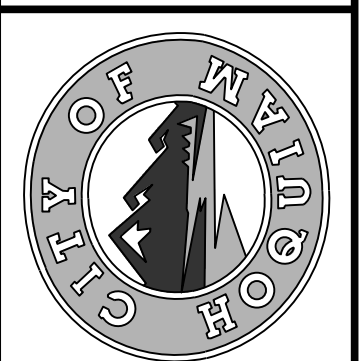


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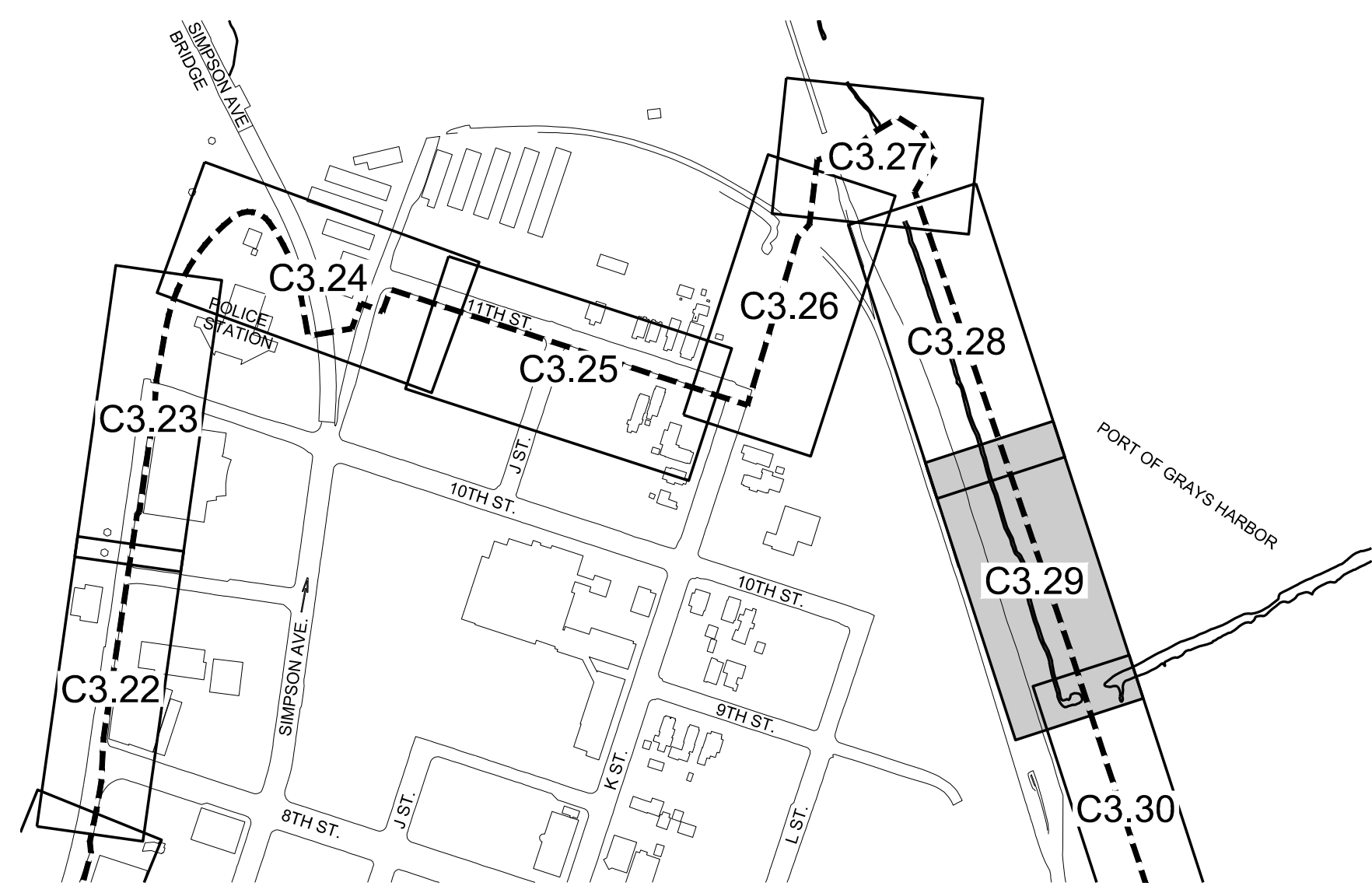
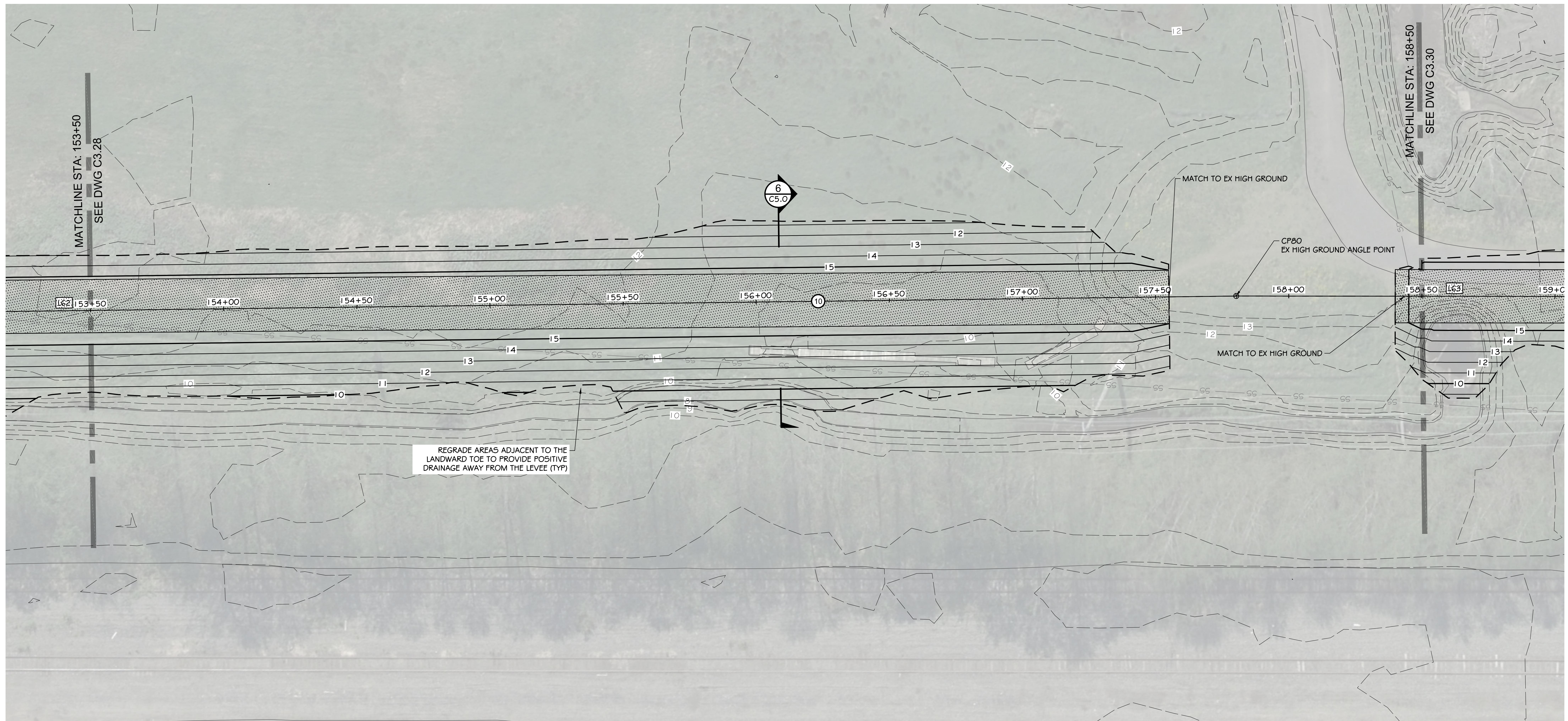
DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	JOB NO.	10181900007
CHECKED BY	SDS		
APPROVED BY	MRS		

**NORTH SHORE LEVEE WEST SEGMENT
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HOQUIAM, WASHINGTON**

LEVEE PLAN

CLOMR PLAN SET

C3.28
SHEET 35 OF 58



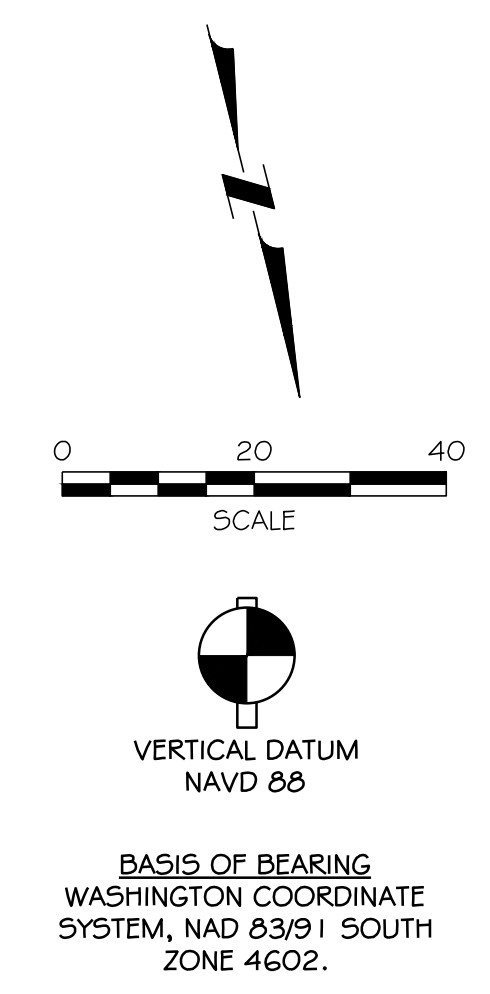
KEY MAP
SCALE: 1" = 300'

HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L62	986.13'	N78° 43' 16"W	80	615,971.61	795,448.46
L63	719.68'	N77° 56' 10"W			

LEGEND	
	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

CONSTRUCTION NOTES:

- 1 SAWCUT / MATCH EXISTING
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- 15 CUT AND CAP EXISTING STORM DRAINAGE LINE

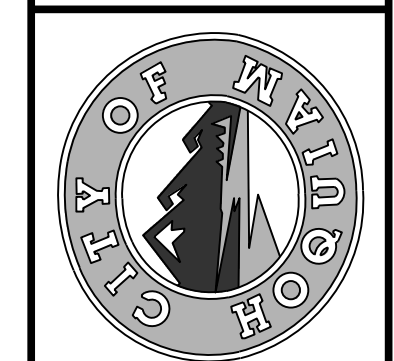


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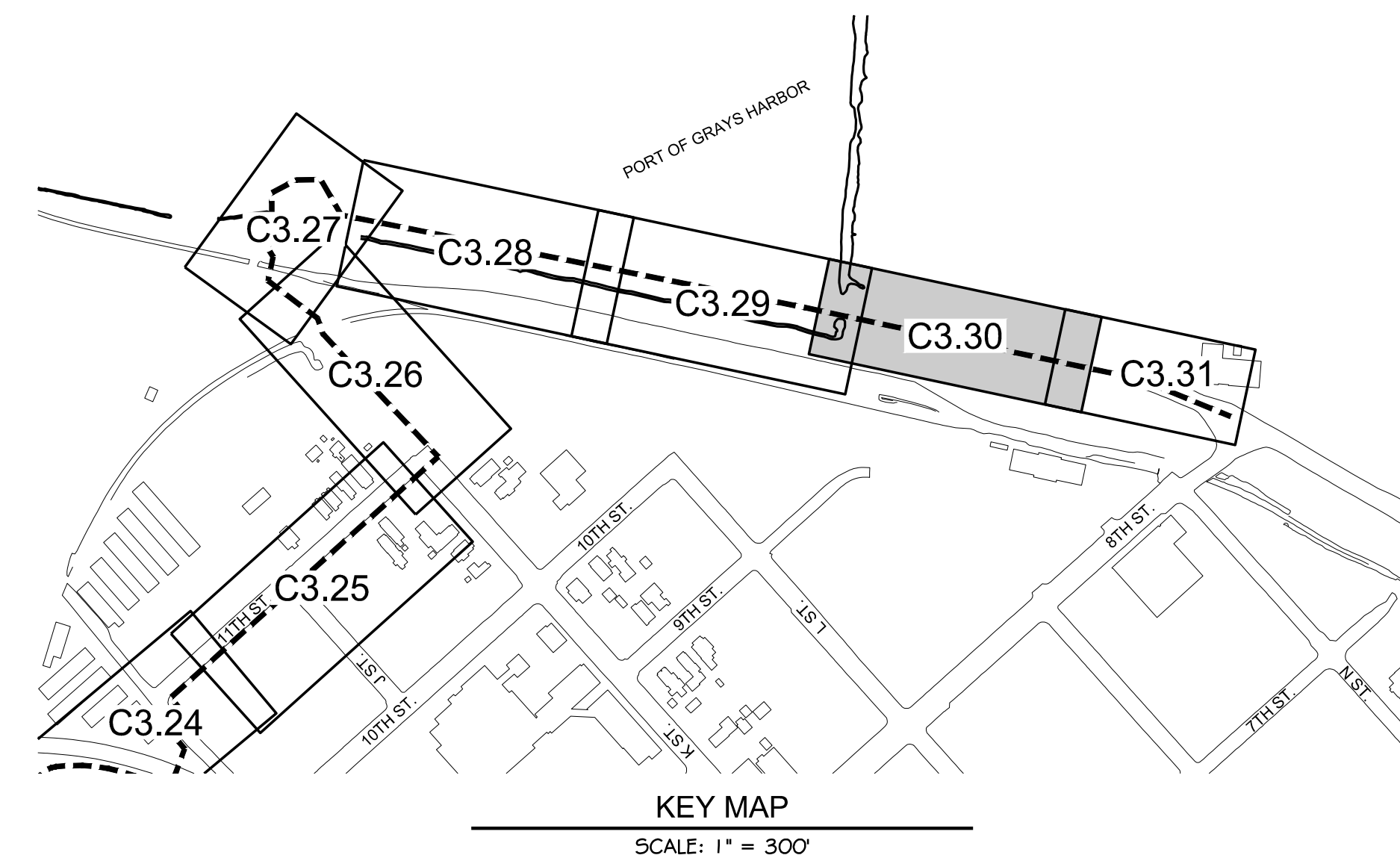
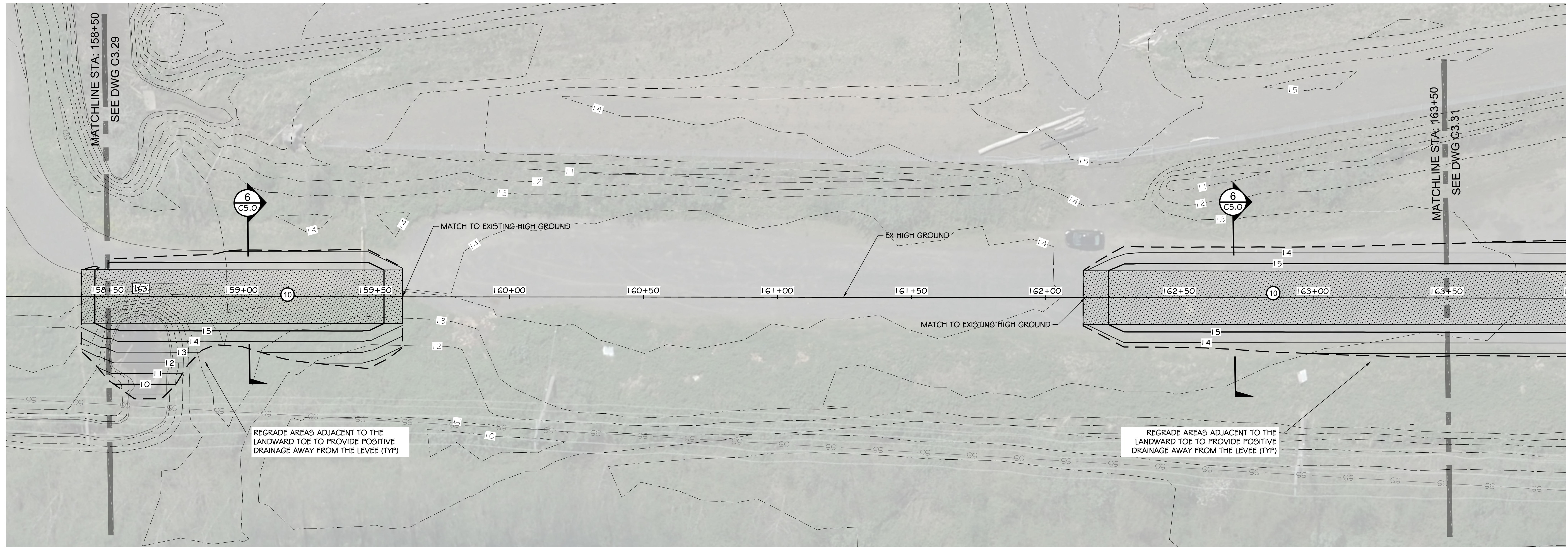
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NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.29
SHEET 36 OF 58



HORIZONTAL CONTROL

LINE TABLE

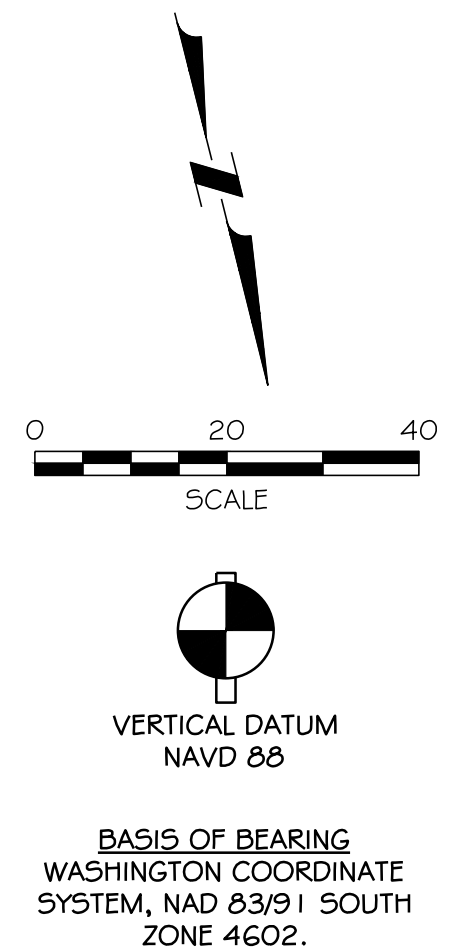
LINE #	LENGTH	BEARING
L62	986.13'	N78° 43' 16"W
L63	719.68'	N77° 56' 10"W

LEGEND

- LEVEE (EARTHEN) / GRAVEL ROAD
- CONCRETE
- LANDSCAPE PLANTER
- ASPHALT PAVEMENT

CONSTRUCTION NOTES:

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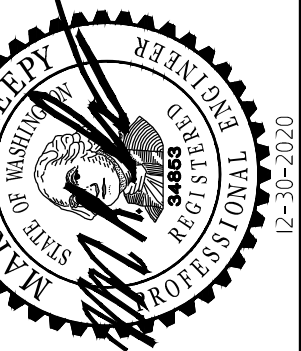


NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.30

SHEET 37 OF 58



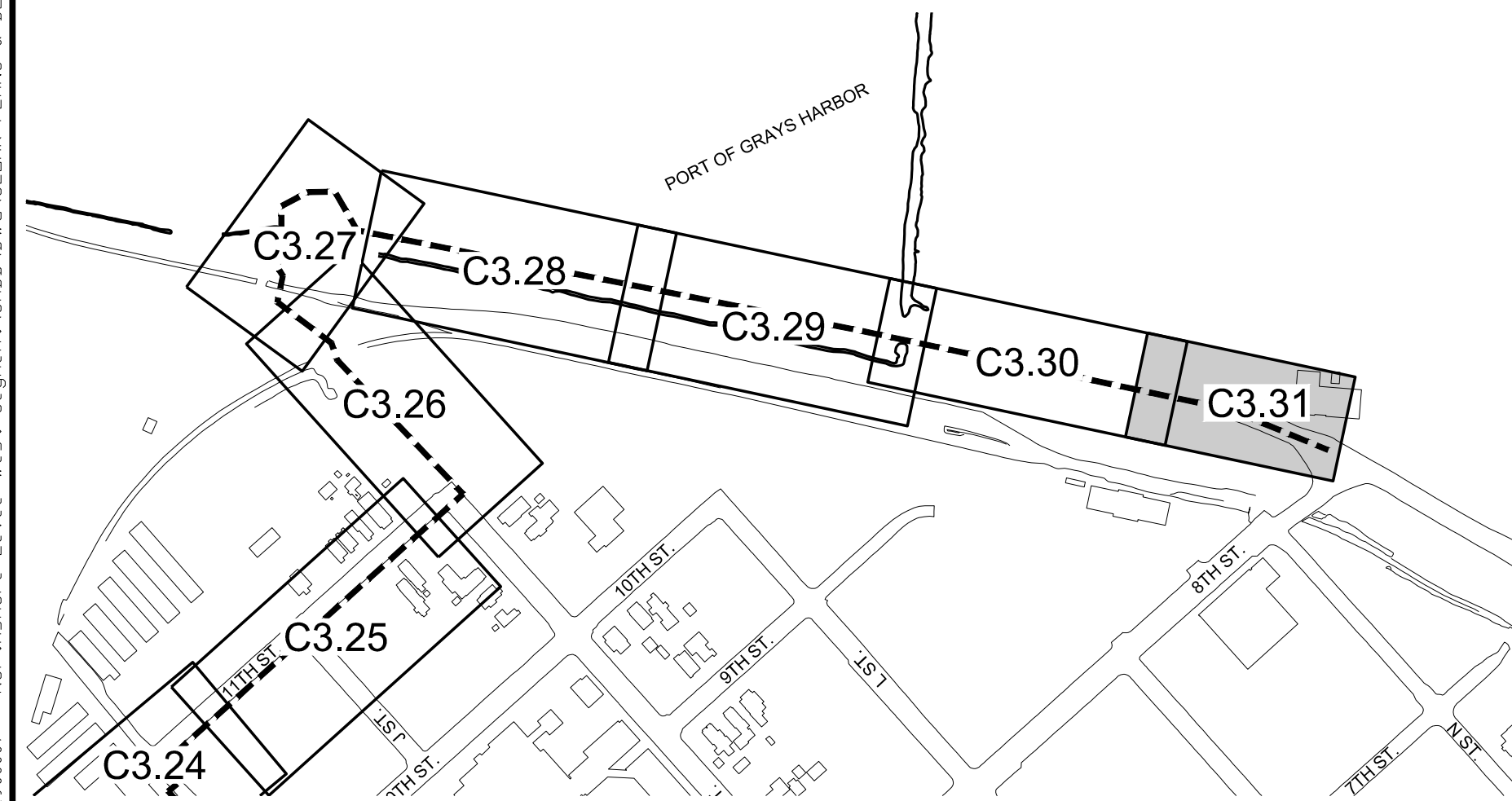
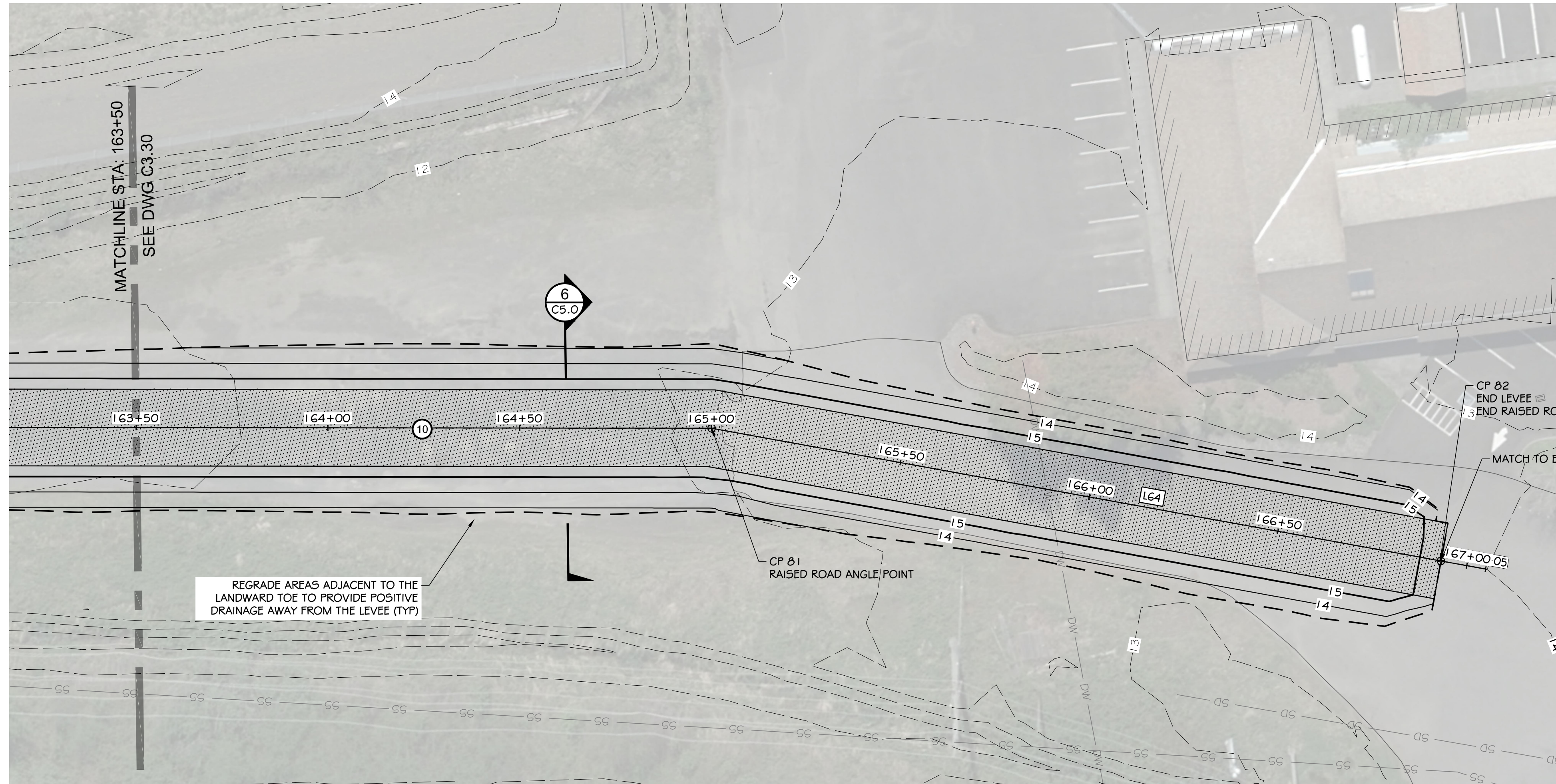
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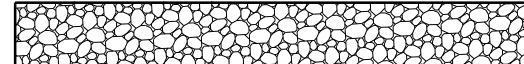
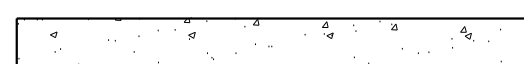
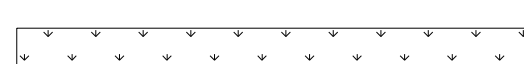
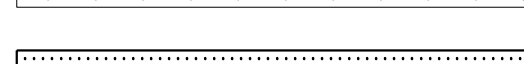
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KEY MAP
SCALE: 1" = 300'

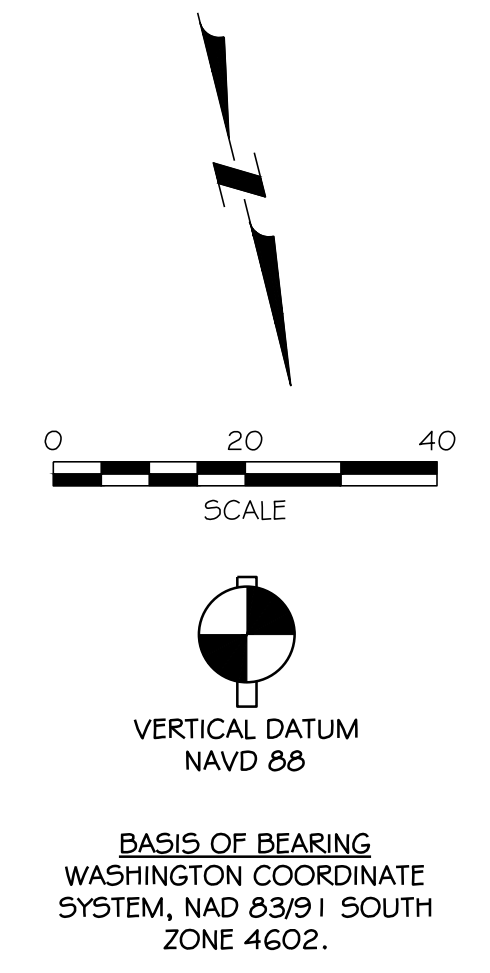
HORIZONTAL CONTROL					
LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L63	719.68	N77° 56' 10"W	81	616,122.02	794,744.68
L64	205.00	N67° 41' 14"W	82	616,195.37	794,565.96

LEGEND

-  LEVEE (EARTHEN) / GRAVEL ROAD
-  CONCRETE
-  LANDSCAPE PLANTER
-  ASPHALT PAVEMENT

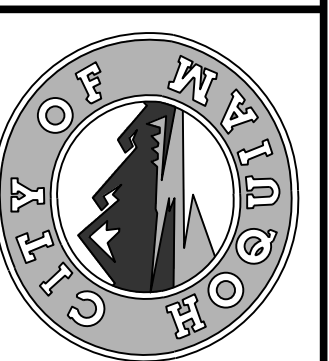
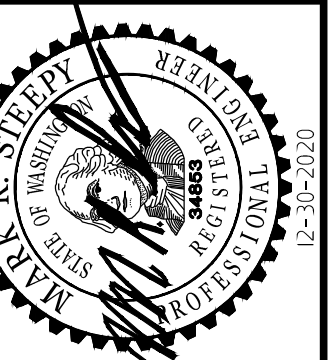
CONSTRUCTION NOTES:

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ZONE 4602.

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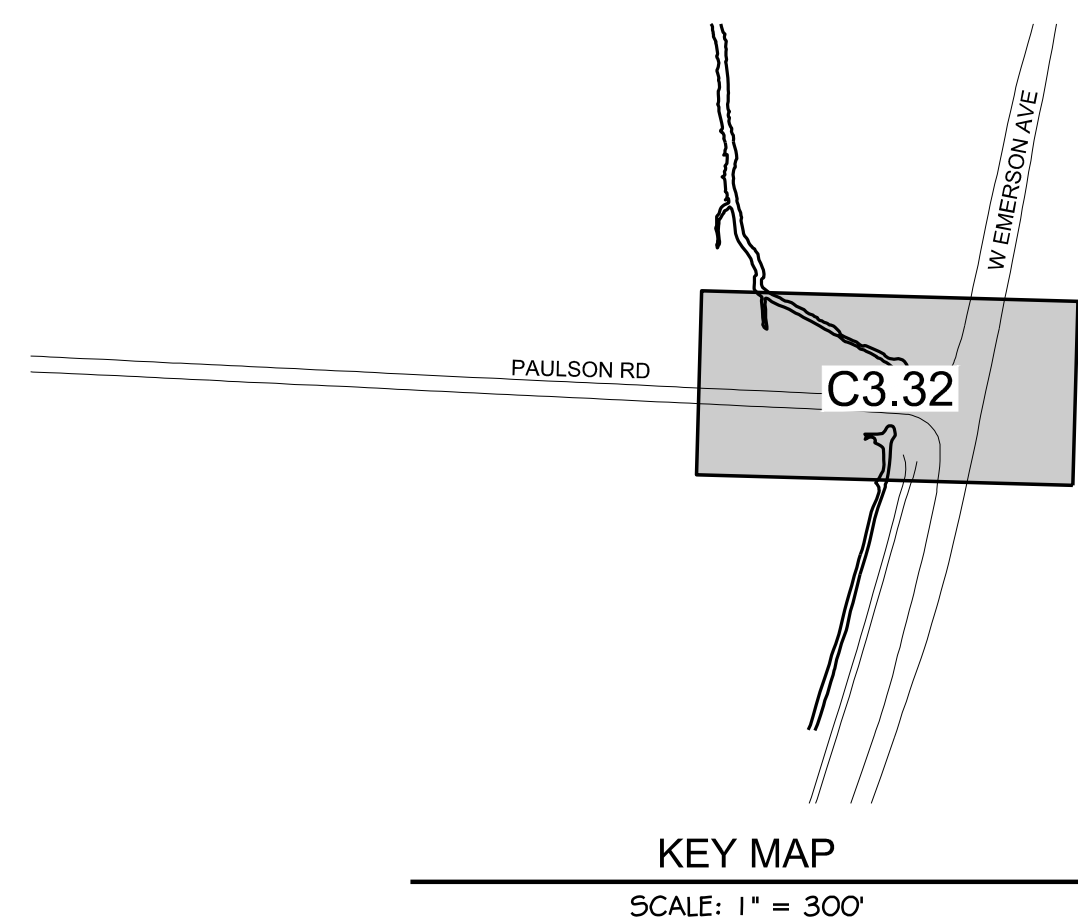
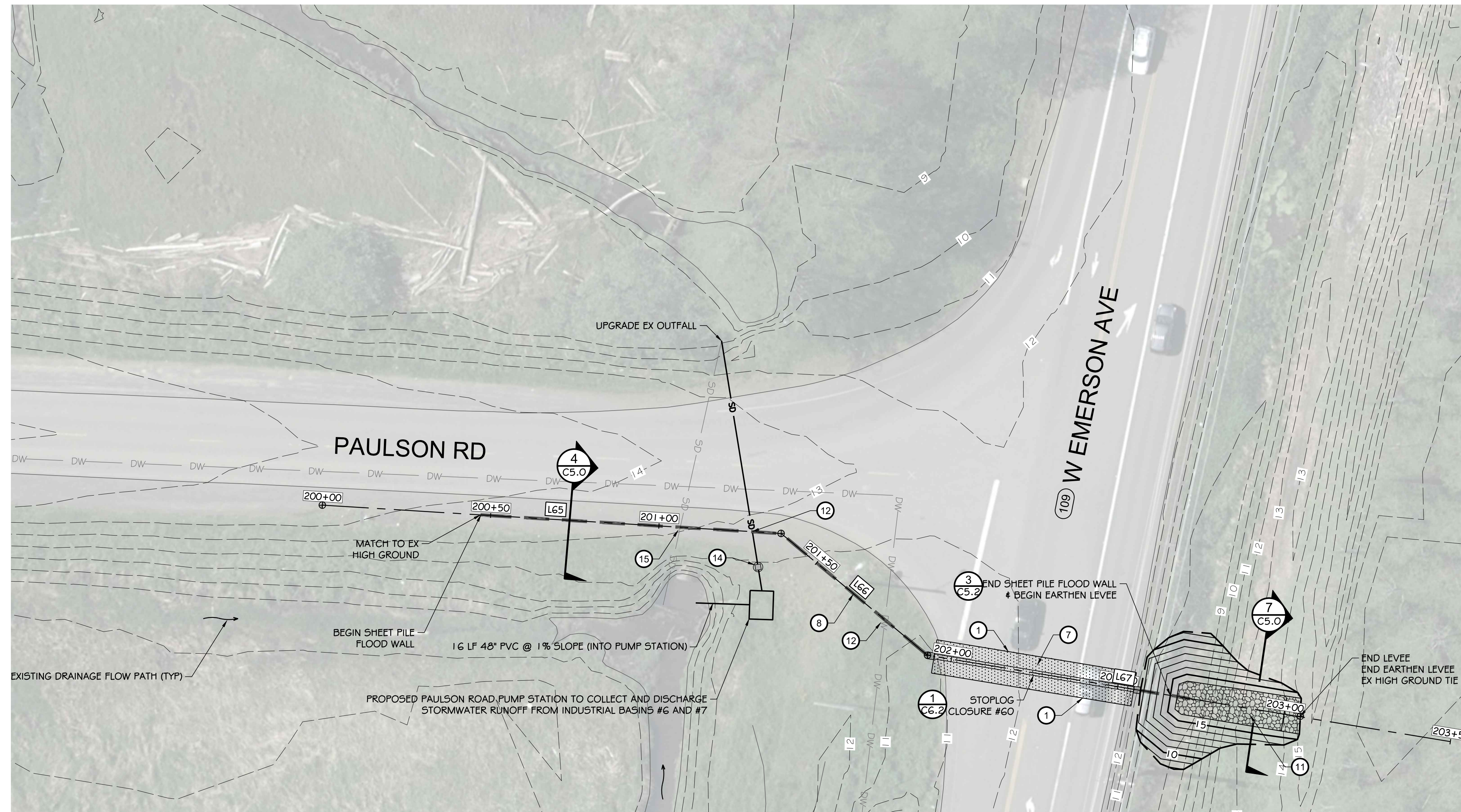
CALL
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LOCATE TWO (2)
WORKING DAYS
BEFORE YOU
DIG
811

DESIGNED BY SDS	APPROVED BY MRS	DATE 12-30-2020	JOB NO. 10181900007
DRAWN BY NLA	CHECKED BY SDS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE PLAN

CLOMR PLAN SET

C3.31
SHEET 38 OF 58



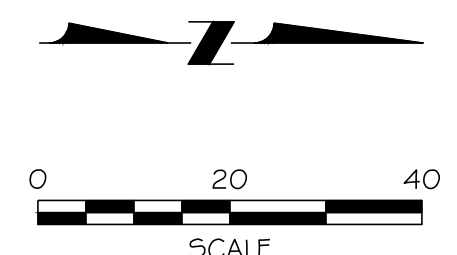
- HORIZONTAL CONTROL

LINE TABLE			POINT TABLE		
LINE #	LENGTH	BEARING	POINT #	NORTHING	EASTING
L65	136.35'	N03° 32' 23"E	83	619,445.87	787,585.19
L66	56.48'	N39° 45' 56"E	84	619,581.96	787,593.61
L67	157.17'	N09° 22' 38"E	85	619,625.38	787,629.74
			86	619,735.94	787,647.80

LEGEND

	LEVEE (EARTHEN) / GRAVEL ROAD
	CONCRETE
	LANDSCAPE PLANTER
	ASPHALT PAVEMENT

- CONSTRUCTION NOTES:**
- 1 SAWCUT / MATCH EXISTING
 - 2 CATCH BASIN / SD IMPROVEMENTS
 - 3 CONNECT TO EXISTING UTILITY
 - 4 CEMENT CONCRETE SIDEWALK
 - 5 LANDSCAPE PLANTER
 - 6 CEMENT CONCRETE CURB
 - 7 ASPHALT PAVEMENT
 - 8 SHEET PILE FLOOD WALL (SEE DETAILS 4 & 5 ON DWG C5.0)
 - 9 CONCRETE FLOOD WALL (SEE DETAILS 2 & 3 ON DWG C5.0)
 - 10 ACCESS ROAD (SEE DETAIL 6 ON DWG C5.0)
 - 11 EARTHEN LEVEE (SEE DETAILS 7 & 8 ON DWG C5.0)
 - 12 PIPE PENETRATION (SEE DETAILS ON DWGS C5.3 & C5.4)
 - 13 CEMENT CONCRETE ADA RAMP
 - 14 STORM DRAINAGE CONTROL MANHOLE (SEE DETAIL 2 ON DWG C5.3)
 - 15 CUT AND CAP EXISTING STORM DRAINAGE LINE



<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p>	<p>LEVEE PLAN</p>
<p>CLOMR PLAN SET</p>	
<p>C3.32</p>	
<p>SHEET 39 OF 58</p>	
<p>DESIGNED BY: SDS DRAWN BY: NILA CHECKED BY: SDS</p>	<p>APPROVED BY: MRS DATE: 12-30-2020 JOB NO.: 10181900007</p>
<p>CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811</p>	
<p>613 McMillan Square Loop Lacey, WA 98503 360.297.7230 www.kpff.com</p>	
<p>NO DATE BY CHD/APPR</p>	<p>NO DATE BY CHD/APPR</p>
<p>REVISION</p>	

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C4.0 - PUMP STATION PLAN
 PLOTTED: Feb 10, 2021 - 11:28:22 PLOTTED BY: Buckel

PUMP STATION	EXISTING PUMP CAPACITY		PROPOSED CAPACITY		# OF PUMPS	NOTES
	CFS	GPM	CFS	GPM		
COTTAGE ST	5.6	2,500	N/A	N/A	1	SERVES AREAS OUTSIDE LEVEE PROTECTION.
RAMER ST	7.8	10,000	N/A	N/A	2	DOES NOT REQUIRE IMPROVEMENTS FOR CLOMR / LOMR APPROVAL
QUEEN AVE	25.4	11,400	N/A	N/A	2	DOES NOT REQUIRE IMPROVEMENTS FOR CLOMR / LOMR APPROVAL
EMERSON AVE	73.5	33,000	N/A	N/A	2	DOES NOT REQUIRE IMPROVEMENTS FOR CLOMR / LOMR APPROVAL
10TH ST	4.5	2,000	21.6	9,700	2	8TH ST BASIN REROUTED TO IMPROVED PUMP STATION
K ST	15.6	7,000	N/A	N/A	2	DOES NOT REQUIRE IMPROVEMENTS FOR CLOMR / LOMR APPROVAL
ADAMS ST	73.5	33,000	N/A	N/A	2	DOES NOT REQUIRE IMPROVEMENTS FOR CLOMR / LOMR APPROVAL
PAULSON RD	N/A	N/A	129.1	58,000	2	PROPOSED PUMP STATION

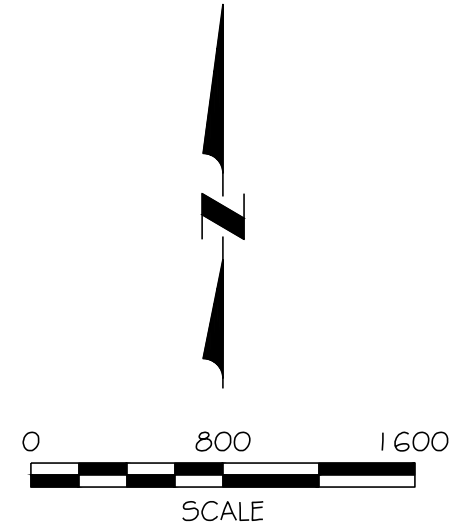
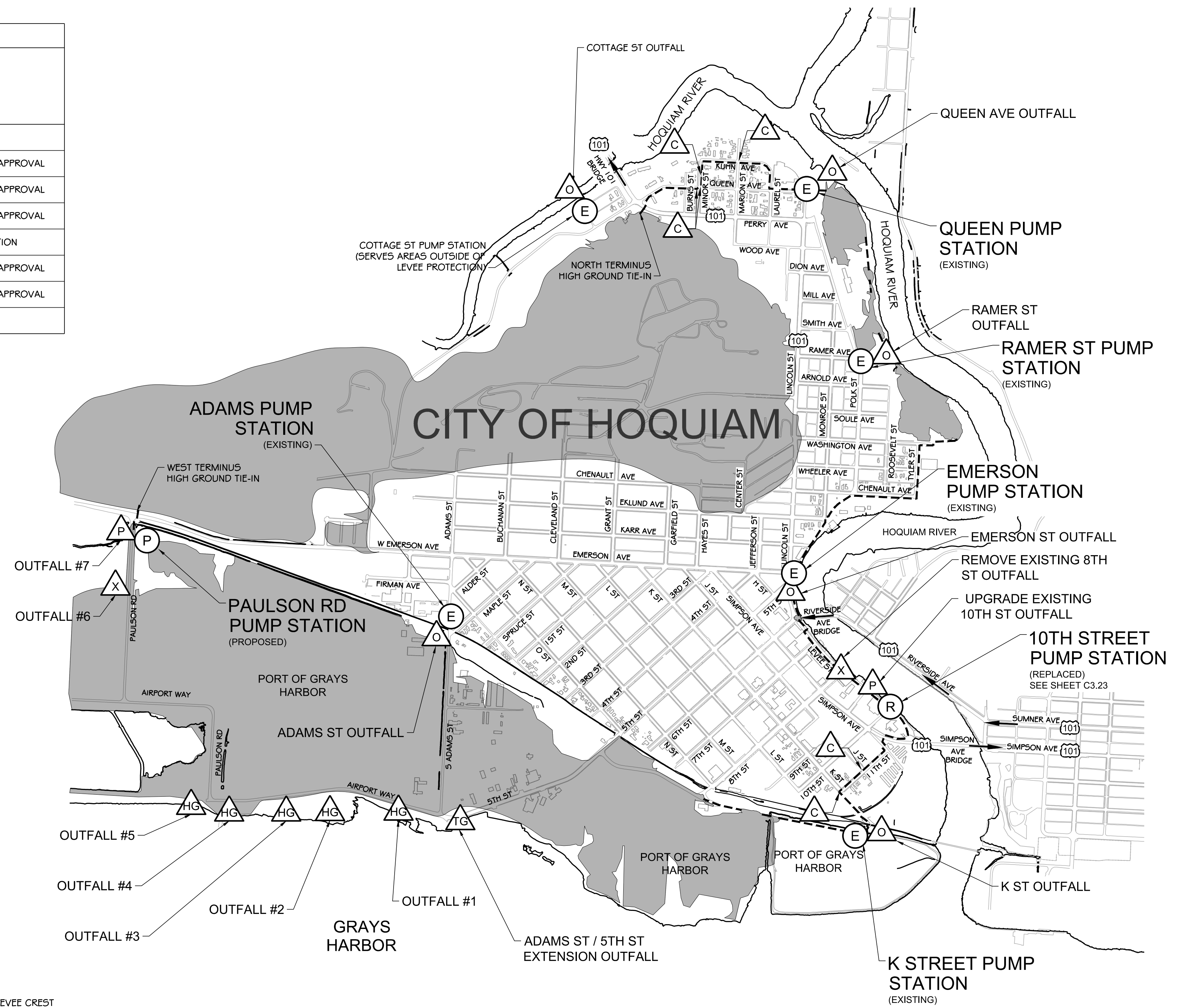
BACKUP PUMP: A TRAILER MOUNTED, 3,000 GPM PUMP WILL BE AVAILABLE IN CASE OF PUMP STATION FAILURE.
 EMERGENCY POWER: A TRAILER MOUNTED GENERATOR WILL PROVIDE EMERGENCY PUMP STATION BACKUP POWER WHEN NECESSARY.

OUTFALLS				
OUTFALL NAME/NUMBER	DRAINAGE BASIN	EXISTING OUTFALL TYPE	PROPOSED CLOSURE DEVICE	DESCRIPTION
COTTAGE ST PUMP STATION	COTTAGE ST	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	OUTSIDE LEVEE PROTECTION
RAMER ST PUMP STATION	RAMER ST	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
8TH ST	8TH ST	GRAVITY	REROUTED TO 10TH ST PUMP STATION	INTERIOR DRAINAGE
ADAMS ST / 5TH ST EXTENSION	5TH ST / ADAMS ST	GRAVITY	BACKFLOW PREVENTION STRUCTURE	HIGH GROUND DRAINAGE
QUEEN AVE PUMP STATION	QUEEN AVE	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
EMERSON AVE PUMP STATION	EMERSON AVE	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
10TH ST PUMP STATION	10TH ST	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
K ST PUMP STATION	K ST	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
ADAMS ST PUMP STATION	ADAMS ST	PUMPED	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE
OUTFALL #1	INDUSTRIAL BASIN 01	GRAVITY	N/A	HIGH GROUND DRAINAGE
OUTFALL #2	INDUSTRIAL BASIN 02	GRAVITY	N/A	HIGH GROUND DRAINAGE
OUTFALL #3	INDUSTRIAL BASIN 03	GRAVITY	N/A	HIGH GROUND DRAINAGE
OUTFALL #4	INDUSTRIAL BASIN 04	GRAVITY	N/A	HIGH GROUND DRAINAGE
OUTFALL #5	INDUSTRIAL BASIN 05	GRAVITY	N/A	HIGH GROUND DRAINAGE
OUTFALL #6	INDUSTRIAL BASIN 06	GRAVITY	REROUTED TO PAULSON ST PUMP STATION	INTERIOR DRAINAGE
OUTFALL #7	INDUSTRIAL BASIN 07	GRAVITY	BACKFLOW PREVENTION STRUCTURE # PUMP STATION DOUBLE CHECK ASSEMBLY	INTERIOR DRAINAGE

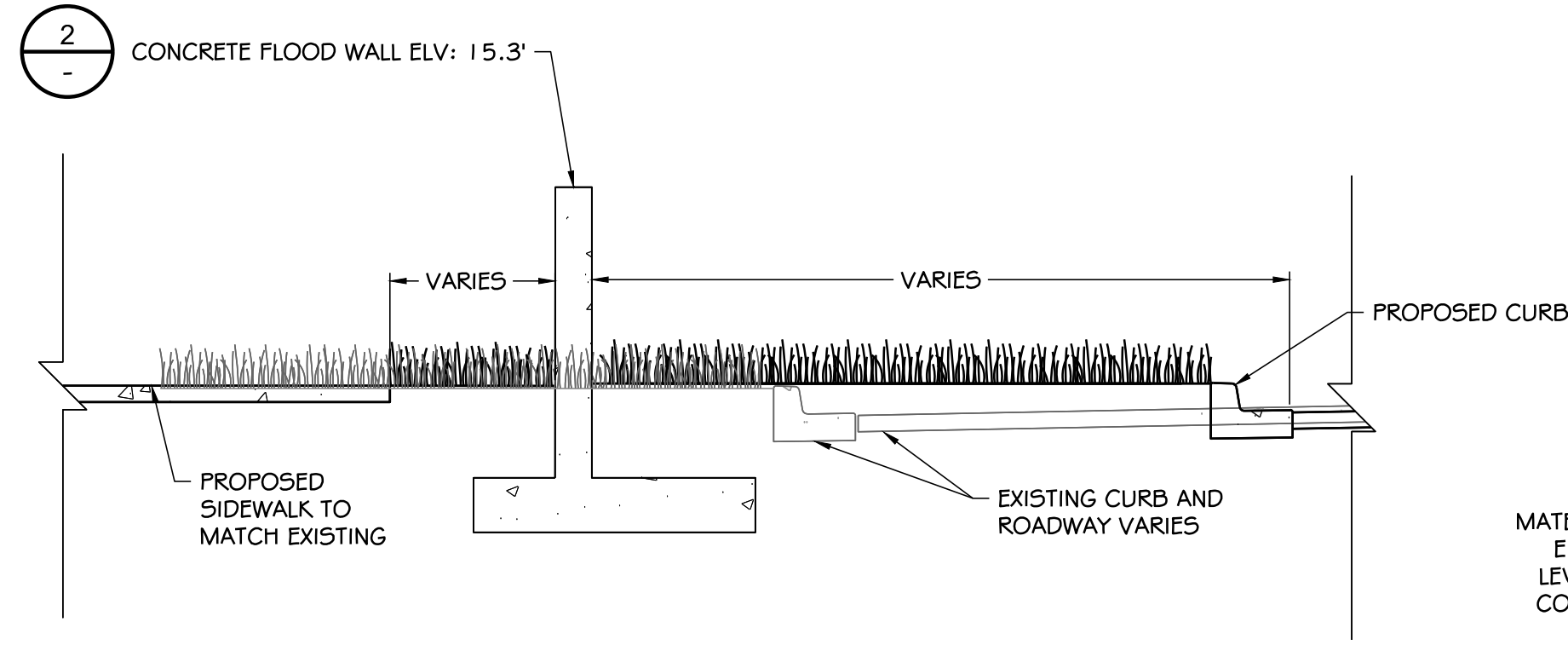
* HIGH GROUND DRAINAGE OUTFALLS DRAIN FLOOD ZONE X AREAS (ELV 13.71 FEET NAVD 88 AND HIGHER) AND DO NOT REQUIRE IMPROVEMENTS BECAUSE THEY ARE INDEPENDENT FROM THE LEVEE INTERIOR DRAINAGE SYSTEM.
 ** BACKFLOW PREVENTION STRUCTURES ARE PROPOSED AT ALL EXISTING AND PROPOSED FORCEMAIN LINES PER DETAIL 2 ON DWG C5.3

LEGEND

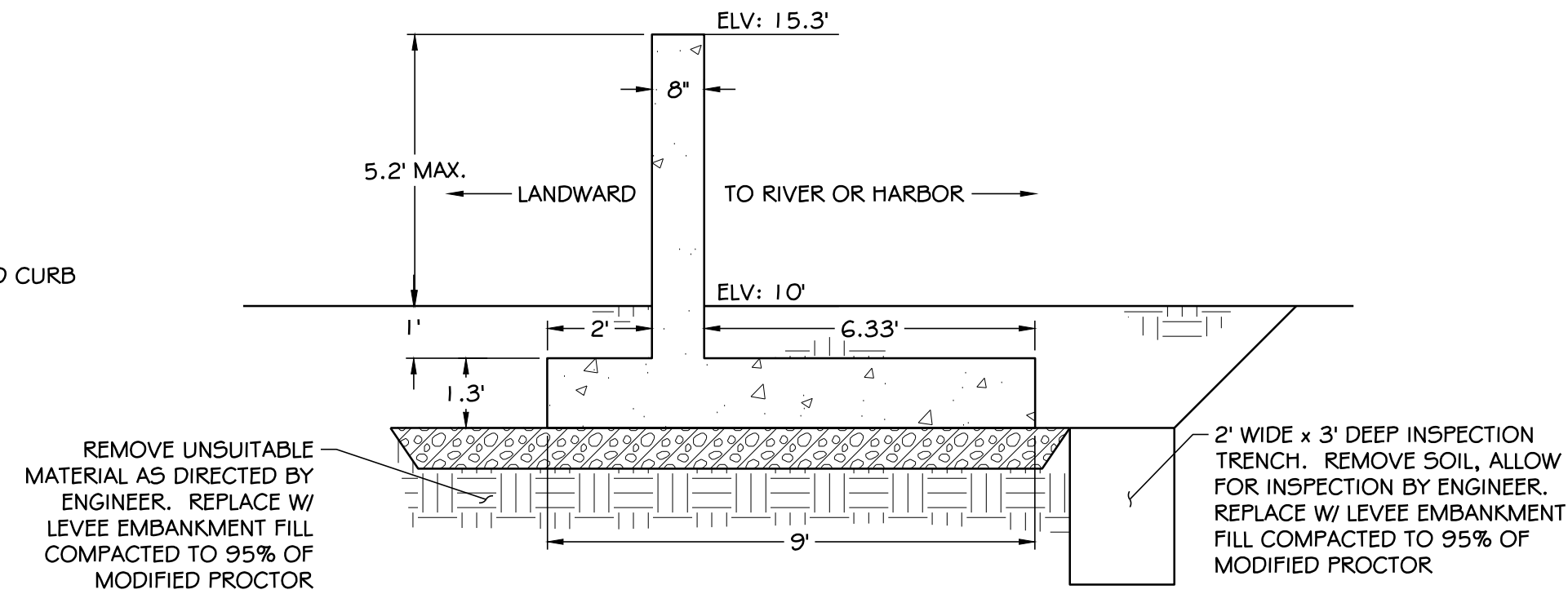
- LEVEE CREST
- EXISTING HIGH GROUND (ELV: 14.71' NAVD 88 & ABOVE)
- REMOVE & REPLACE EXISTING PUMP STATION
- EXISTING PUMP STATION TO BE MODIFIED
- PROPOSED PUMP STATION
- EXISTING PUMP STATION FORCEMAIN OUTFALL TO REMAIN
- PROPOSED FORCEMAIN OUTFALL
- EXISTING GRAVITY OUTFALL TO REMAIN
- EXISTING OUTFALL TO REMAIN, REPLACE EXISTING TIDE GATE
- CONVEYANCE SYSTEM CONNECTION
- REMOVE EXISTING OUTFALL



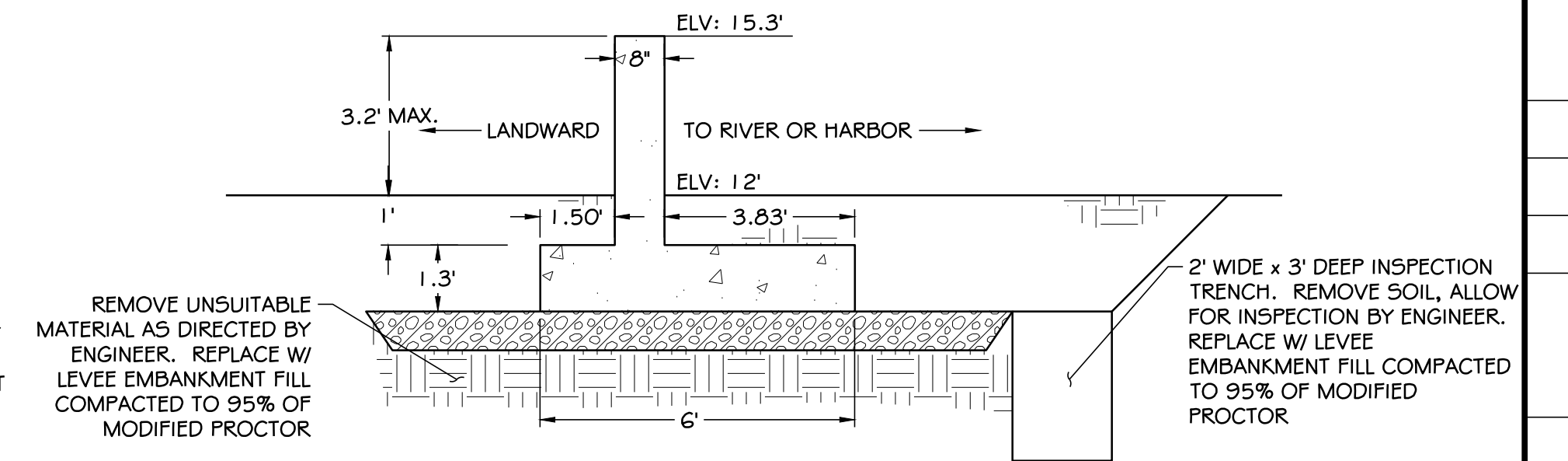
<p>DESIGNED BY: NILA</p> <p>CHECKED BY: SDS</p> <p>DRAWN BY: SDS</p> <p>DATE: 12-30-2020</p> <p>JOB NO.: 10181900007</p>	<p>REVISION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>NO</td><td>DATE</td><td>BY</td><td>CHD/APPF</td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	NO	DATE	BY	CHD/APPF				
NO	DATE	BY	CHD/APPF						
<p>613 Westland Square Loop Suite 100 Lacey, WA 98503 360.292.7230 www.kpff.com</p>									
<p>CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811</p>									
<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p> <p>PUMP STATION & OUTFALL PLAN</p> <p>CLOMR PLAN SET</p> <p>C4.0</p> <p>SHEET 40 OF 58</p>									



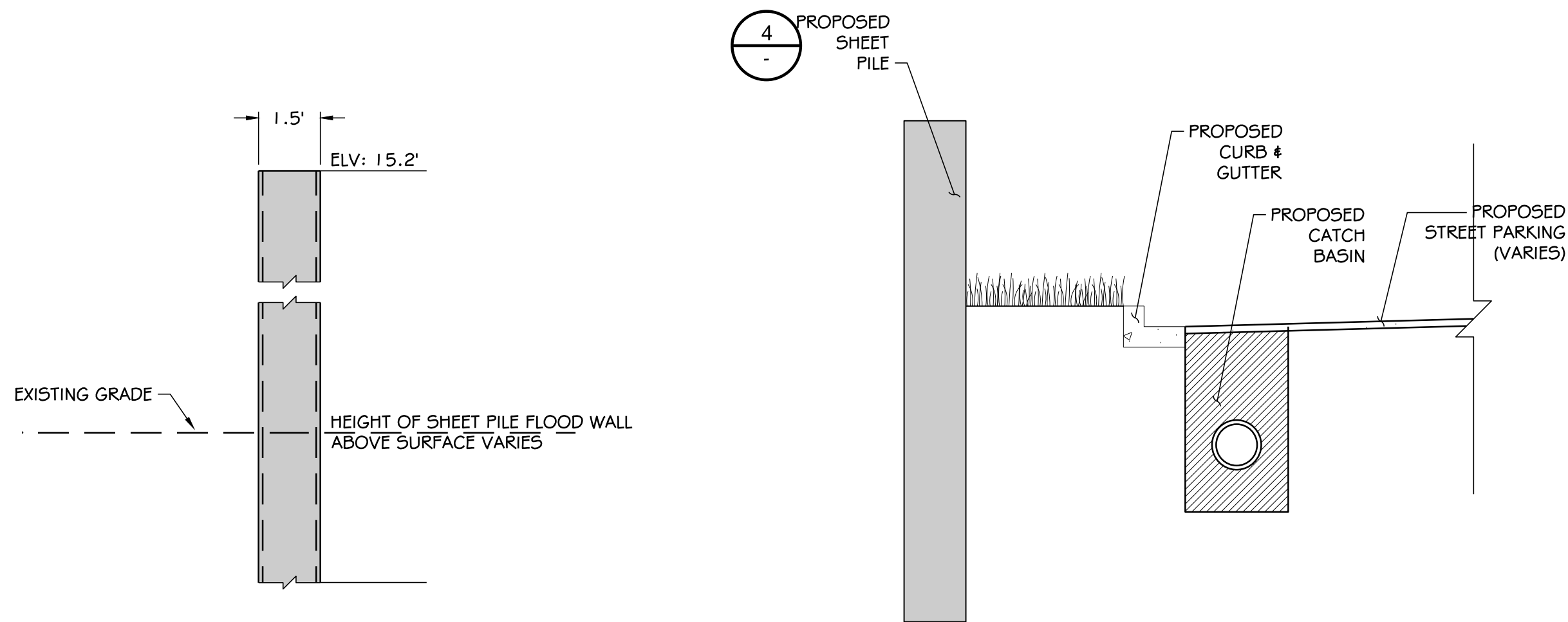
1 GENERAL CROSS SECTION
SCALE: 1" = 3'



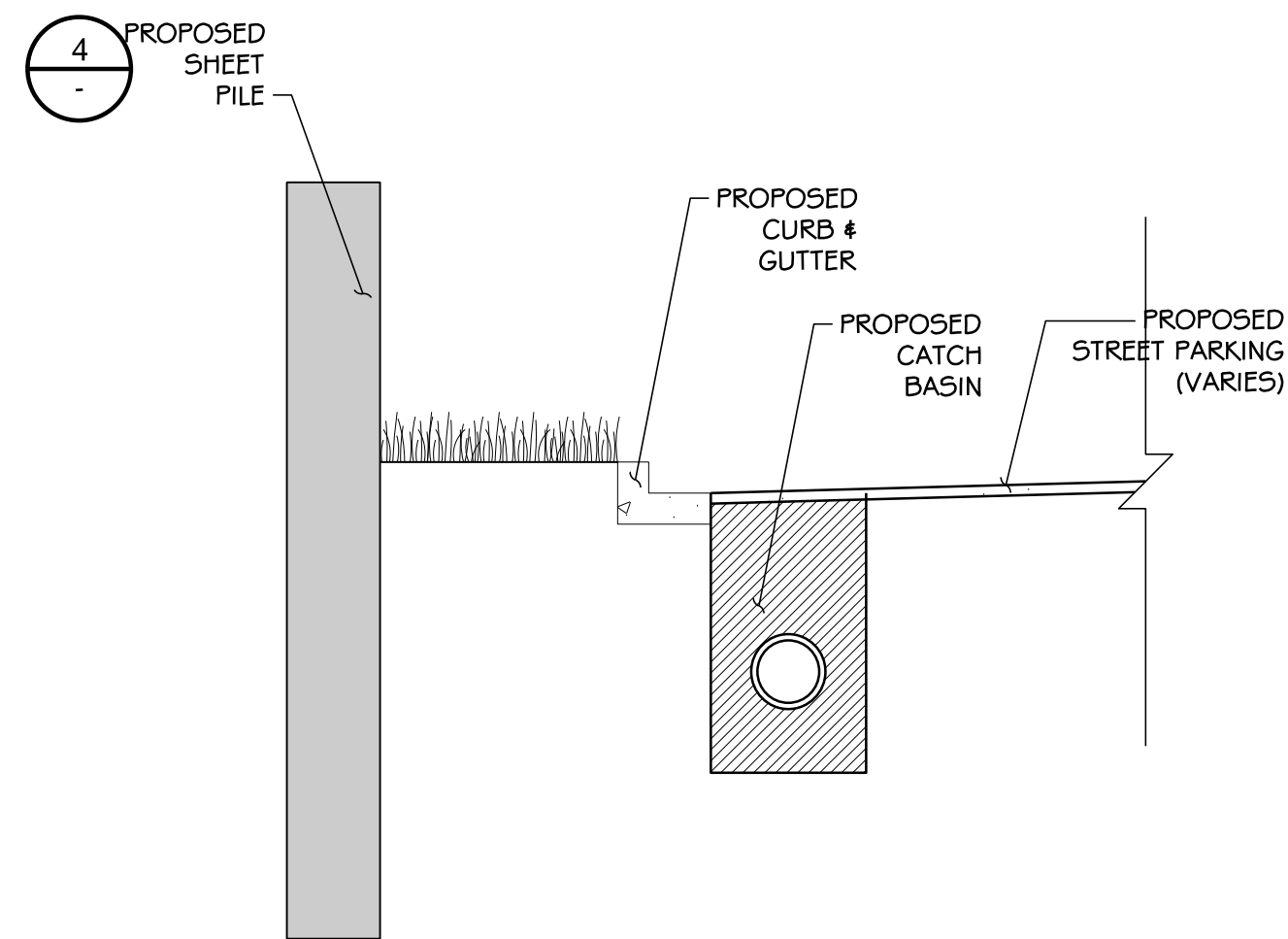
2 TYPICAL CONCRETE FLOOD WALL SECTION
SCALE: 1" = 3'



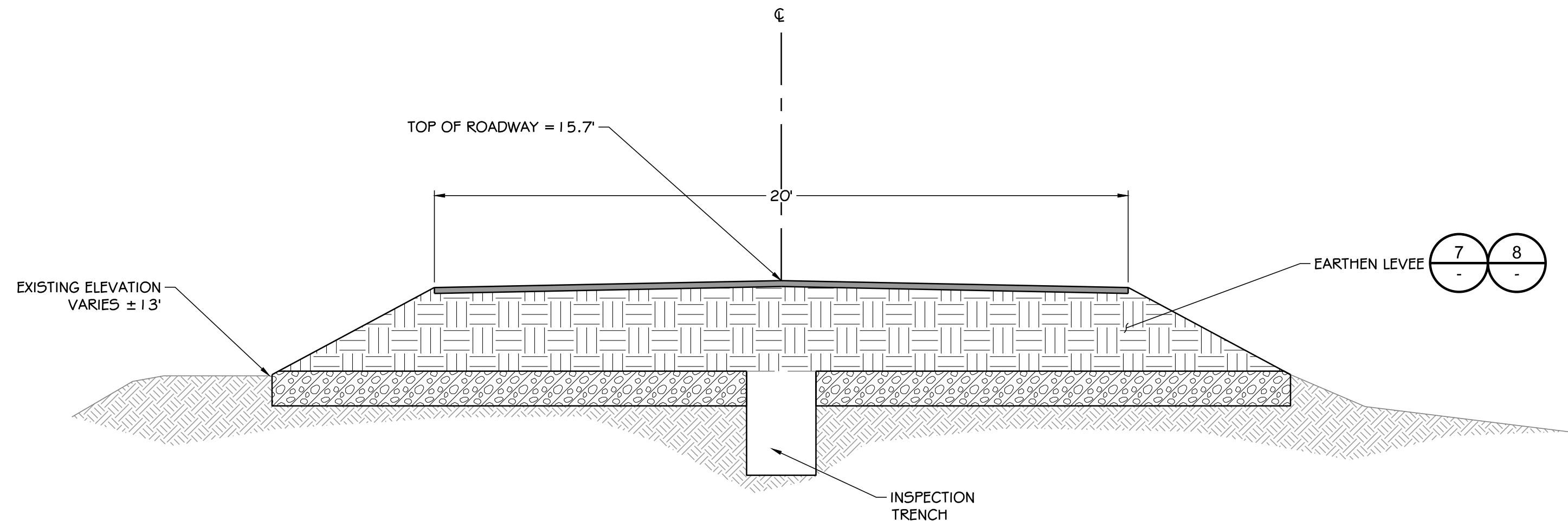
3 TYPICAL LEVEE STREET CONCRETE FLOOD WALL SECTION
SCALE: 1" = 3'



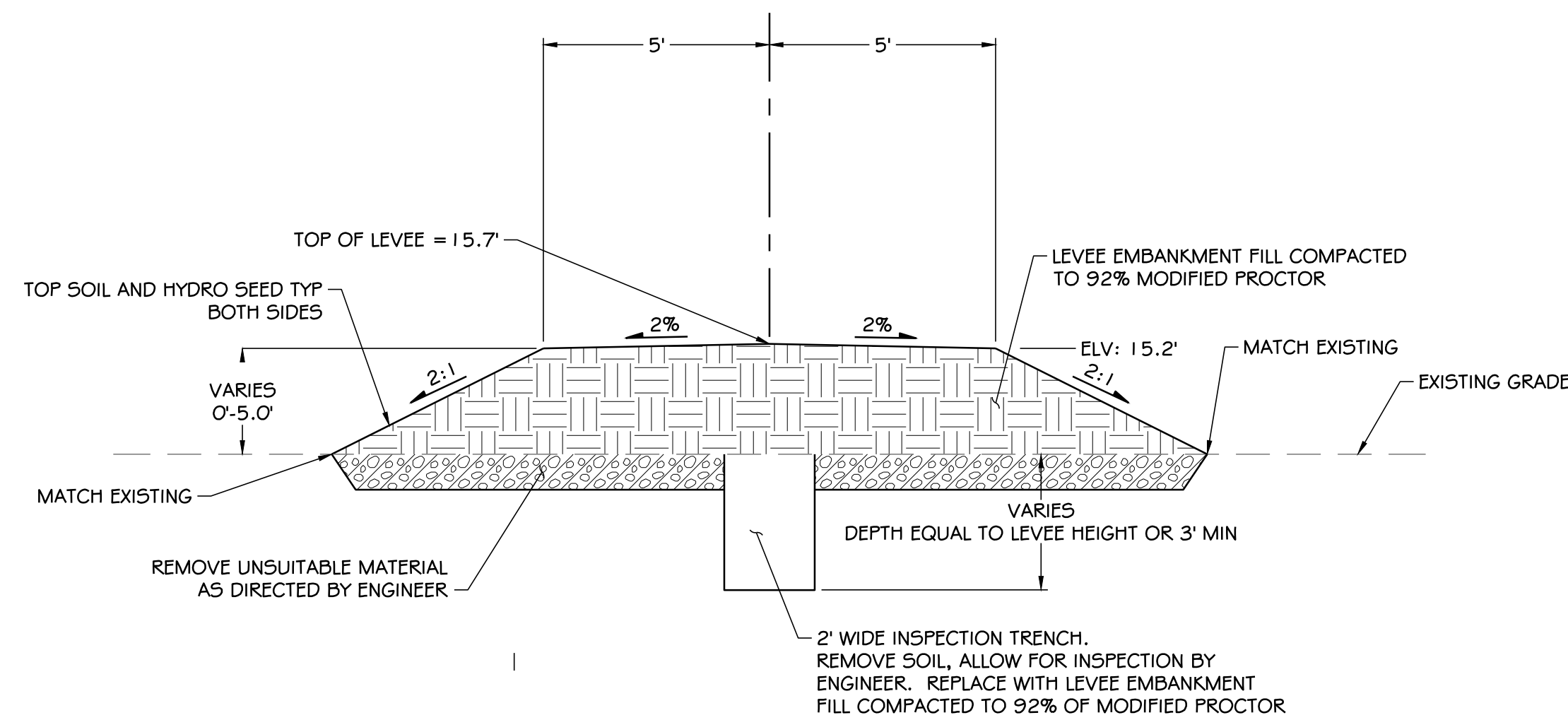
4 TYPICAL SHEET PILE FLOOD WALL SECTION
SCALE: 1" = 3'



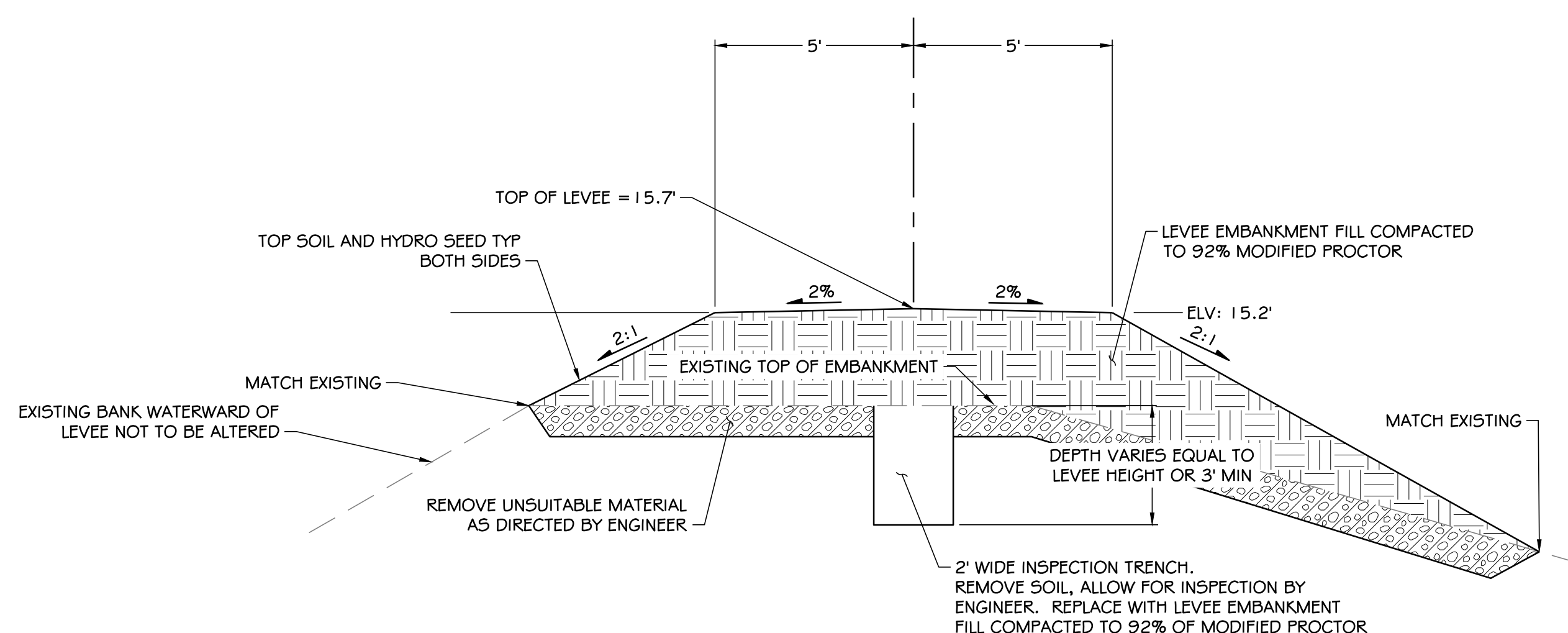
5 TYPICAL SHEET PILE FLOOD WALL SECTION WITH PARKING
SCALE: 1" = 3'



6 ACCESS ROAD SECTION
SCALE: 1" = 3'

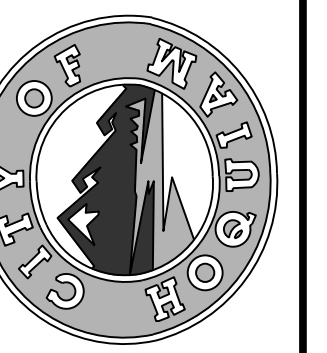


7 TYPICAL EARTHEN LEVEE SECTION
SCALE: 1" = 3'



8 IRREGULAR EARTHEN LEVEE SECTION
SCALE: 1" = 3'

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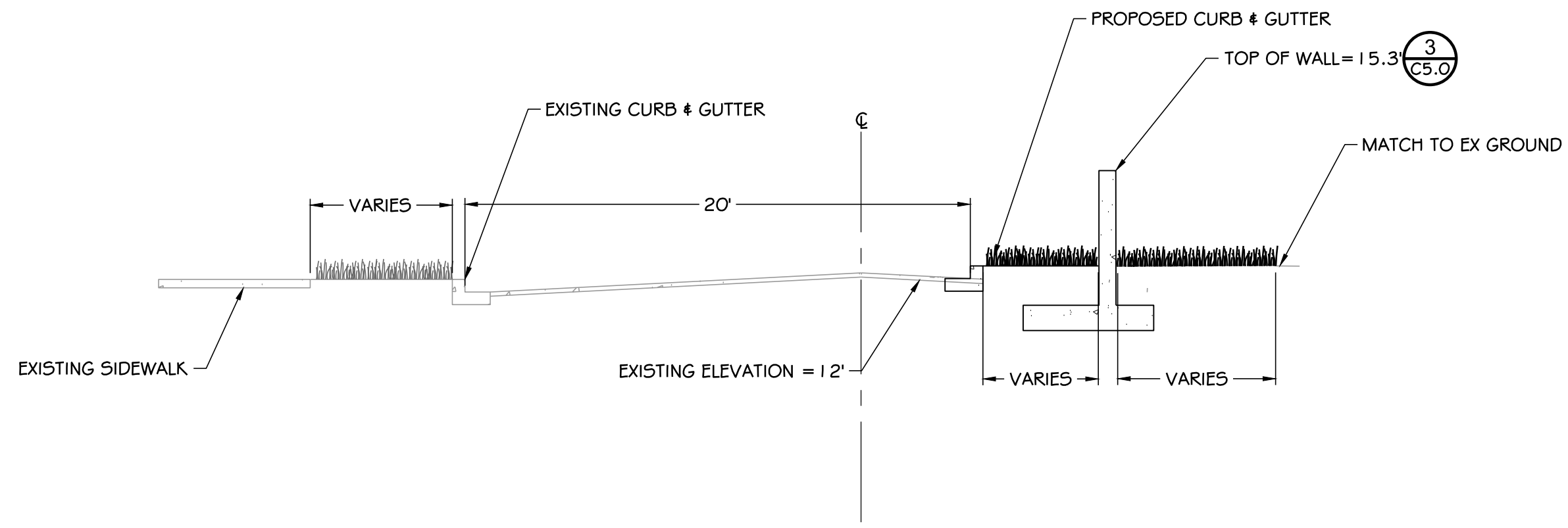


CALL
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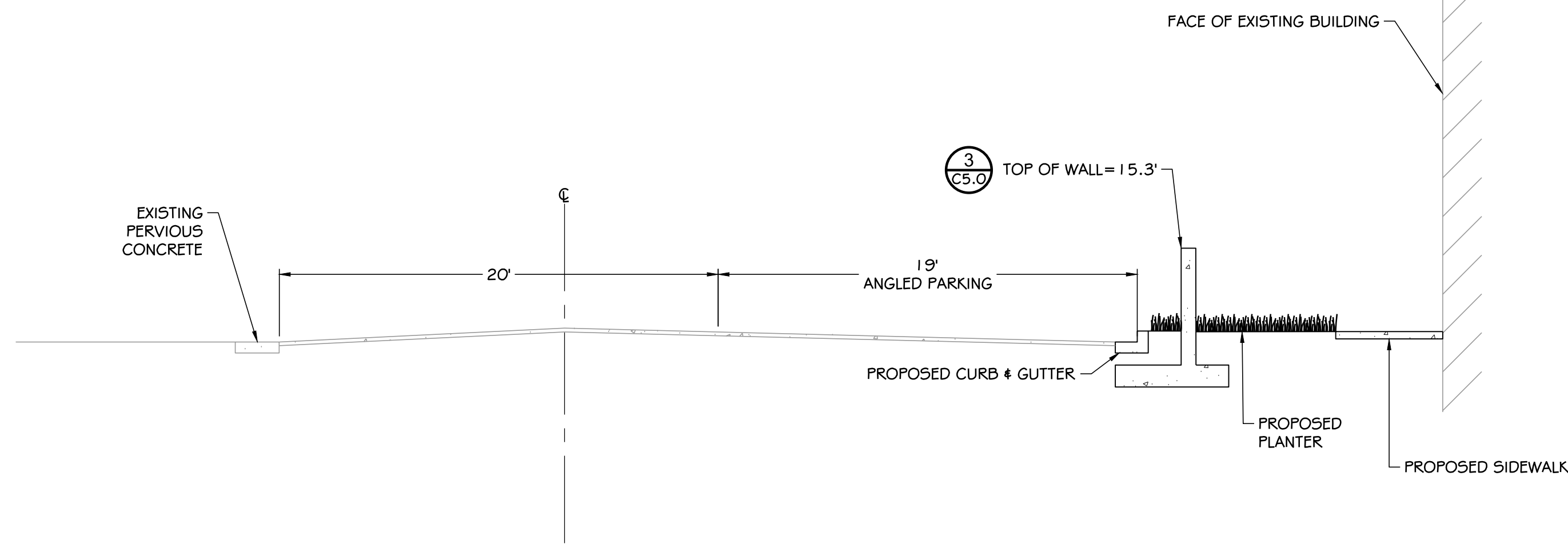
DESIGNED BY	SDS	APPROVED BY	MRS	DATE	12-30-2020	JOB NO.	10181900007
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NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE SECTIONS

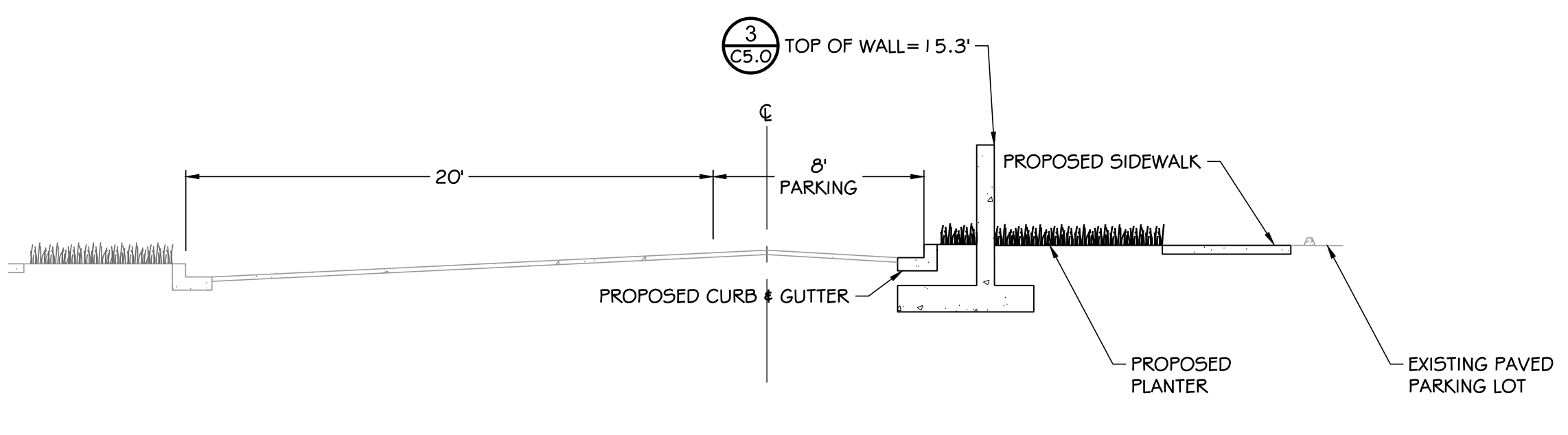
CLOMR PLAN SET



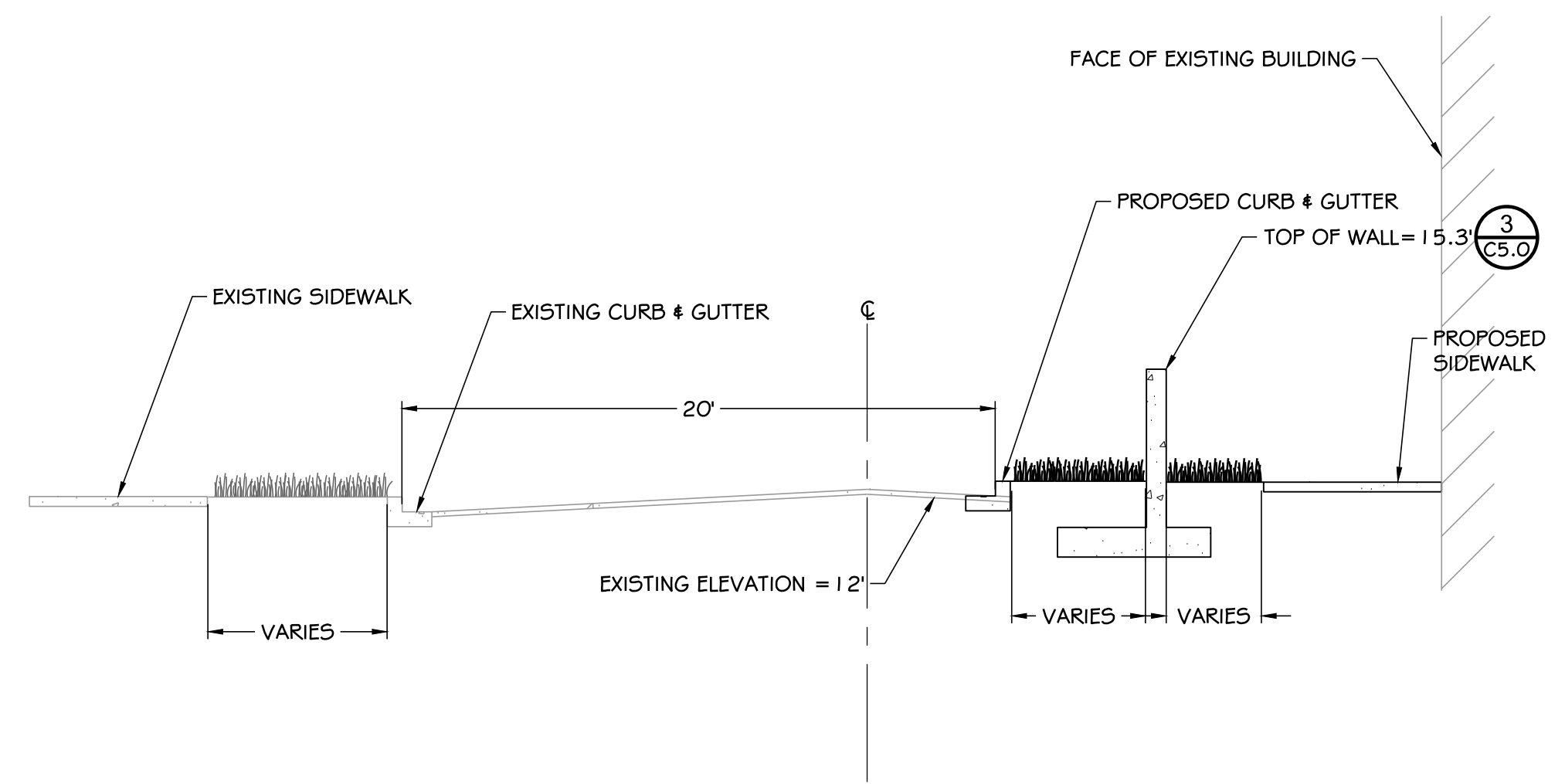
1 LEVEE STREET
SCALE: 1" = 5'



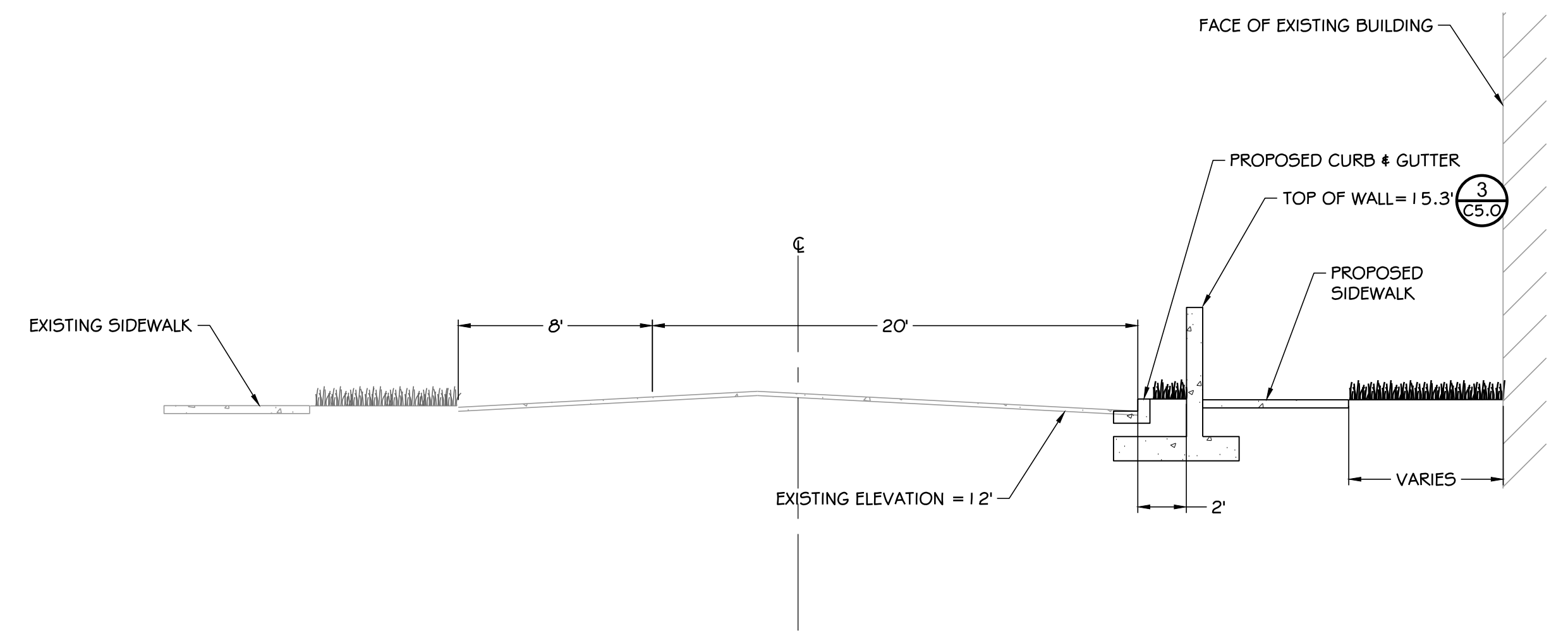
2 LEVEE STREET
SCALE: 1" = 5'



3 LEVEE STREET
SCALE: 1" = 5'



4 LEVEE STREET
SCALE: 1" = 5'

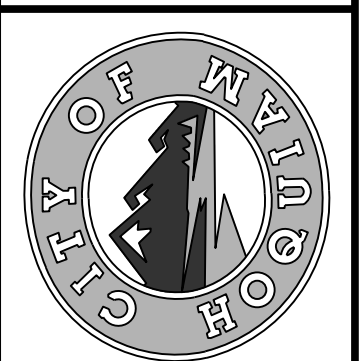


5 LEVEE STREET
SCALE: 1" = 5'

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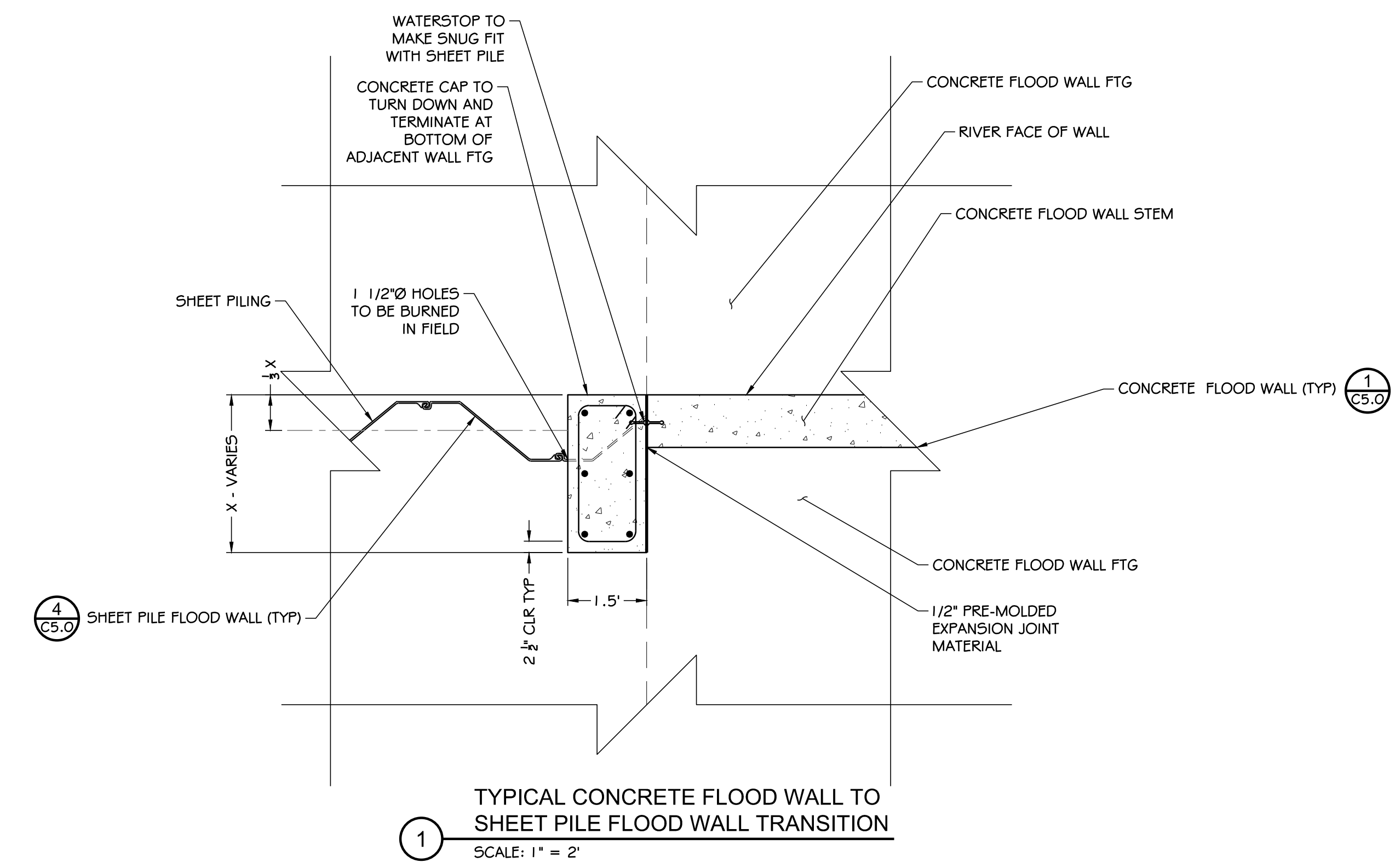


CALL
 UNDERGROUND
 LOCATE TWO (2)
 WORKING DAYS
 BEFORE YOU
 DIG
 811

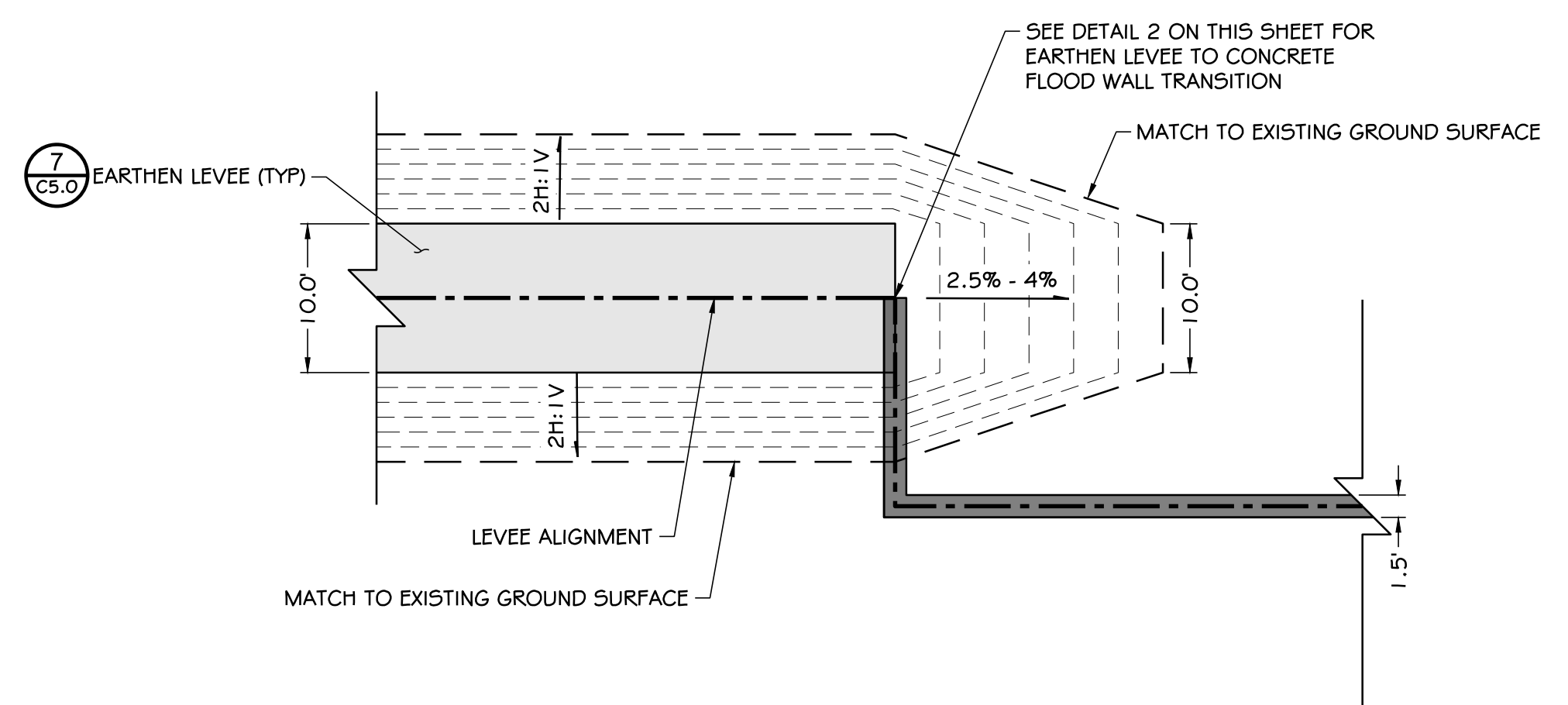
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DRAWN BY SDS	CHECKED BY SDS			

NORTH SHORE LEVEE WEST SEGMENT
 CLOMR PLANS
 HOQUIAM, WASHINGTON
 LEVEE STREET SECTIONS

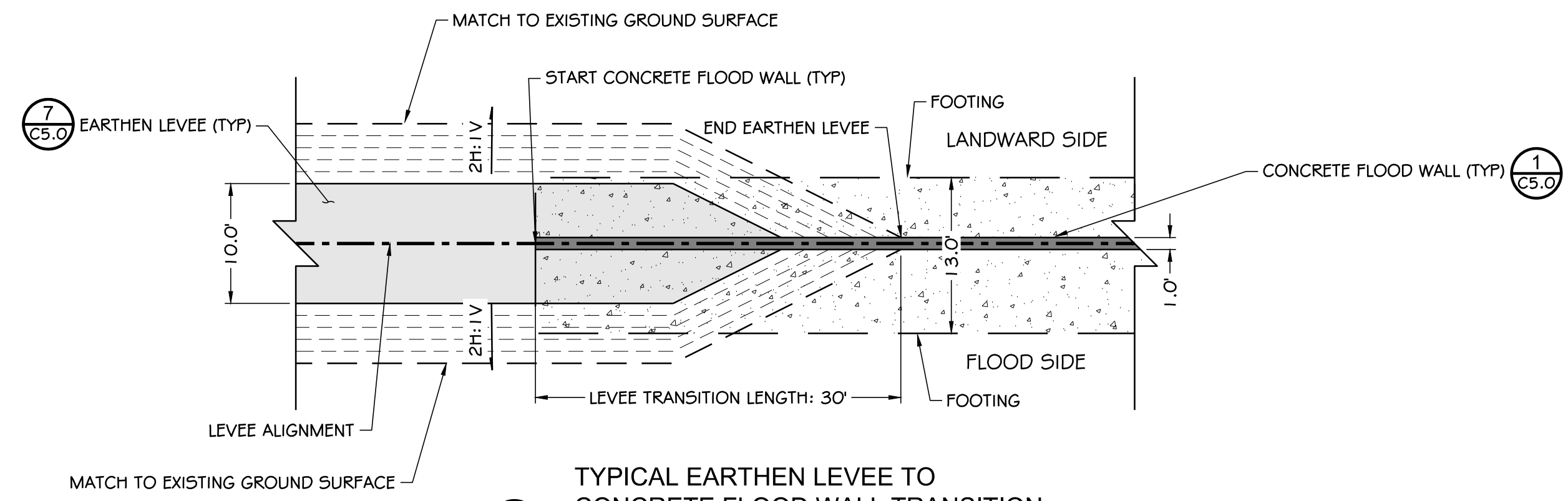
CLOMR PLAN SET



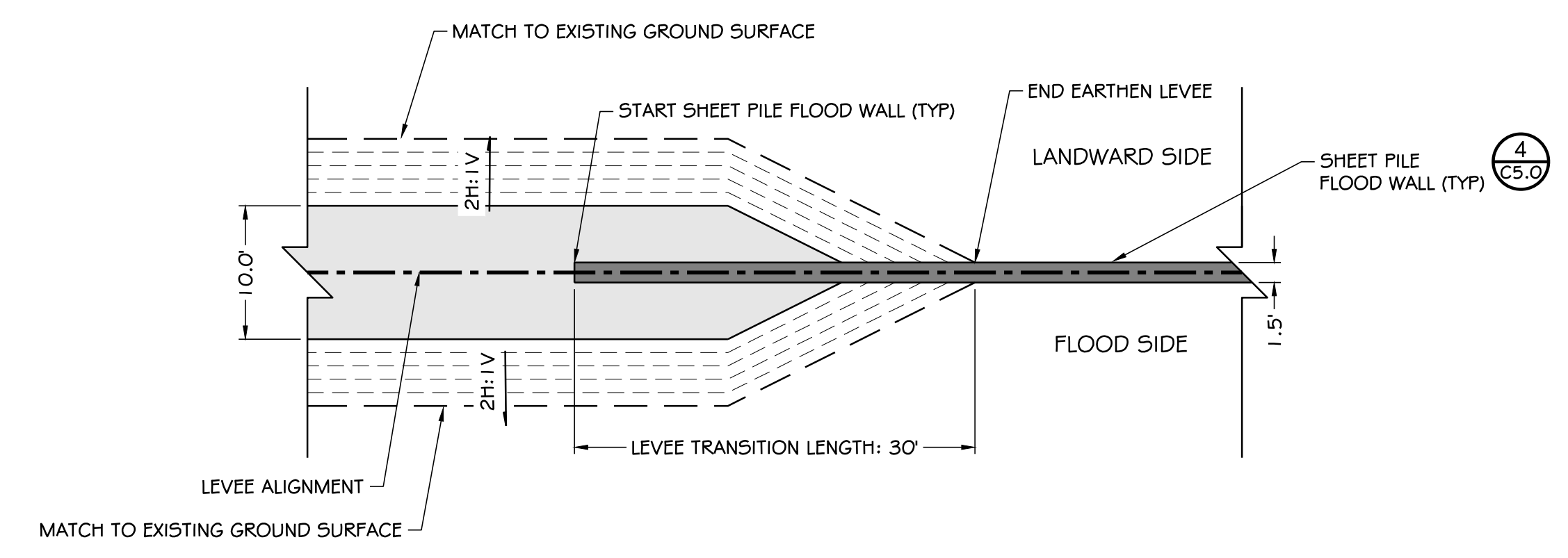
1 TYPICAL CONCRETE FLOOD WALL TO SHEET PILE FLOOD WALL TRANSITION
SCALE: 1" = 2'



4 TYPICAL EARTHEN LEVEE ACCESS RAMP
SCALE: 1" = 10'



2 TYPICAL EARTHEN LEVEE TO CONCRETE FLOOD WALL TRANSITION
SCALE: 1" = 10'

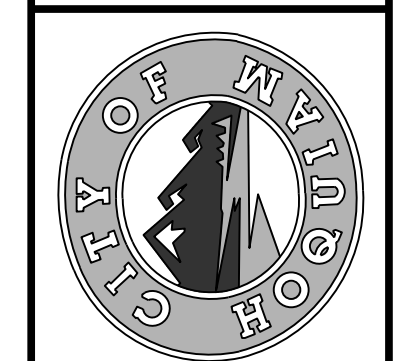


3 TYPICAL EARTHEN LEVEE TO SHEET PILE FLOOD WALL TRANSITION
SCALE: 1" = 10'

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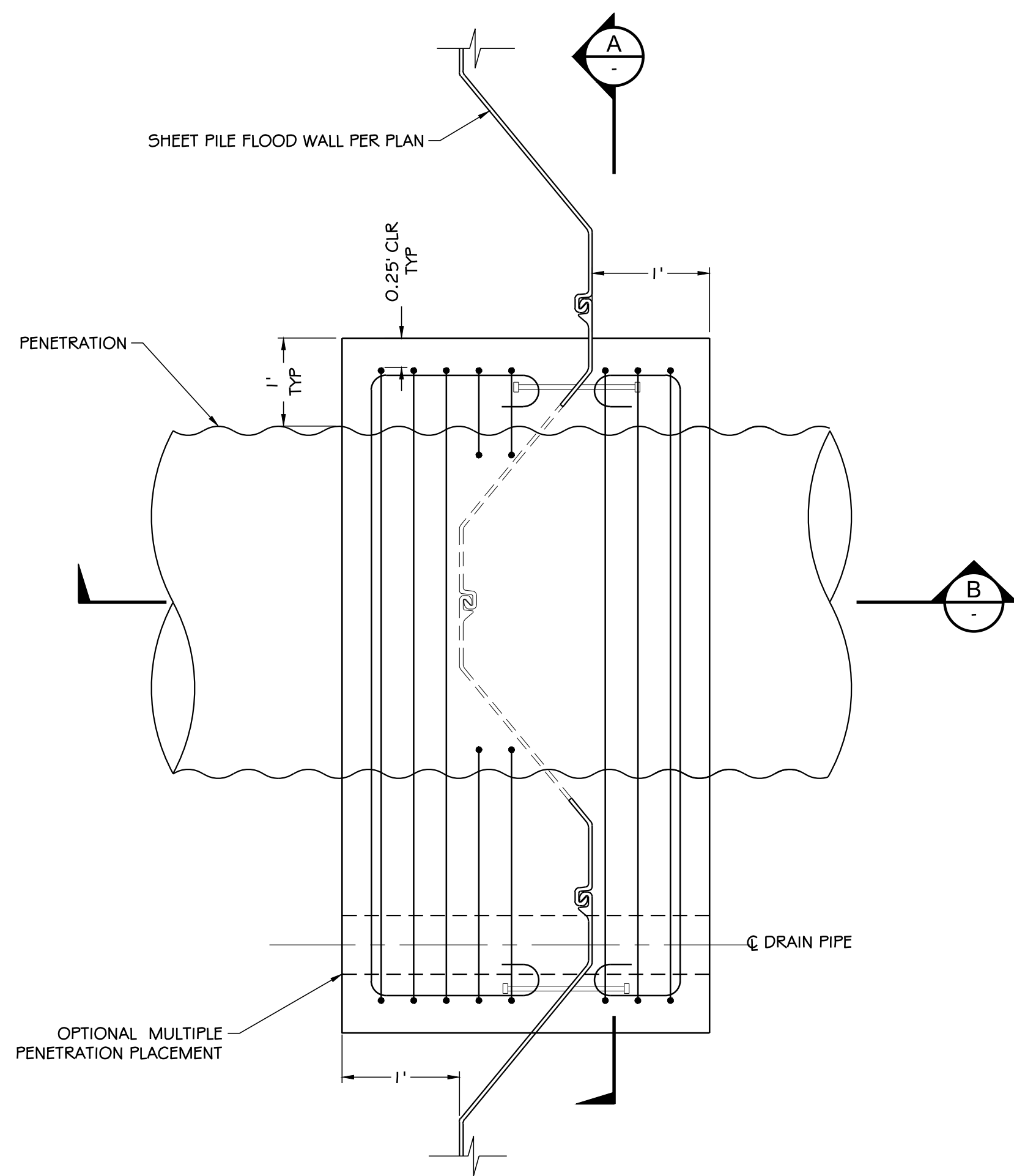
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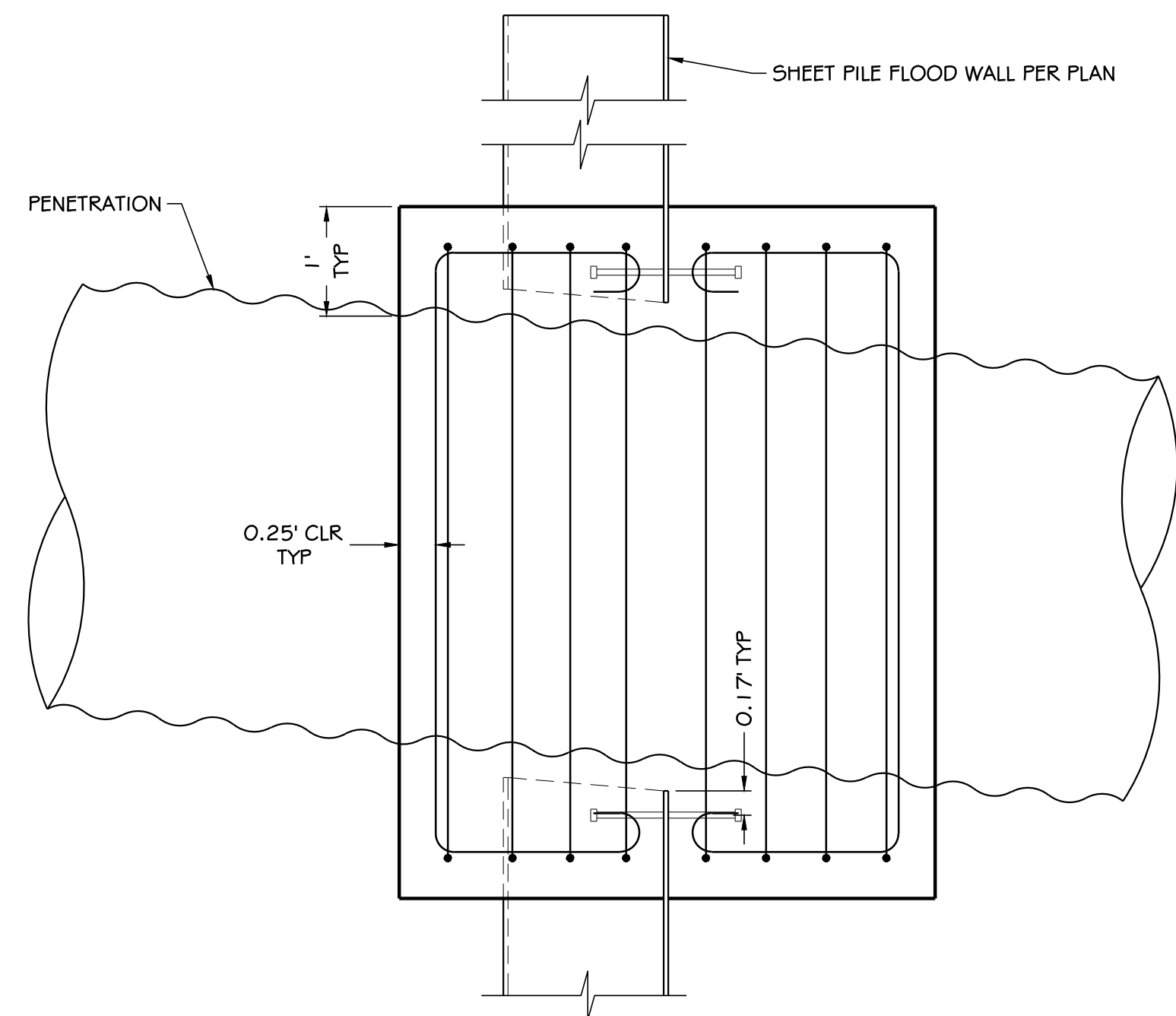
NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
TRANSITION DETAILS

CLOMR PLAN SET

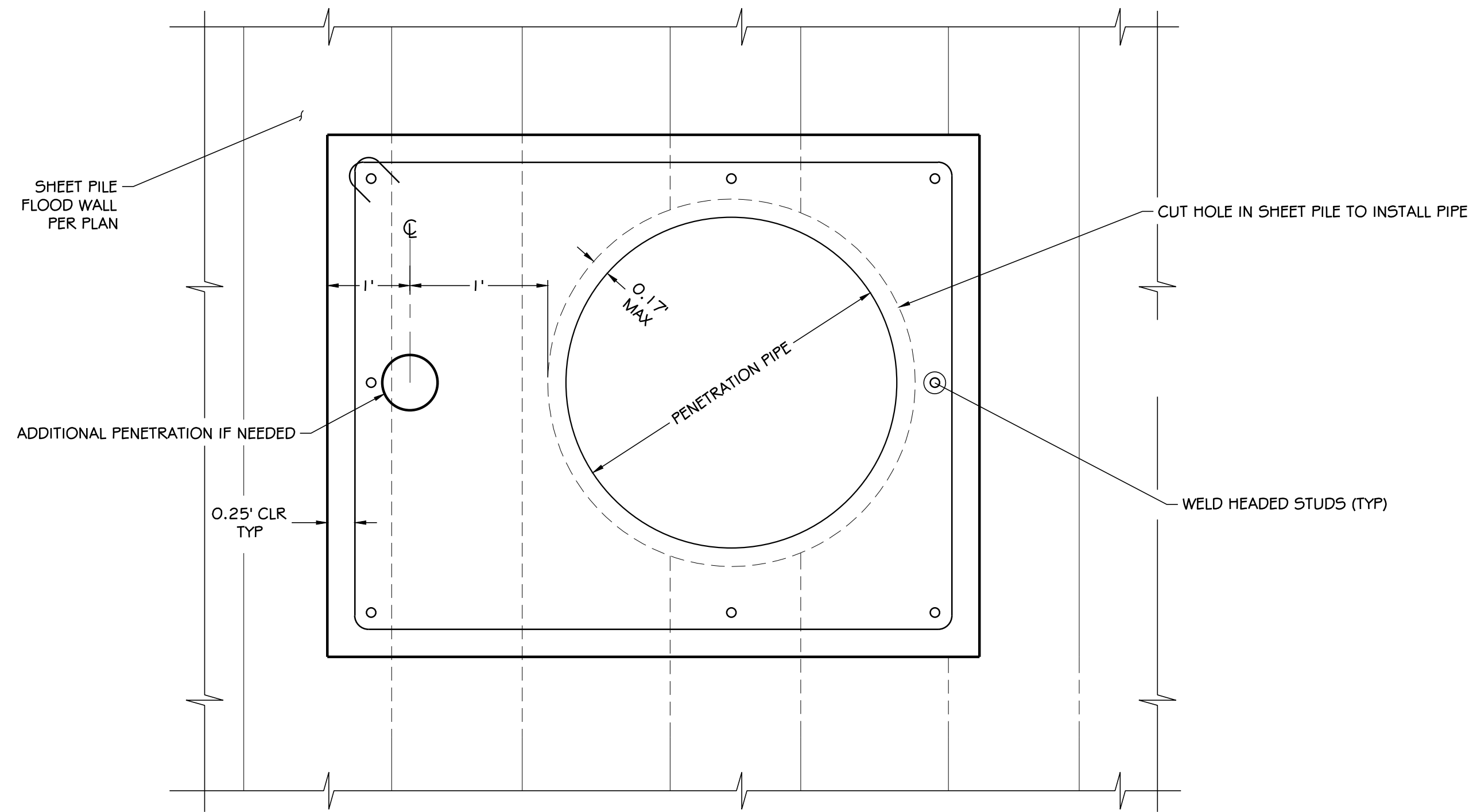
C5.2
SHEET 43 OF 58



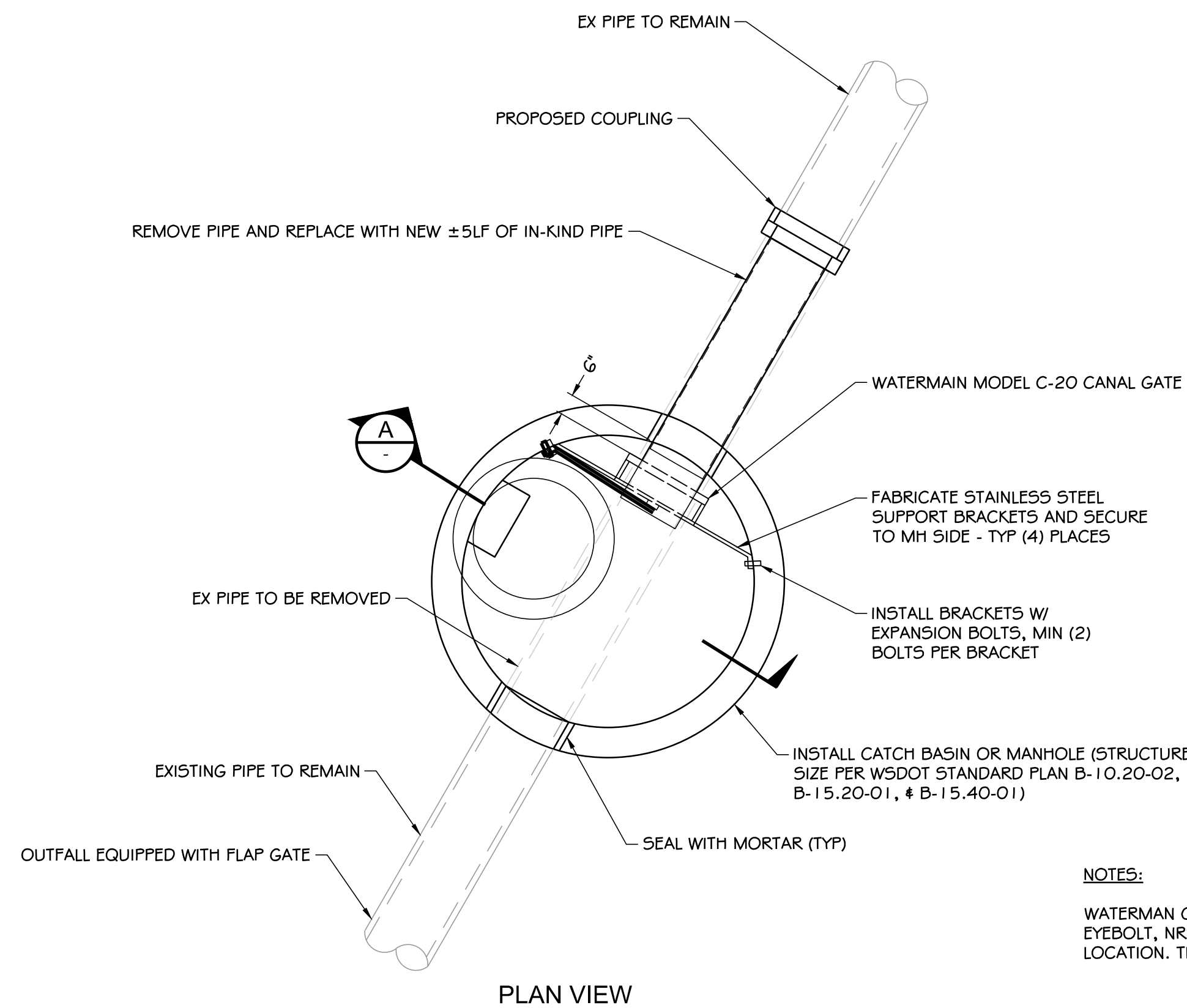
1 TYPICAL SHEET PILE FLOOD WALL PENETRATION PLAN
SCALE: N.T.S.



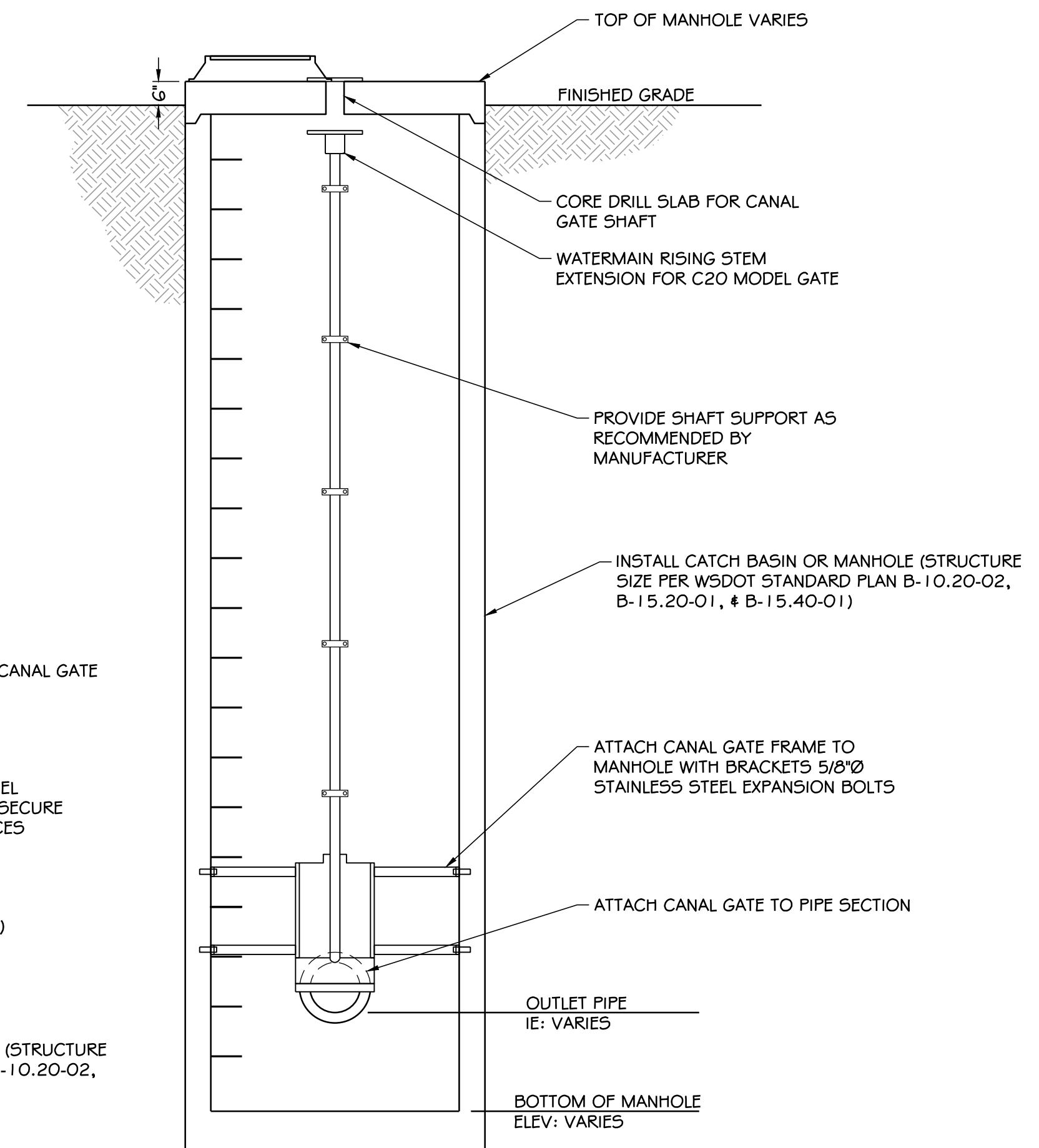
B SHEET PILE FLOOD WALL PENETRATION SECTION
SCALE: N.T.S.



A SHEET PILE FLOOD WALL PENETRATION SECTION
SCALE: N.T.S.



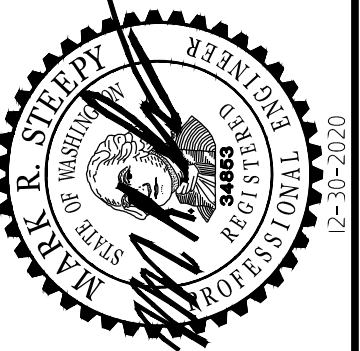
2 BACKFLOW PREVENTION STRUCTURE
SCALE: N.T.S.



NOTES:
WATERMAN C-20 CANAL GATE SHALL HAVE STAINLESS STEEL RAILS AND STEM. STEM GUIDE SUCH AS EYEBOLT, NR5-K, 5K 1, 5K2, K-1, AND K-2 SERIES ARE RECOMMENDED TO SECURE THE HANDRAIL LOCATION. THE STEM SHALL BE NON-RISING.

SECTION - A

NO	DATE	BY	CHKD	APPR	REVISION

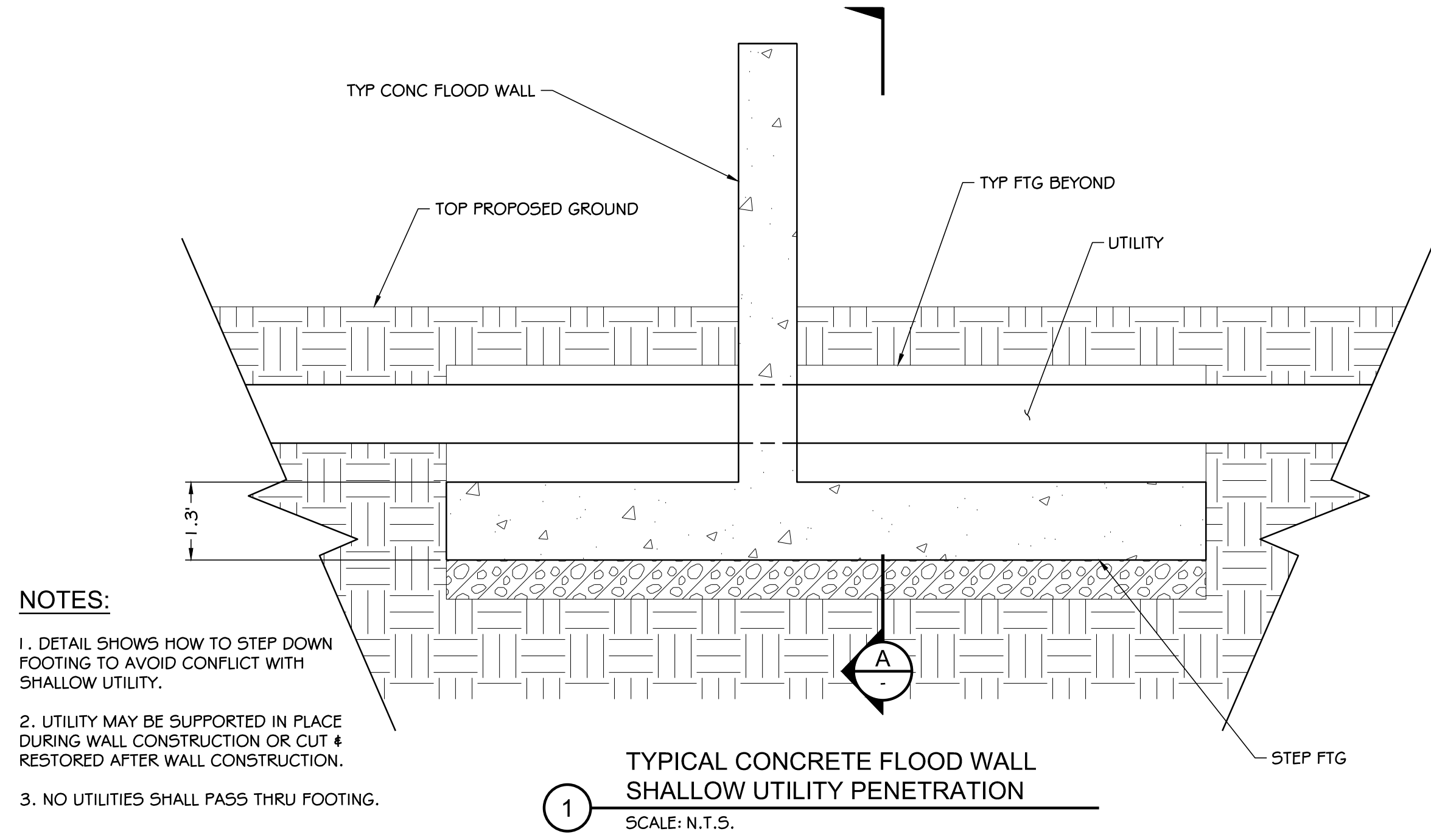


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DRAWN BY: NILA	CHECKED BY: SDS		

NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS
HOQUIAM, WASHINGTON
PIPE PENETRATION DETAILS

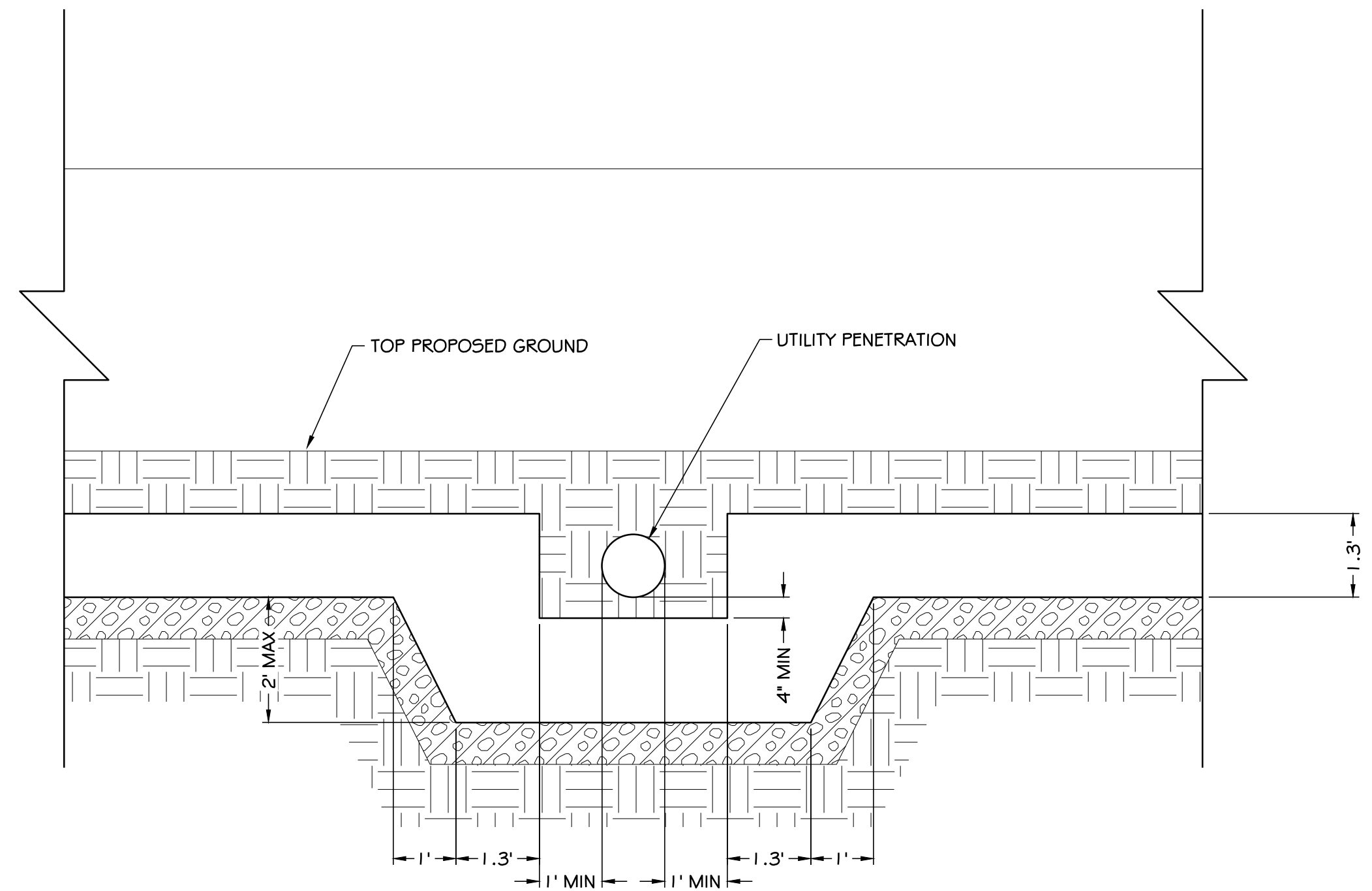
CLOMR PLAN SET



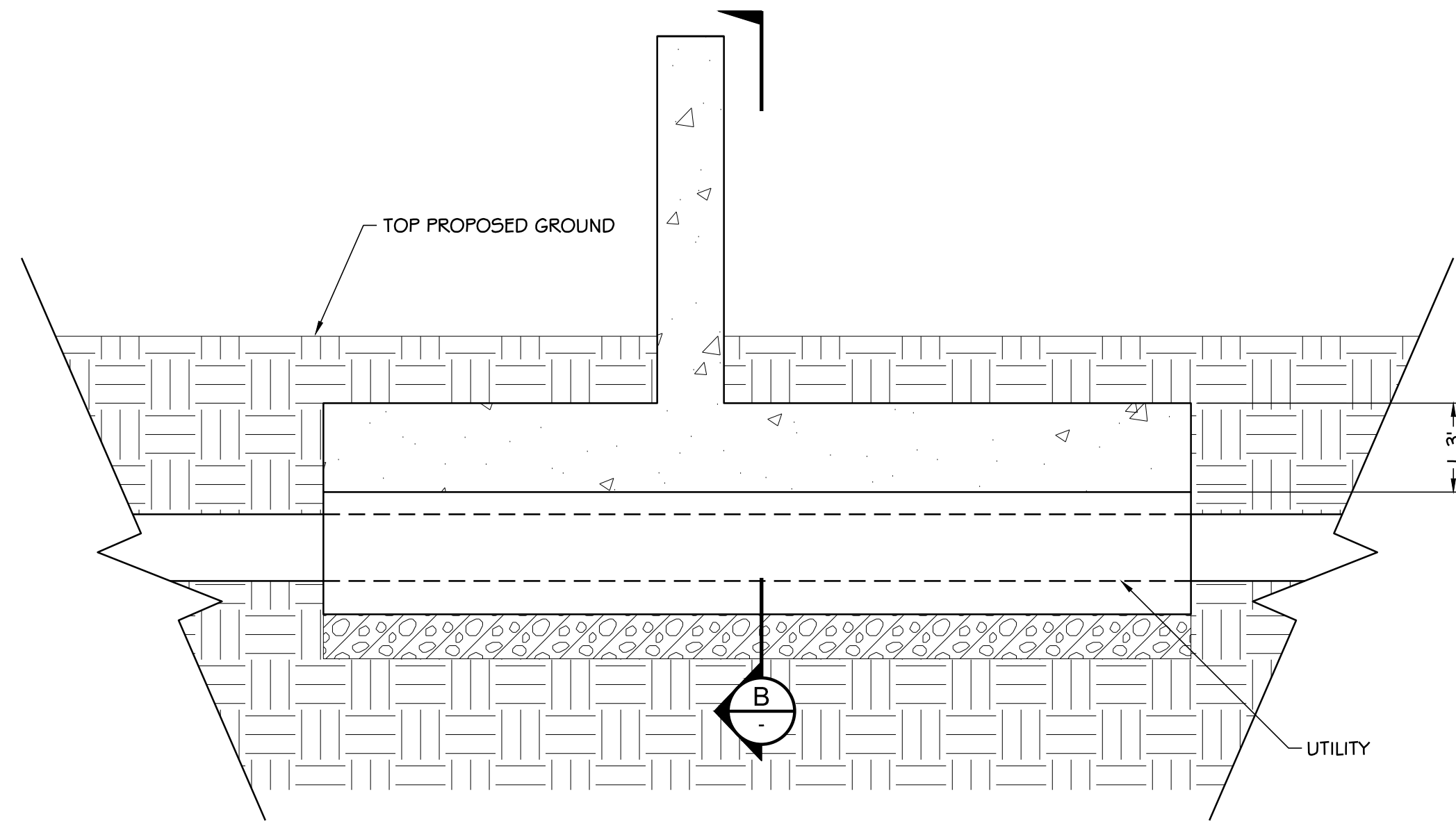
NOTES:

1. DETAIL SHOWS HOW TO STEP DOWN FOOTING TO AVOID CONFLICT WITH SHALLOW UTILITY.
2. UTILITY MAY BE SUPPORTED IN PLACE DURING WALL CONSTRUCTION OR CUT & RESTORED AFTER WALL CONSTRUCTION.
3. NO UTILITIES SHALL PASS THRU FOOTING.

1 TYPICAL CONCRETE FLOOD WALL SHALLOW UTILITY PENETRATION
SCALE: N.T.S.



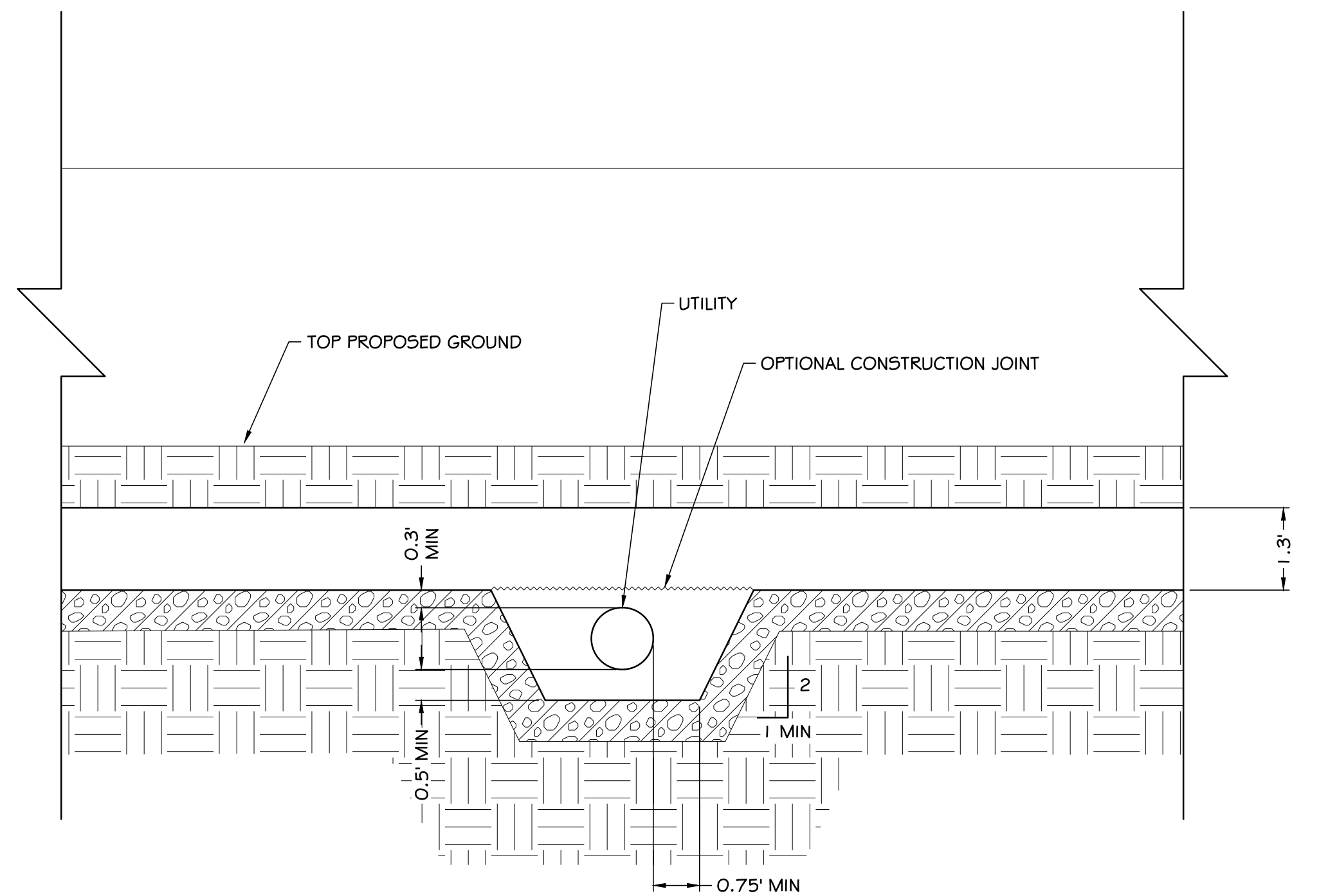
A TYPICAL CONCRETE FLOOD WALL SHALLOW UTILITY PENETRATION SECTION
SCALE: N.T.S.



NOTES:

1. TYPE OF CONCRETE WALL PENETRATION (EITHER DETAIL 1 OR DETAIL 2) WILL BE CHOSEN DURING DETAILED DESIGN FOLLOWING A SURVEY OF ALL UTILITY CROSSINGS
2. DETAIL SHOWS HOW TO DEEPEN FOOTING WHERE UTILITIES PASS BELOW.
3. UTILITIES LOCATED 5'-0" MIN BELOW FOOTING (MEASURED TO TOP OF UTILITY) DO NOT REQUIRE DEEPENED FOOTING.
4. NO UTILITIES SHALL PASS THRU FOOTING.

2 TYPICAL CONCRETE FLOOD WALL UTILITY PENETRATION BELOW
SCALE: N.T.S.

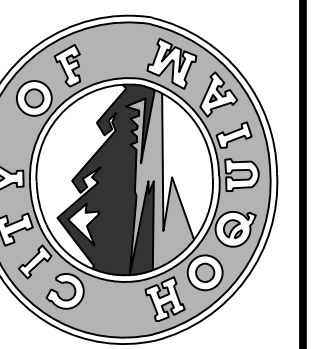


B TYPICAL CONCRETE FLOOD WALL UTILITY PENETRATION BELOW SECTION
SCALE: N.T.S.

NO	DATE	BY	CHKD	APPR	REVISION



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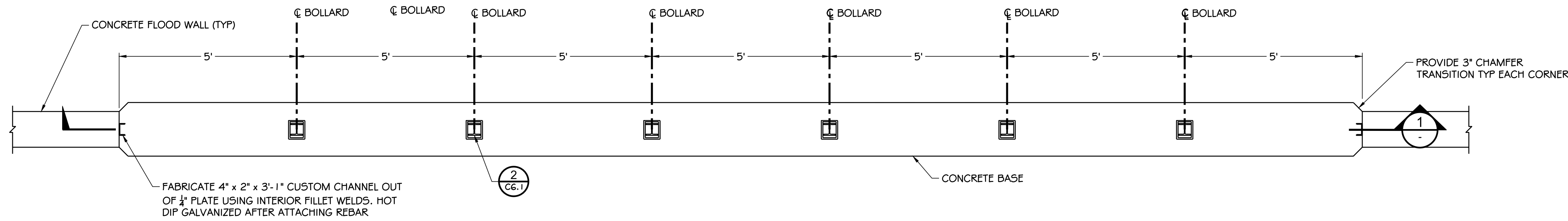


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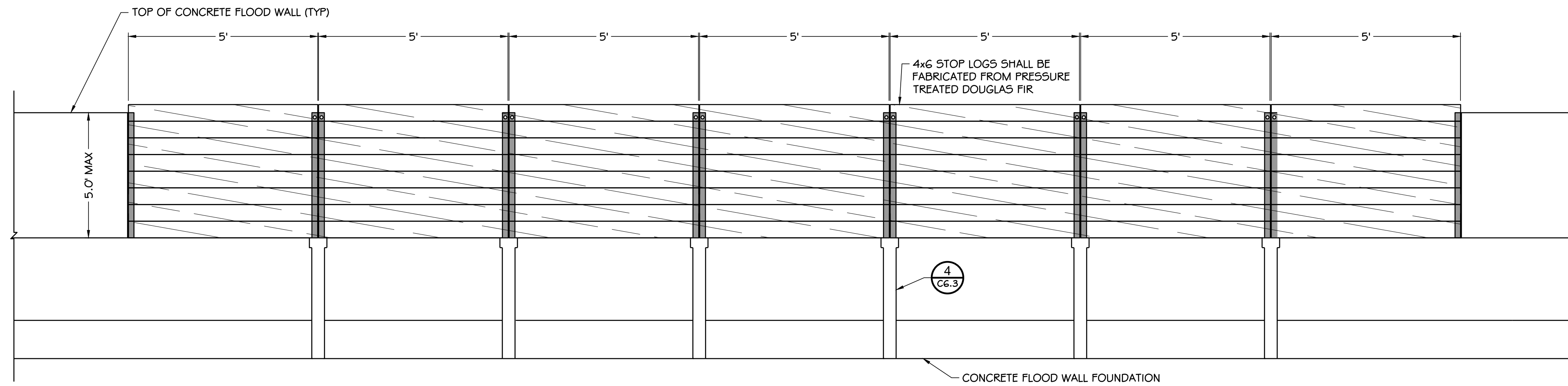
DESIGNED BY	SDS	DATE	12-30-2020
DRAWN BY	NLA	CHECKED BY	MRS
CHECKED BY	SDS	JOB NO.	10181900007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
PIPE PENETRATION DETAILS

CLOMR PLAN SET



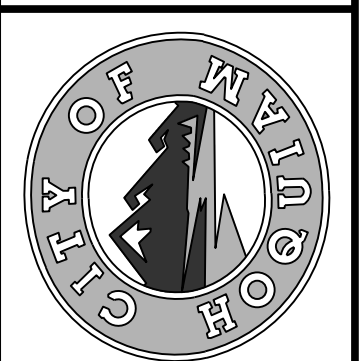
1 BOLLARD CLOSURE PLAN VIEW - CONCRETE FLOOD WALL
SCALE: 1" = 2'



2 TYPICAL STOPLOG CLOSURE ELEVATION VIEW - CONCRETE FLOOD WALL
SCALE: 1" = 2'

STOPLOG CLOSURES				
WALL TYPE	CLOSURE NO.	WIDTH	SPACING	CENTER STA.
CONCRETE	1	45'	5'	1+74
CONCRETE	2	5'	5'	2+57
CONCRETE	3	30'	5'	3+89
CONCRETE	4	25'	5'	4+37
CONCRETE	5	35'	5'	5+18
CONCRETE	6	30'	5'	5+86
CONCRETE	7	5'	5'	6+79
CONCRETE	8	30'	5'	7+91
CONCRETE	9	70'	5'	9+66
CONCRETE	10	5'	5'	11+07
CONCRETE	11	5'	5'	11+55
CONCRETE	12	5'	5'	12+35
CONCRETE	13	10'	5'	13+04
CONCRETE	14	40'	5'	14+03
CONCRETE	15	20'	5'	14+71
CONCRETE	16	40'	5'	16+04
CONCRETE	17	40'	5'	17+36
CONCRETE	18	20'	5'	18+79
CONCRETE	19	5'	5'	19+58
CONCRETE	20	25'	5'	20+09
CONCRETE	21	15'	5'	22+00
CONCRETE	22	15'	5'	23+17
CONCRETE	23	45'	5'	24+01
CONCRETE	24	30'	5'	25+51
CONCRETE	25	20'	5'	26+87
CONCRETE	26	50'	5'	28+14
SHEET PILE	27	50'	5'	71+53
SHEET PILE	28	50'	5'	74+41
SHEET PILE	29	35'	5'	79+32
SHEET PILE	30	60'	5'	83+53
SHEET PILE	31	30'	5'	86+98
SHEET PILE	32	30'	5'	87+38
SHEET PILE	33	70'	5'	92+15
N/A	34	N/A	N/A	NOT USED
CONCRETE	35	30'	5'	107+41
CONCRETE	36	80'	5'	109+51
CONCRETE	37	20'	5'	112+51
CONCRETE	38	90'	5'	114+29
CONCRETE	39	15'	5'	116+17
CONCRETE	40	25'	5'	116+62
CONCRETE	41	25'	5'	117+13
CONCRETE	42	25'	5'	117+51
CONCRETE	43	50'	5'	118+02
CONCRETE	44	20'	5'	118+57
CONCRETE	45	20'	5'	119+10
CONCRETE	46	50'	5'	121+76
CONCRETE	47	10'	5'	125+91
CONCRETE	48	40'	5'	130+65
CONCRETE	49	5'	5'	131+29
CONCRETE	50	35'	5'	131+97
CONCRETE	51	25'	5'	132+87
CONCRETE	52	25'	5'	133+37
CONCRETE	53	60'	5'	134+85
CONCRETE	54	25'	5'	135+85
CONCRETE	55	15'	5'	136+64
CONCRETE	56	60'	5'	138+60
RAILROAD	57	20'	5'	142+49
RAILROAD	58	25'	5'	144+33
SHEET PILE	59	25'	5'	144+68
SHEET PILE	60	60'	5'	202+25

NO	DATE	BY	REVISION



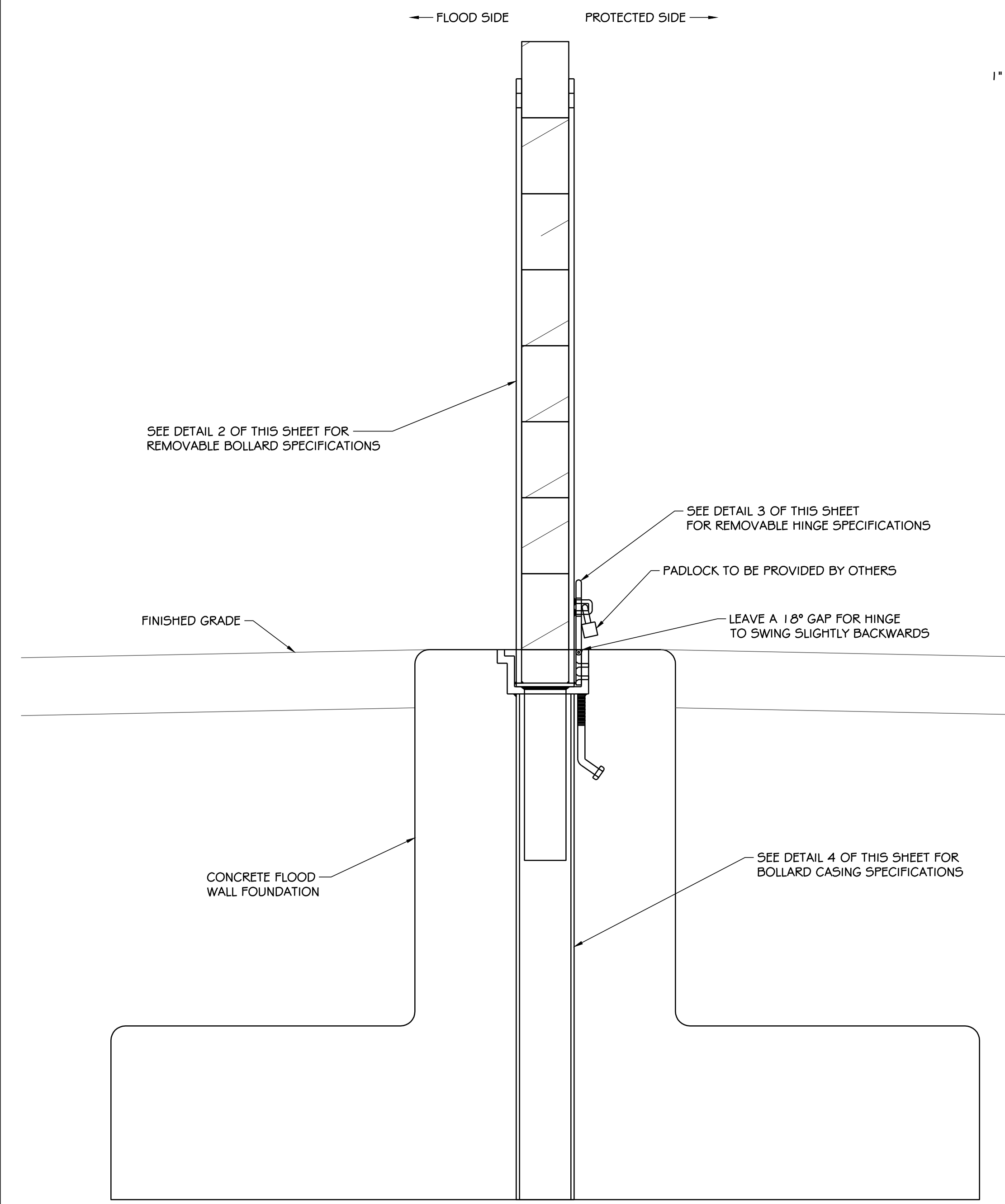
CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811

DESIGNED BY: NLA	SDS	DATE: 12-30-2020
CHECKED BY: MRS	MRS	JOB NO: 10181900007

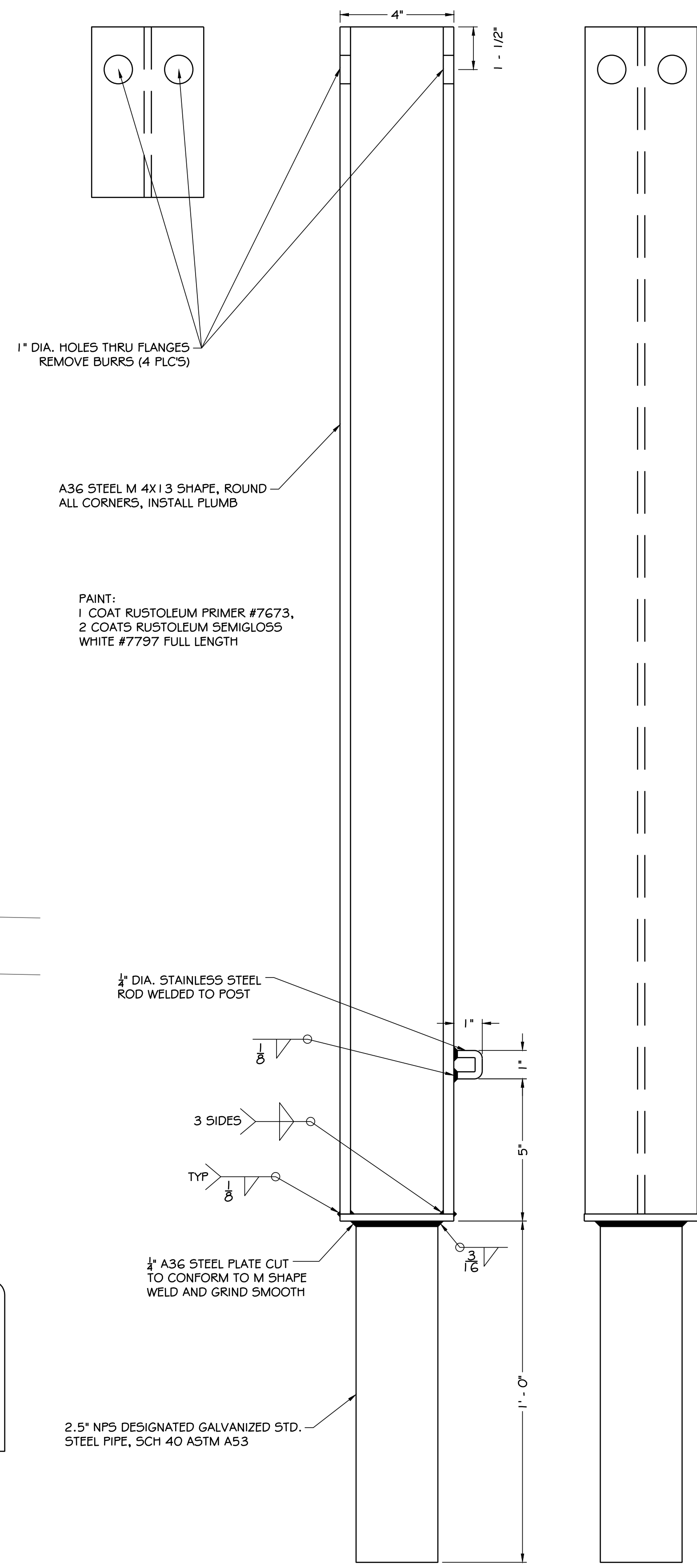
NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
STOPLOG DETAILS

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C6.0 THRU C6.4 - STOPLOG DETAILS PLOTTED: Dec 29, 2020 - 12:09:12 PLOTTED BY: Nscsa

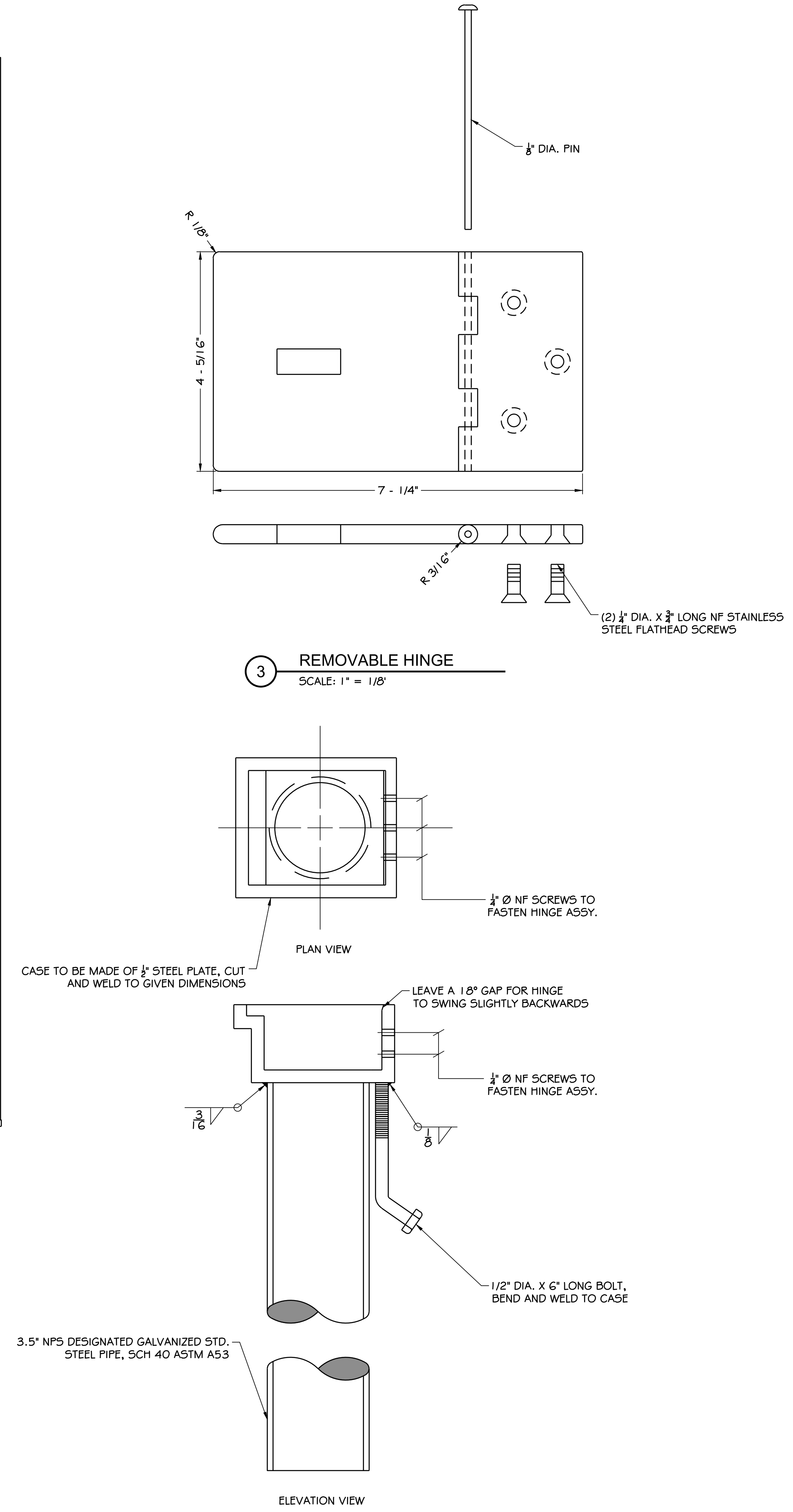
- NOTES:**
1. DIMENSIONS GIVEN ARE APPROXIMATE, FABRICATOR TO ADJUST AS NEEDED TO ENSURE PROPER FIT.
 2. SILL PLATE BETWEEN BOLLARDS VARIES IN DISTANCE.
 3. HINGE TO BE FABRICATED FROM 3/8" STEEL PLATE TO GIVEN DIMENSIONS.




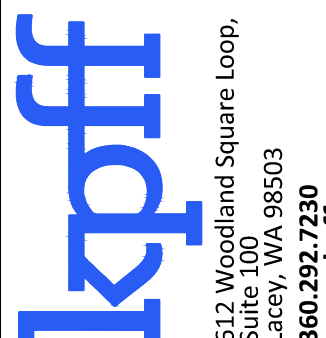
1 BOLLARD CASING ELEVATION VIEW - CONCRETE FLOOD WALL
SCALE: 1" = 1/2"

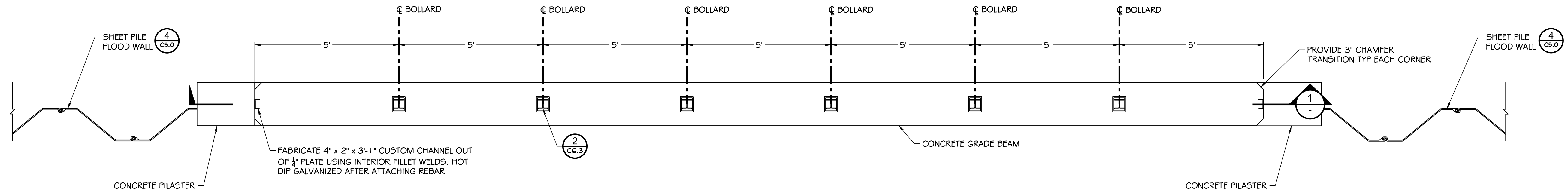


2 REMOVABLE BOLLARD
SCALE: 1" = 1/4"

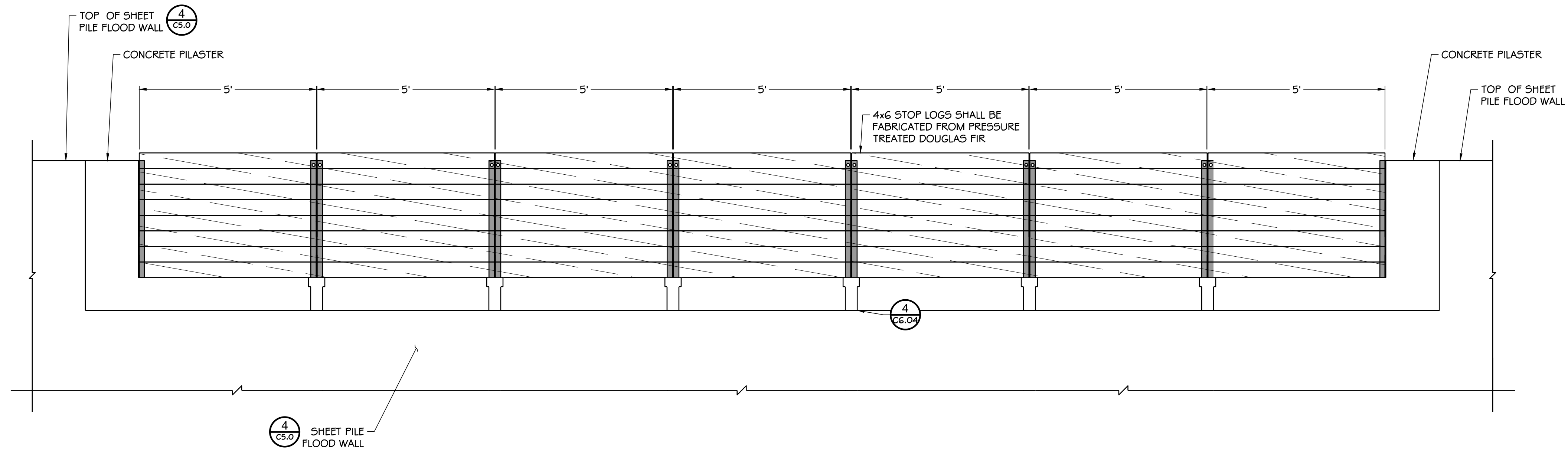


4 BOLLARD CASING
SCALE: 1" = 1/4"

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<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p>	<p>STOPLOG DETAILS</p>
<p>DESIGNED BY: SDS CHECKED BY: MRS DATE: 12-30-2020 JOB NO.: 10181900007</p>	<p>NO. DATE BY CHD APPR REVISION</p>
<p>CLOMR PLAN SET</p> <p>C6.1</p> <p>SHEET 47 OF 58</p>	



1 BOLLARD CLOSURE PLAN VIEW - SHEET PILE FLOOD WALL
SCALE: 1" = 2'

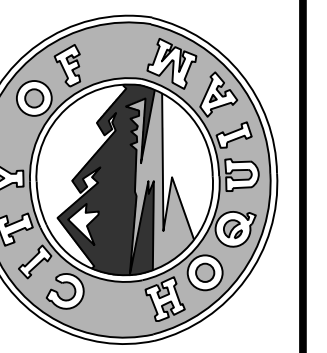


2 TYPICAL STOPLOG CLOSURE ELEVATION VIEW - SHEET PILE FLOOD WALL
SCALE: 1" = 2'

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APPROVED BY		

NORTH SHORE LEVEE WEST SEGMENT
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STOPLOG DETAILS

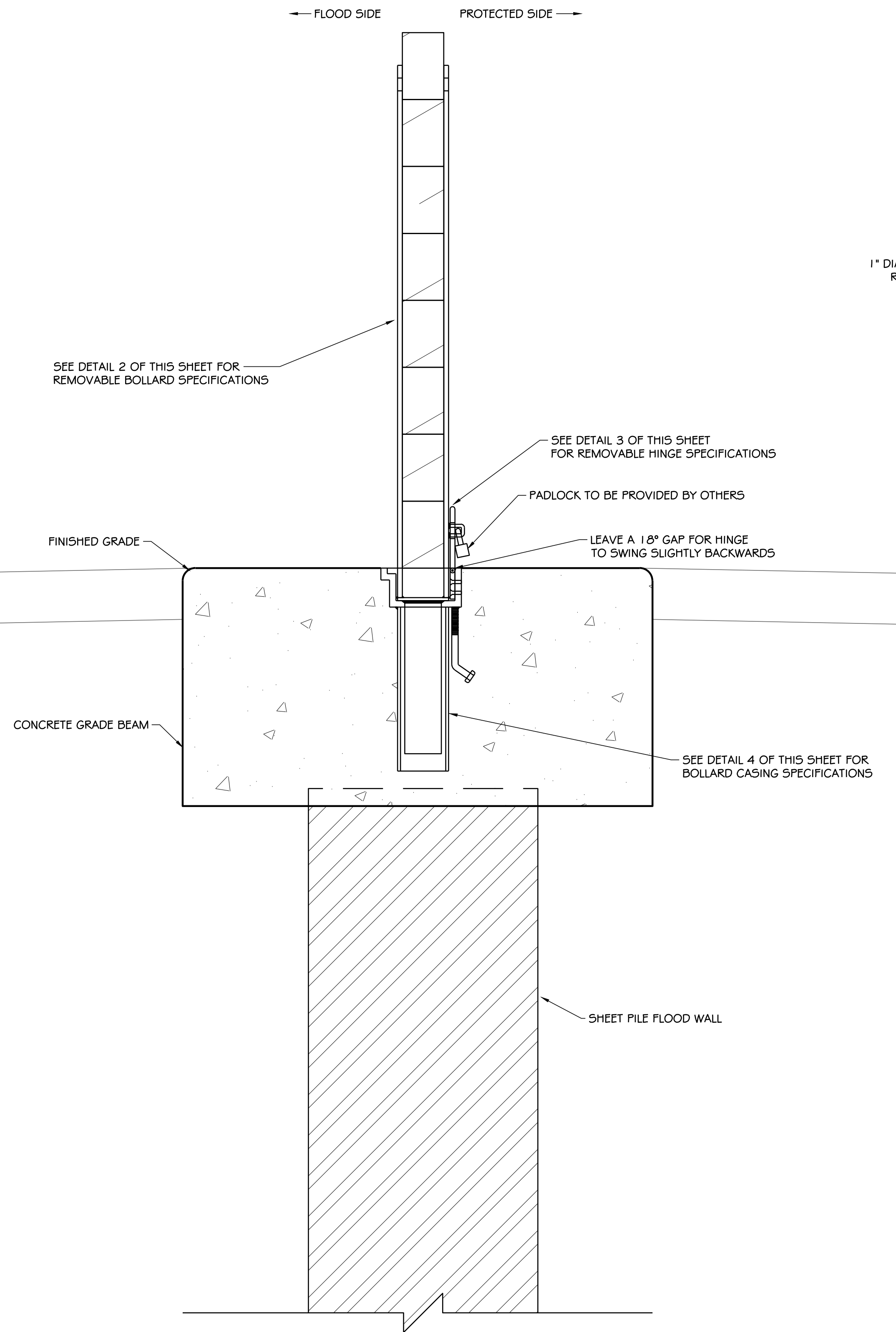
CLOMR PLAN SET

PLOTTED: Dec 29, 2020 - 12:00:12 PLOTTED BY: No:4

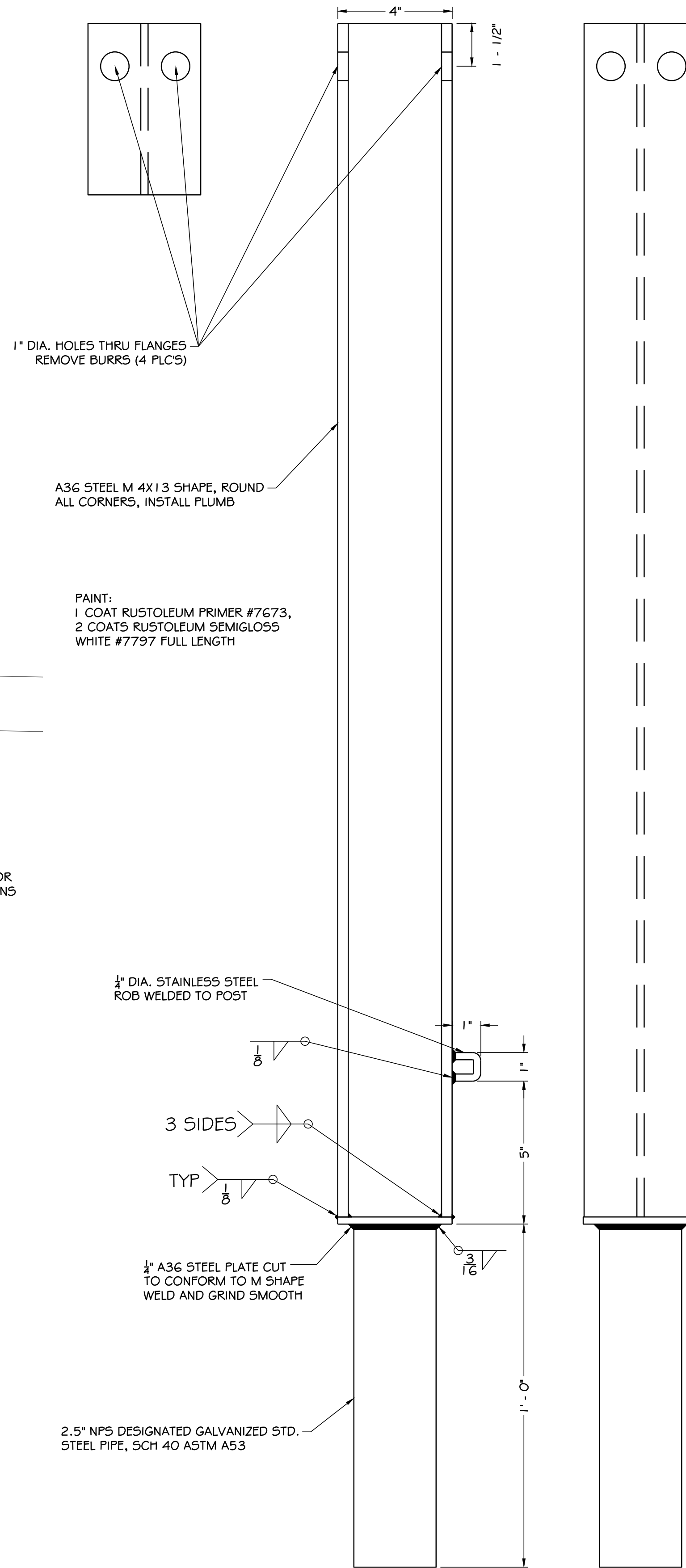
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NOTES:

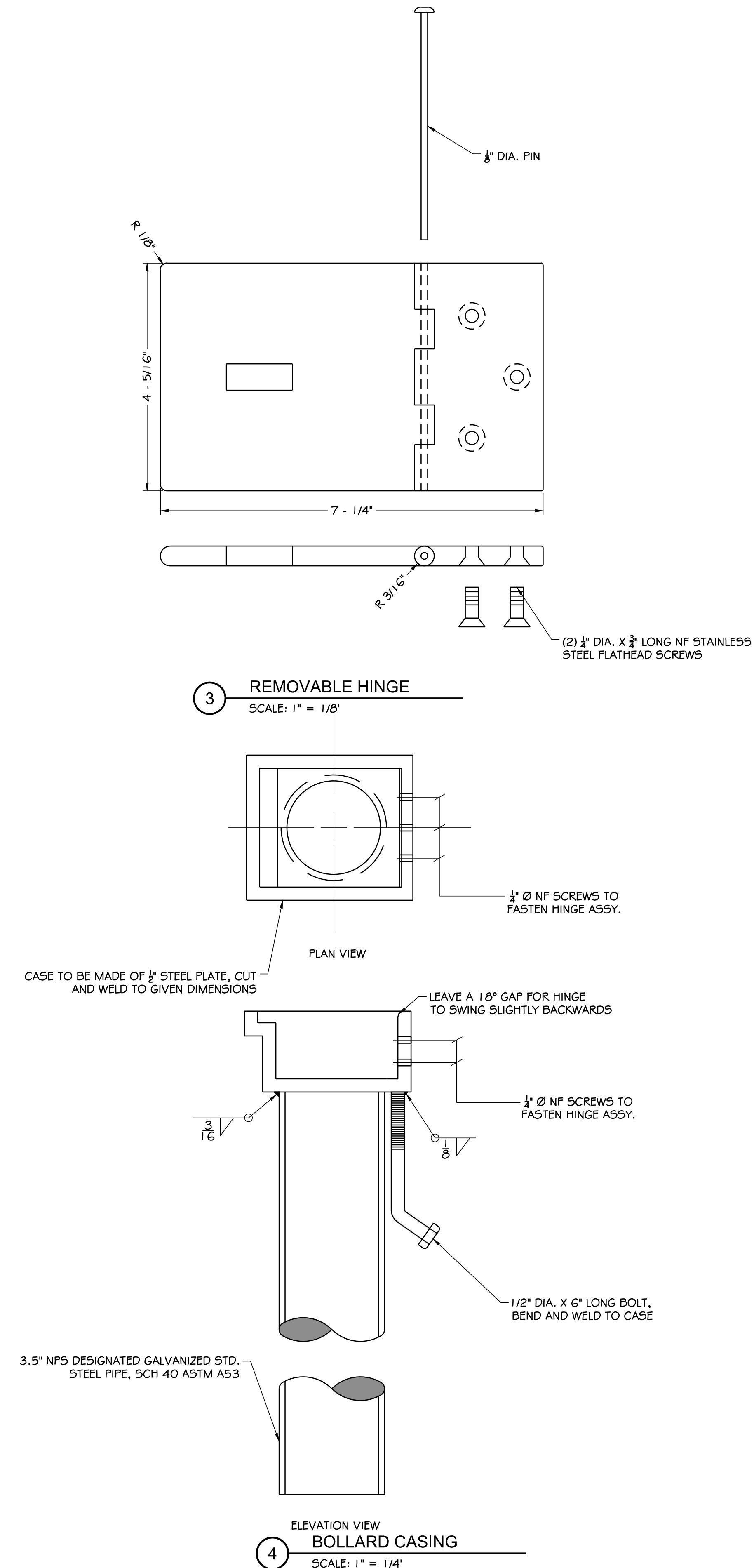
1. DIMENSIONS GIVEN ARE APPROXIMATE, FABRICATOR TO ADJUST AS NEEDED TO ENSURE PROPER FIT.
2. SILL PLATE BETWEEN BOLLARDS VARIES IN DISTANCE.
3. HINGE TO BE FABRICATED FROM 3/8" STEEL PLATE TO GIVEN DIMENSIONS.



1 BOLLARD CASING ELEVATION VIEW - SHEET PILE FLOOD WALL
SCALE: 1" = 1/2"



2 REMOVABLE BOLLARD
SCALE: 1" = 1/4"

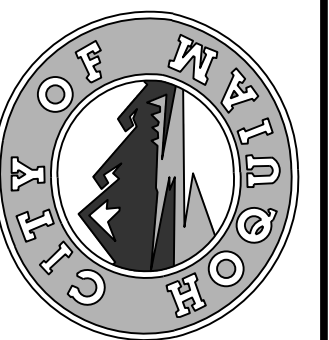


3 REMOVABLE HINGE
SCALE: 1" = 1/8"
4 ELEVATION VIEW BOLLARD CASING
SCALE: 1" = 1/4"

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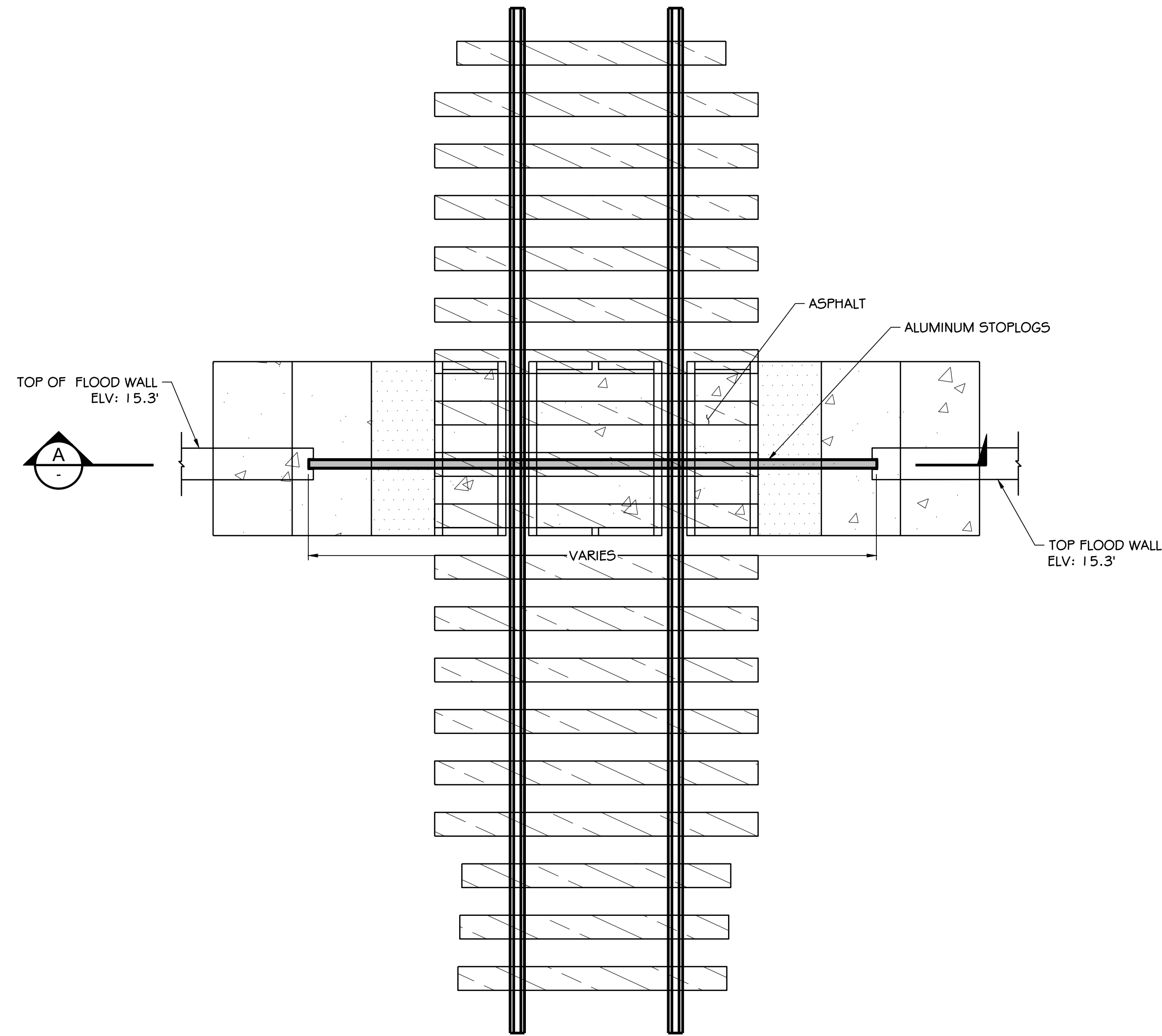


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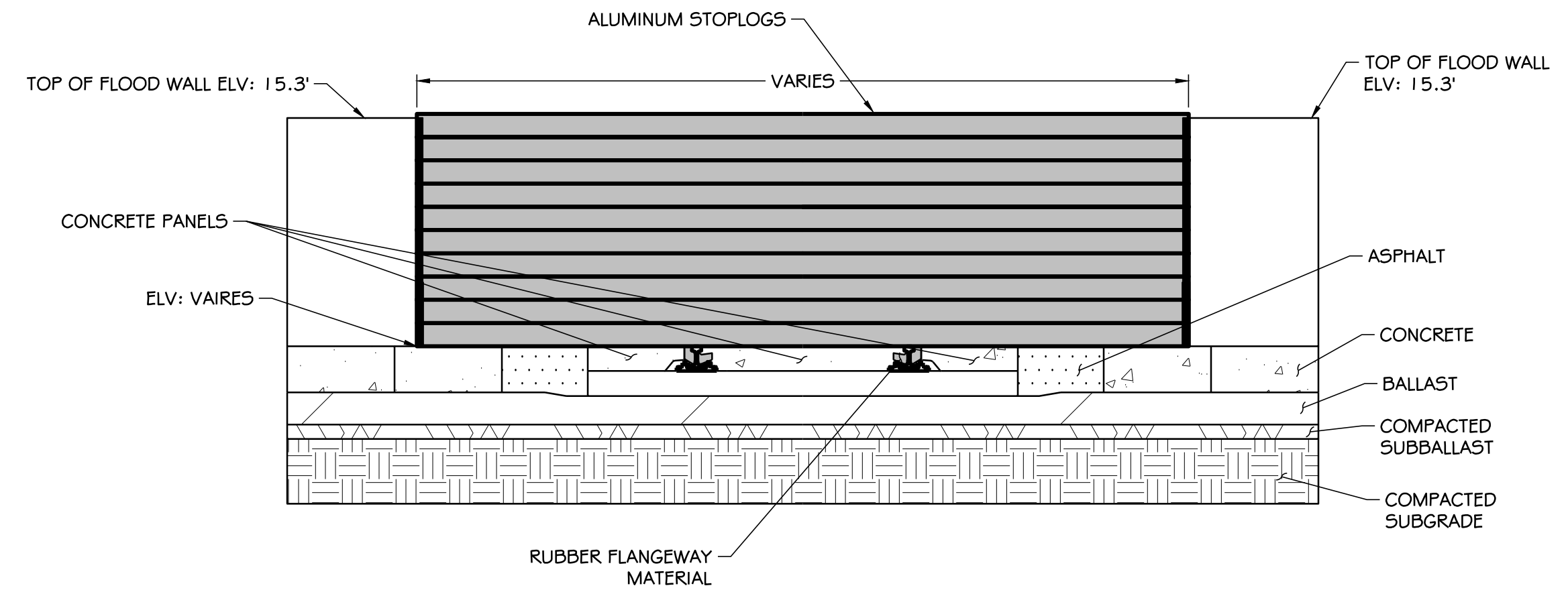
NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS
HOQUIAM, WASHINGTON
STOPLOG DETAILS

CLOMR PLAN SET



1 STOPLOG CLOSURE OVER RAILROAD SPUR
SCALE: 1" = 3'

RAIL SPUR STOPLOG CLOSURE				
CLOSURE NO.	WIDTH	QTY. BOLLARDS	SPACING	CENTER STA.
RAILROAD	57	20'	5'	142+49
RAILROAD	58	25'	5'	144+33

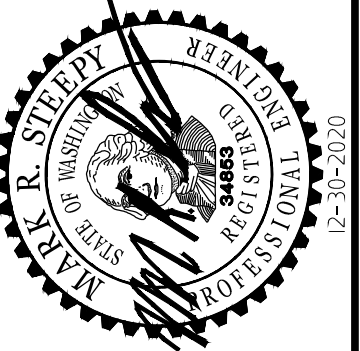


A CLOSED CONDITION
SCALE: 1" = 3'

NOTES:

1. THESE NOTES WERE OBTAINED FROM GENESEE # WYOMING INDUSTRIAL TRACK CONSTRUCTION SPECIFICATIONS.
2. TRACK TIES TO BE INSTALLED UNDER ROAD CROSSINGS WHERE ASPHALT SURFACE, CONCRETE OR RUBBER PLANKS ARE SPECIFIED, TIES WILL BE OF DIMENSIONS AND SPACING AS DIRECTED BY THE RAILROAD ENGINEERING MANAGER, ROADMASTER OR AS RECOMMENDED BY THE CROSSING SYSTEM MANUFACTURER/SUPPLIER.
3. LAY RAILS WITH STAGGERED JOINTS. THE STAGGER BETWEEN JOINTS IN OPPOSITE RAILS BEING NOT LESS THAN 12 FEET EXCEPT AS OTHERWISE AUTHORIZED BY THE RAILWAY. 50 FEET EITHER SIDE AND THRU CROSSING.
4. GAUGE OF TRACK AFTER LAYING MUST BE UNIFORM AND SET AT 4' 8-1/2".
5. USE RAIL SAWS AND RAIL DRILLS ONLY FOR CUTTING AND DRILLING RAIL RESPECTIVELY.
6. DO NOT USE WELDING EQUIPMENT TO CUT RAIL OR DRILL HOLES IN RAIL, UNDER ANY CIRCUMSTANCES.
7. INSTALL CROSSINGS ONLY AT THE LOCATIONS SHOWN ON THE DRAWINGS. CROSSING SURFACE TO BE AS SPECIFIED BY THE RAILROAD.
8. ONLY CONCRETE SOLID PLANKING WILL BE ACCEPTED. PLANKS TO BE THE FULL DEPTH OF THE CROSSING TO MATCH THE HEIGHT OF THE RAIL, TO A MAXIMUM OF SEVEN INCHES. RUBBER FLANGWAY MATERIAL IS PREFERRED FOR ASPHALT AND CONCRETE SURFACES.

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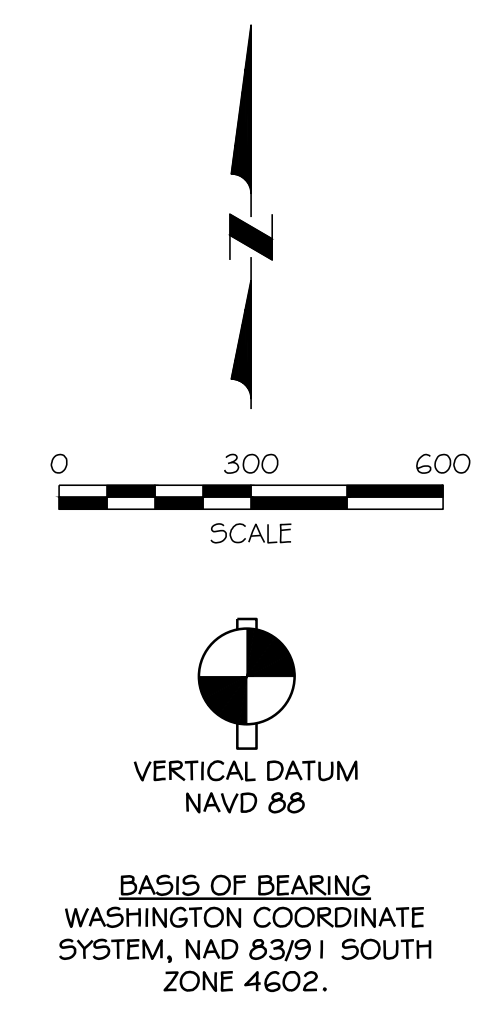
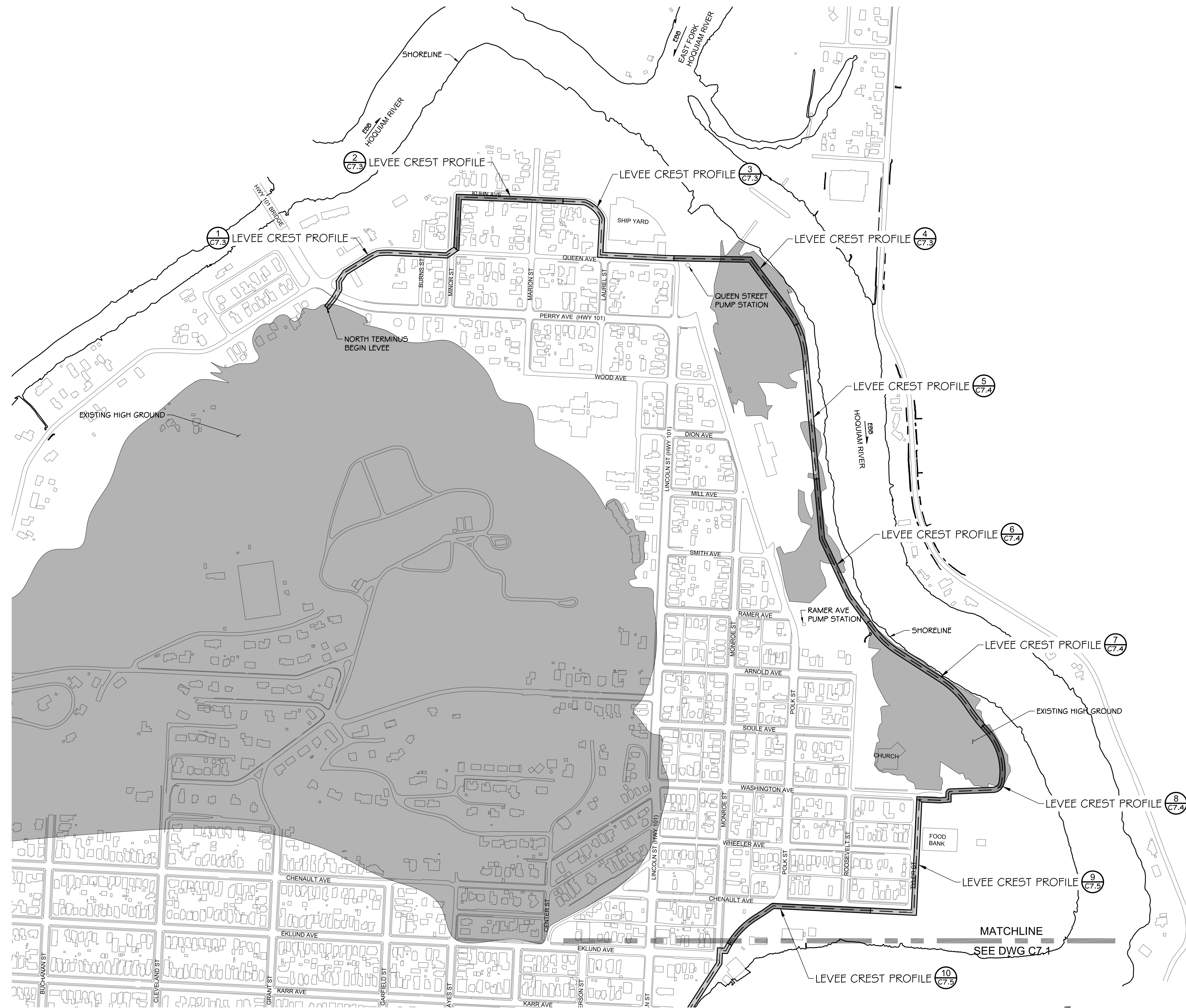


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DRAWN BY: NILA	CHECKED BY: SDS		

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
STOPLOG DETAILS

CLOMR PLAN SET

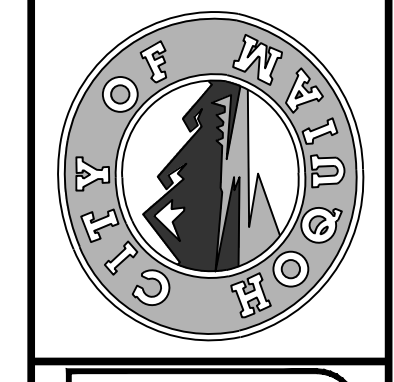


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CHECKED BY	SDS	JOB NO.	10181900007

**NORTH SHORE LEVEE WEST SEGMENT
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HOQUIAM, WASHINGTON**

LEVEE CREST PLAN

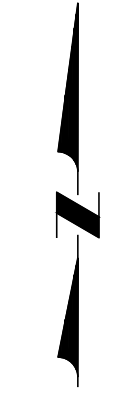
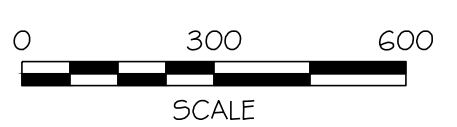
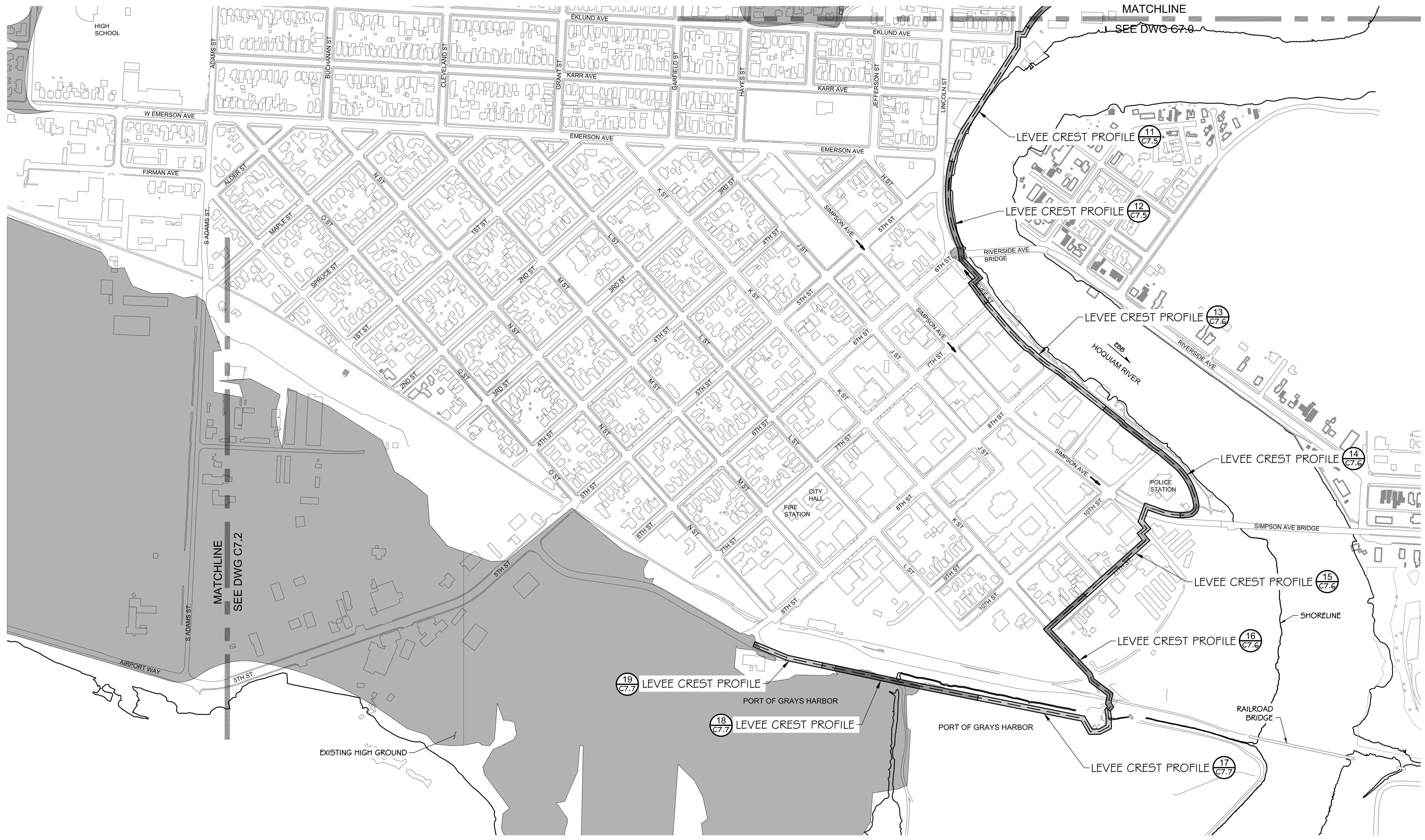
CLOMR PLAN SET

C7.0

SHEET 51 OF 58

PLOTTED: Dec 29, 2020 - 12:08:20 PM - PLOTTED BY: Nscsa

FILE: I:\2019\1018190007 - Northshore Levee West Segment\CADD\DWG\CLOMR PLANS & DETAILS\C7.0 THRU C7.2 - LEVEE CREST PLANS



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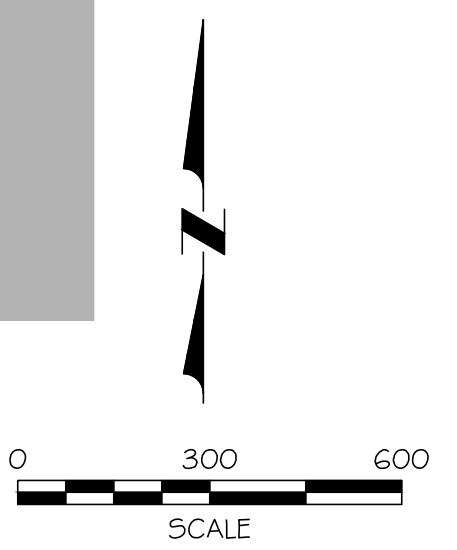
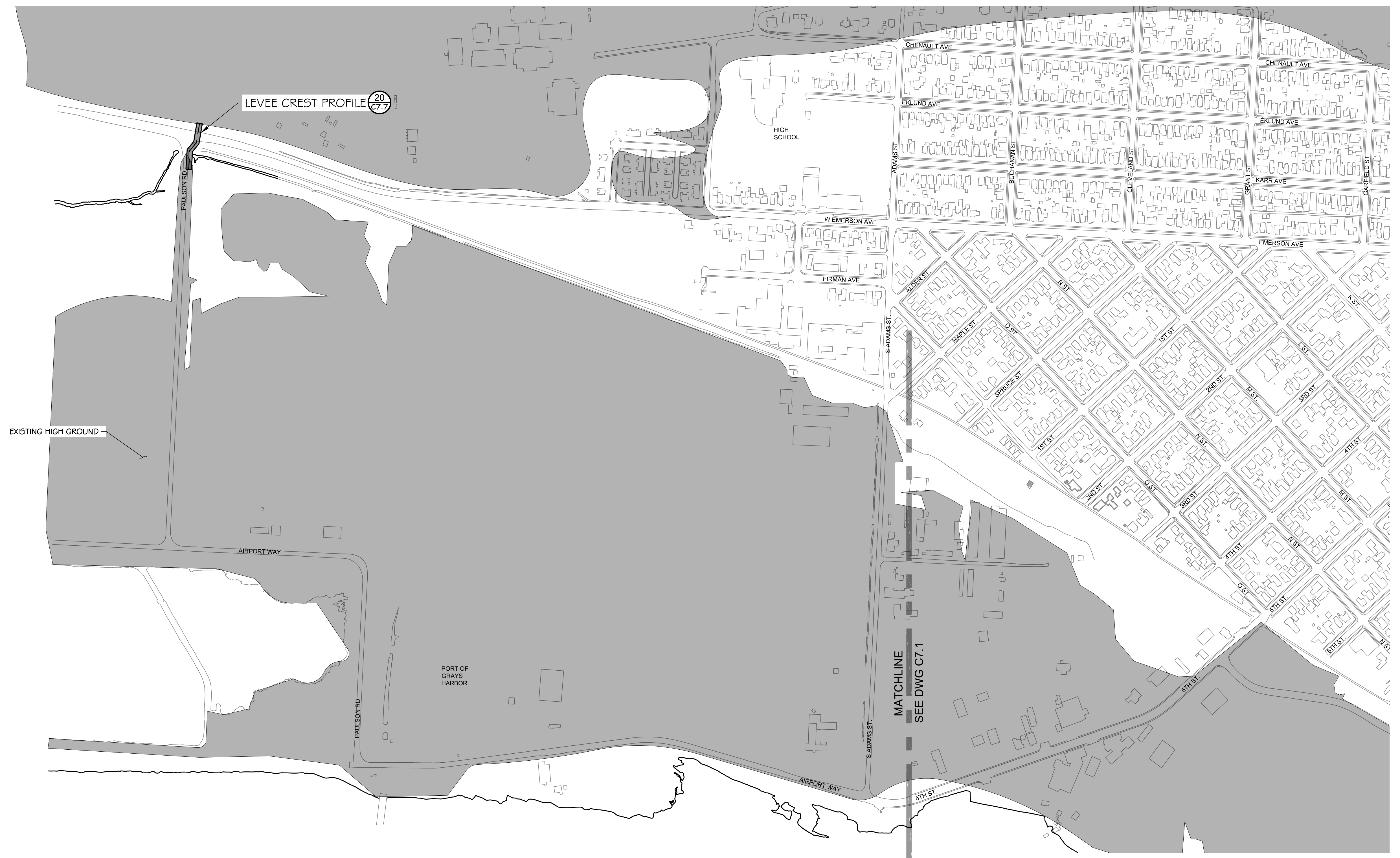
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**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE CREST PLAN**

CLOMR PLAN SET

C7.1
SHEET 52 OF 58



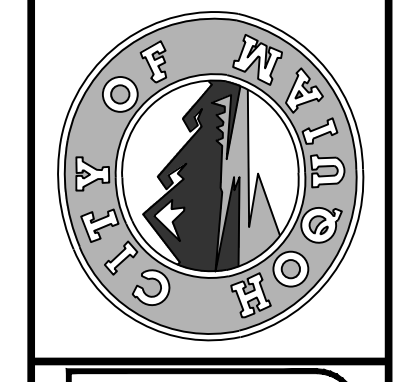
VERTICAL DATUM
NAVD 88

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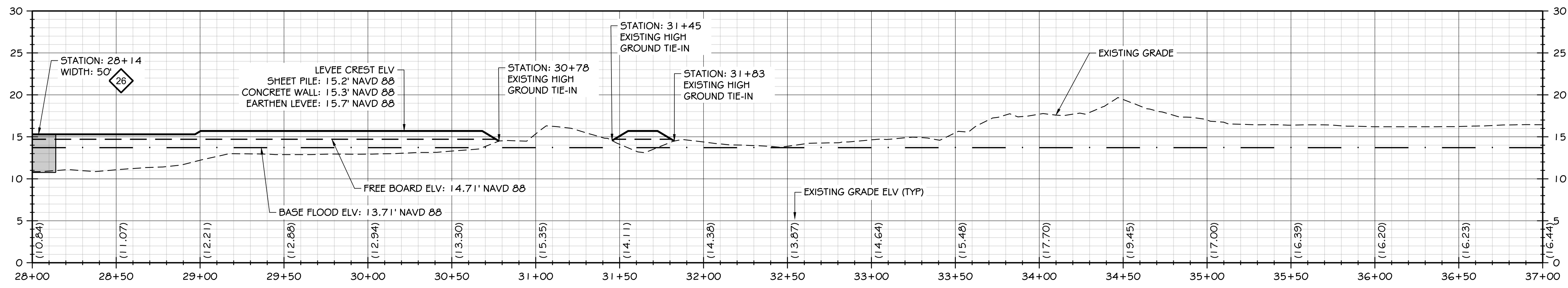
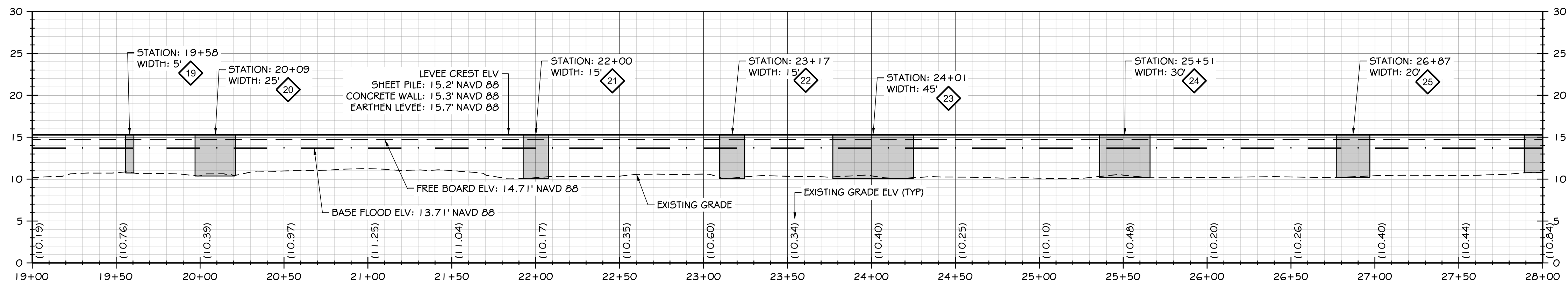
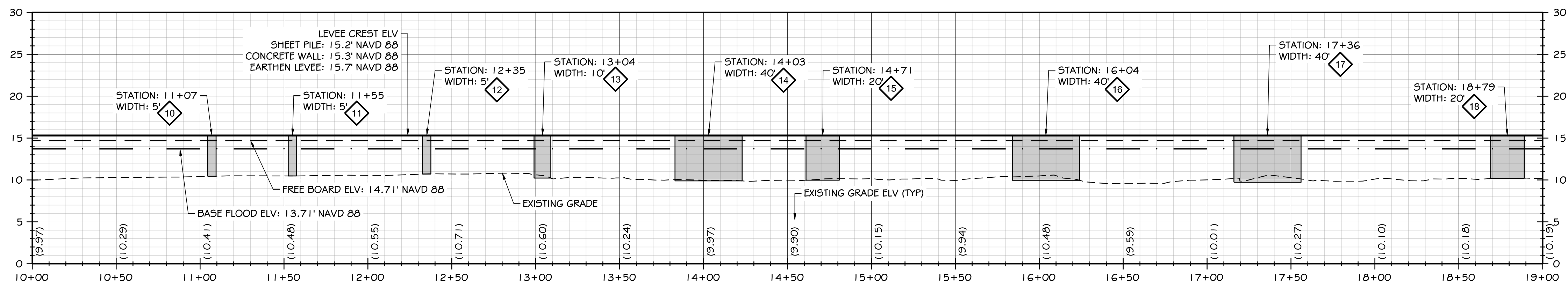
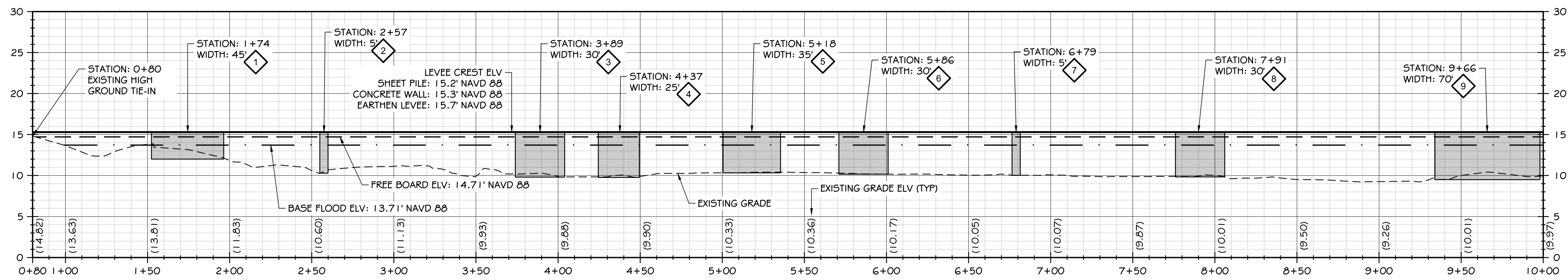
DESIGNED BY	SDS	DATE
SDS	MRS	12-30-2020
CHECKED BY	SDS	JOB NO.
NLA	SDS	10181900007

**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON**

LEVEE CREST PLAN

CLOMR PLAN SET

C7.2
SHEET 53 OF 58



NOTE:

1. LEVEE WALLS ARE DESIGNED TO BE OVERBUILT TO ACCOUNT FOR SETTLEMENT DURING FUTURE ACCREDITATION CYCLES.
 - 1.1. CONCRETE WALLS ARE ANTICIPATED TO SETTLE NO MORE THAN 1". THEREFORE A CONCRETE WALL CONSTRUCTED HEIGHT OF 15.3' WILL RESULT IN A CREST HEIGHT OF 15.2' FOLLOWING ANTICIPATED SETTLEMENT.
 - 1.2. EARTHEN LEVEE SECTIONS ARE TO BE CONSTRUCTED TO ELEVATION 15.7' TO ENSURE THE LEVEE STRUCTURE IS ABOVE THE THE BFE PLUS FREEBOARD (ELV: 14.71') FOLLOWING LONG-TERM SETTLEMENT (MAX 1.12" SETTLEMENT FOR EARTHEN LEVEE SECTIONS).
2. LEVEE WALL TYPE SECTION CHANGES (AS IDENTIFIED ON DWG C5.2) HAVE 30' OF OVERLAP TO ACCOUNT FOR ANY DIFFERENTIAL SETTLEMENT THAT MAY OCCUR.

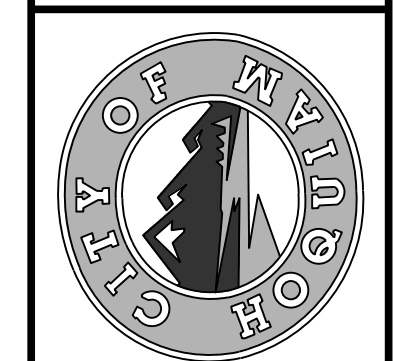
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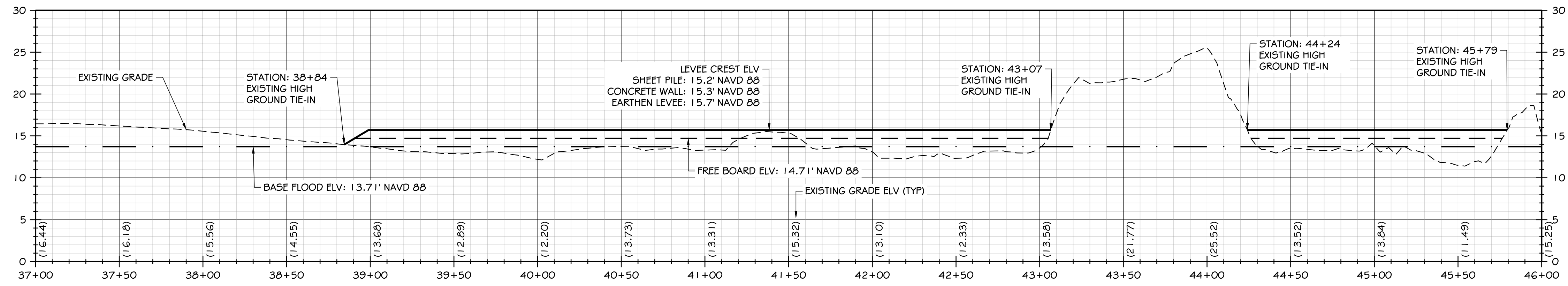
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CHECKED BY: SDS	APPROVED BY: MRS	JOB NO: 10181900007

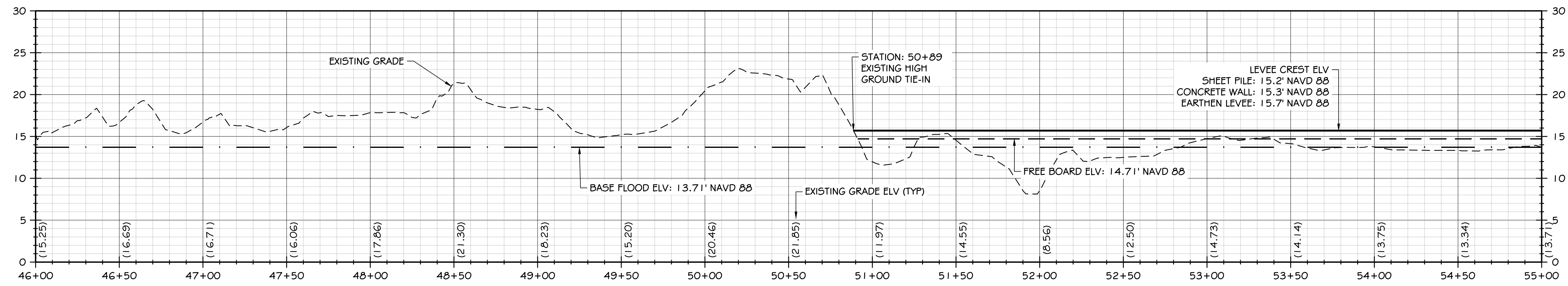
**NORTH SHORE LEVEE WEST SEGMENT
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LEVEE CREST PROFILES

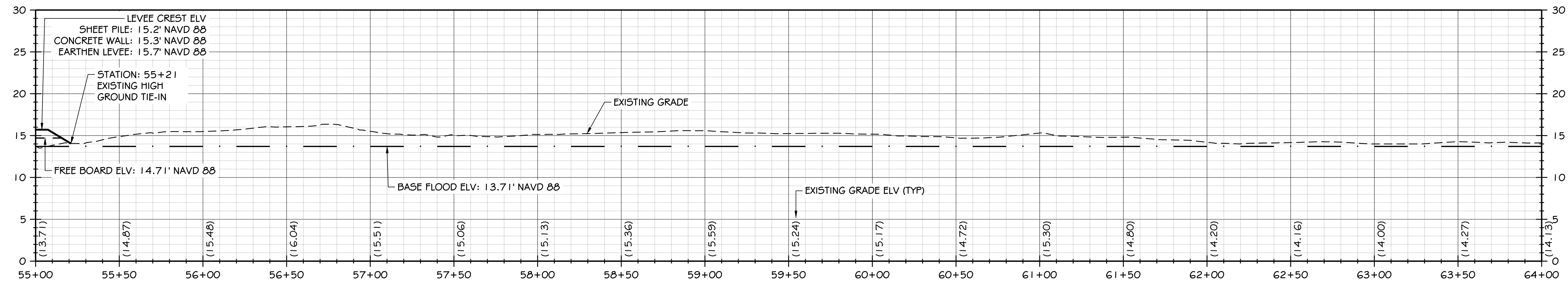
CLOMR PLAN SET



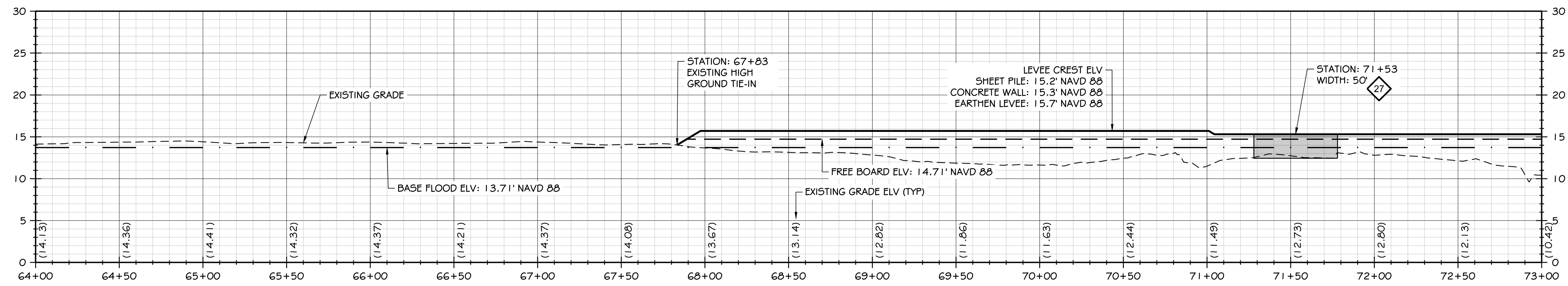
5 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



6 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



7 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



8 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'

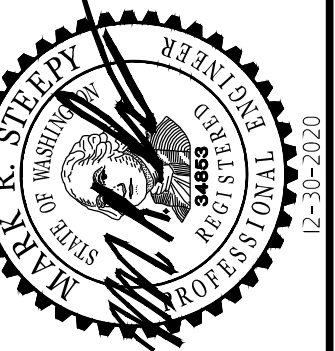
NOTE:

1. LEVEE WALLS ARE DESIGNED TO BE OVERBUILT TO ACCOUNT FOR SETTLEMENT DURING FUTURE ACCREDITATION CYCLES.
 - 1.1. CONCRETE WALLS ARE ANTICIPATED TO SETTLE NO MORE THAN 1", THEREFORE A CONCRETE WALL CONSTRUCTED HEIGHT OF 15.3' WILL RESULT IN A CREST HEIGHT OF 15.2' FOLLOWING ANTICIPATED SETTLEMENT.
 - 1.2. EARTHEN LEVEE SECTIONS ARE TO BE CONSTRUCTED TO ELEVATION 15.7' TO ENSURE THE LEVEE STRUCTURE IS ABOVE THE THE BFE PLUS FREEBOARD (ELV: 14.71') FOLLOWING LONG-TERM SETTLEMENT (MAX 11.2" SETTLEMENT FOR EARTHEN LEVEE SECTIONS).
2. LEVEE WALL TYPE SECTION CHANGES (AS IDENTIFIED ON DWG C5.2) HAVE 30' OF OVERLAP TO ACCOUNT FOR ANY DIFFERENTIAL SETTLEMENT THAT MAY OCCUR.

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◆ STOPLOG NUMBER

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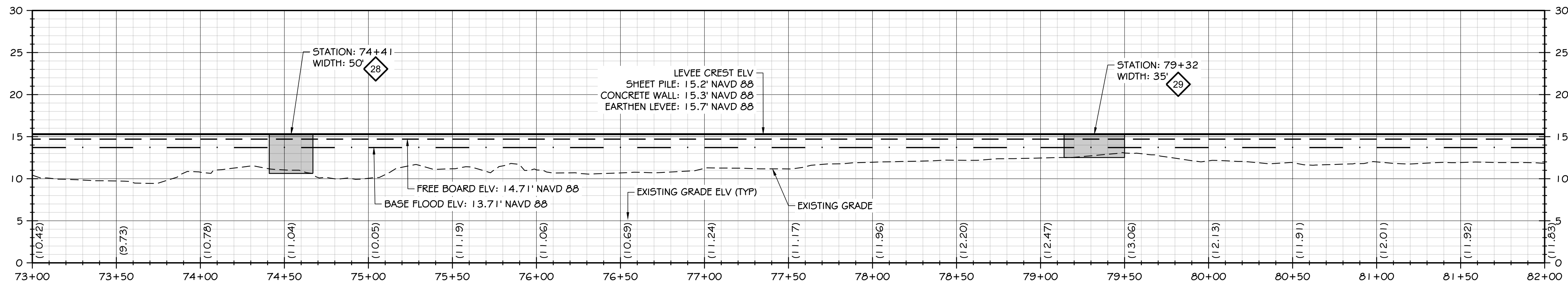
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APPROVED BY	MRS		

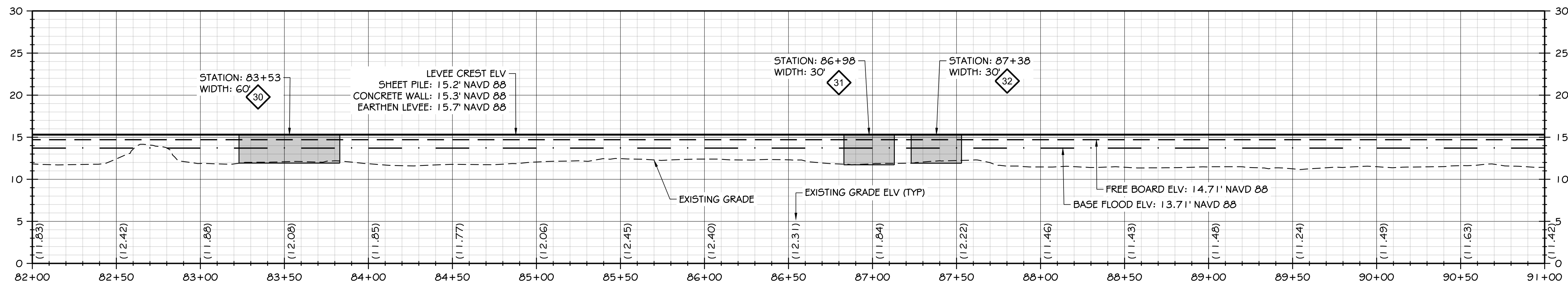
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LEVEE CREST PROFILES

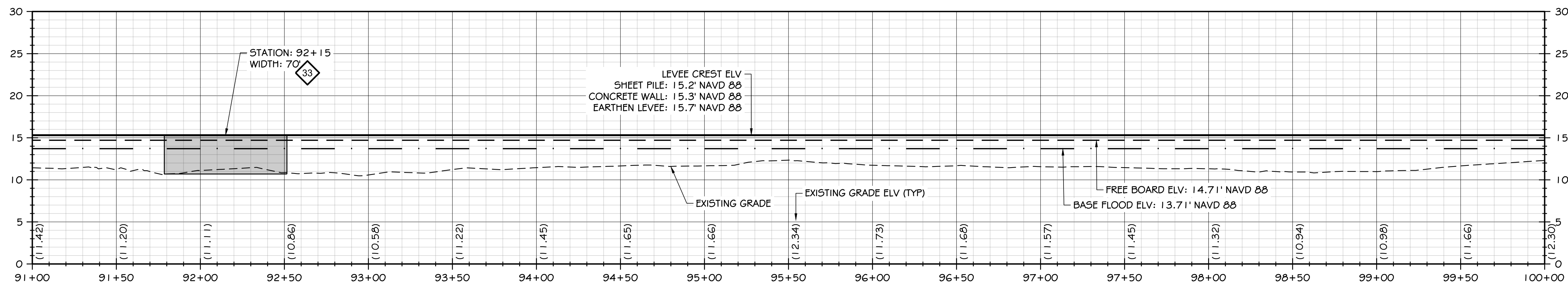
CLOMR PLAN SET



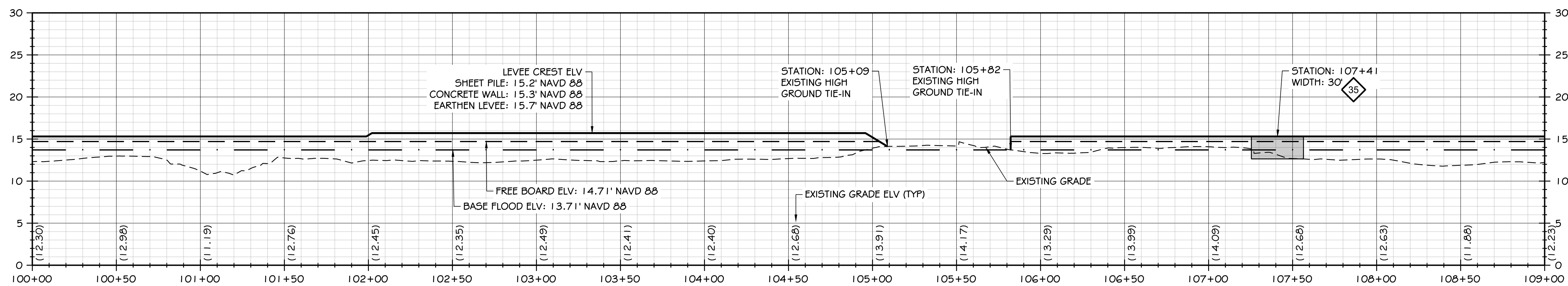
9 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



10 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



11 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



12 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'

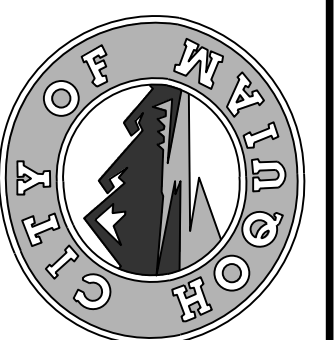
NOTE:

1. LEVEE WALLS ARE DESIGNED TO BE OVERBUILT TO ACCOUNT FOR SETTLEMENT DURING FUTURE ACCREDITATION CYCLES.
 - 1.1. CONCRETE WALLS ARE ANTICIPATED TO SETTLE NO MORE THAN 1", THEREFORE A CONCRETE WALL CONSTRUCTED HEIGHT OF 15.3' WILL RESULT IN A CREST HEIGHT OF 15.2' FOLLOWING ANTICIPATED SETTLEMENT.
 - 1.2. EARTHEN LEVEE SECTIONS ARE TO BE CONSTRUCTED TO ELEVATION 15.7' TO ENSURE THE LEVEE STRUCTURE IS ABOVE THE THE BFE PLUS FREEBOARD (ELV: 14.71') FOLLOWING LONG-TERM SETTLEMENT (MAX 11.2" SETTLEMENT FOR EARTHEN LEVEE SECTIONS).
2. LEVEE WALL TYPE SECTION CHANGES (AS IDENTIFIED ON DWG C5.2) HAVE 30' OF OVERLAP TO ACCOUNT FOR ANY DIFFERENTIAL SETTLEMENT THAT MAY OCCUR.

KEY NOTE:

STOPLOG NUMBER

NO	DATE	BY	CHKD	APPR	REVISION



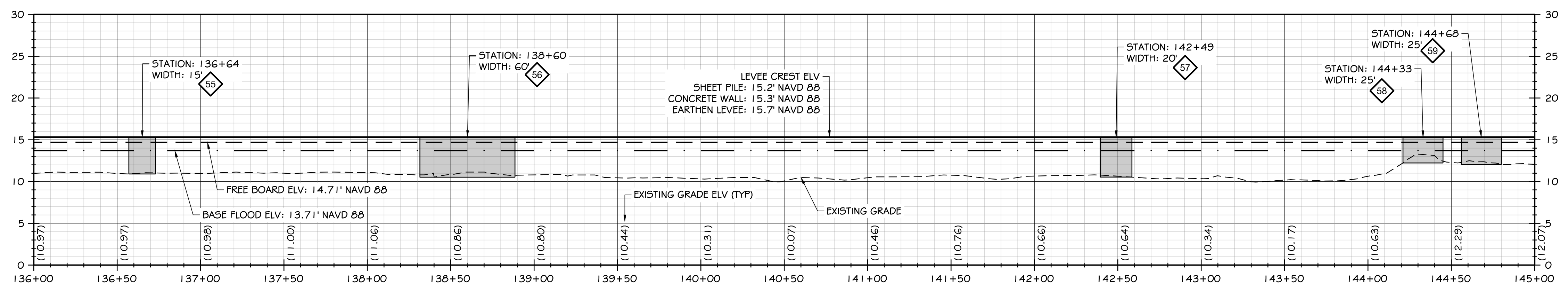
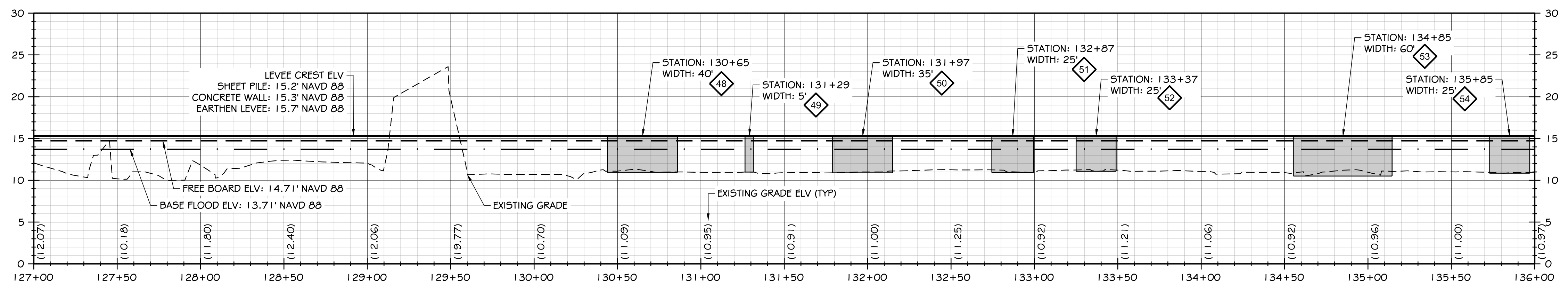
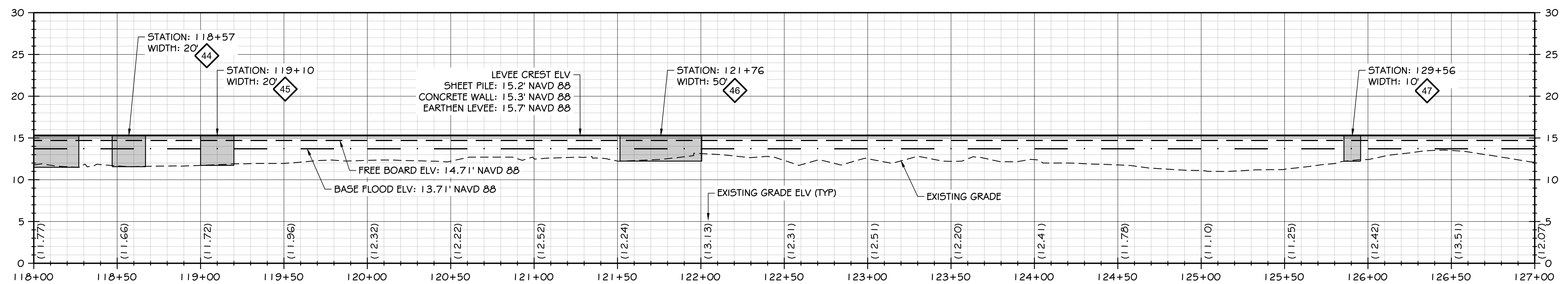
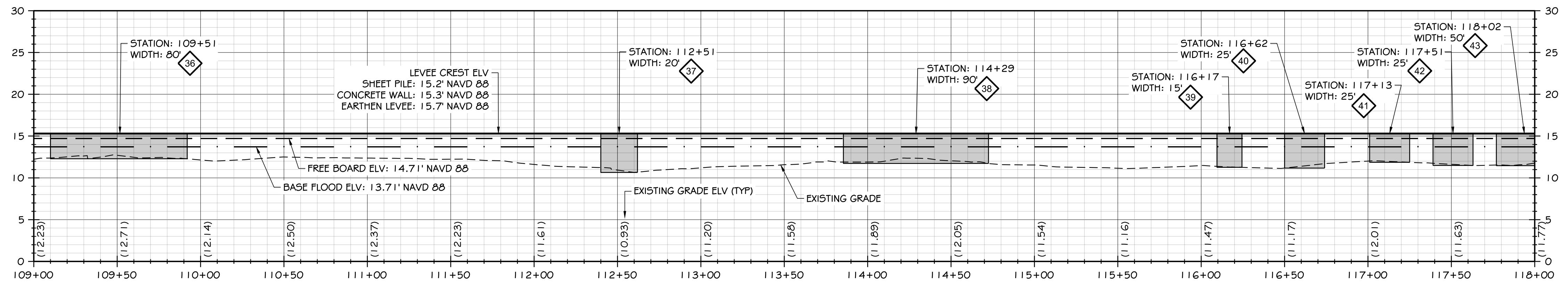
CALL
UNDERGROUND
LOCATE TWO (2)
WORKING DAYS
BEFORE YOU
DIG
811

DESIGNED BY NLA	DESIGNED BY SDS	APPROVED BY MRS	DATE 12-30-2020	JOB NO. 1018190007
CHECKED BY SDS				

**NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON**

LEVEE CREST PROFILES

CLOMR PLAN SET





NOTE:

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KEY NOTE:

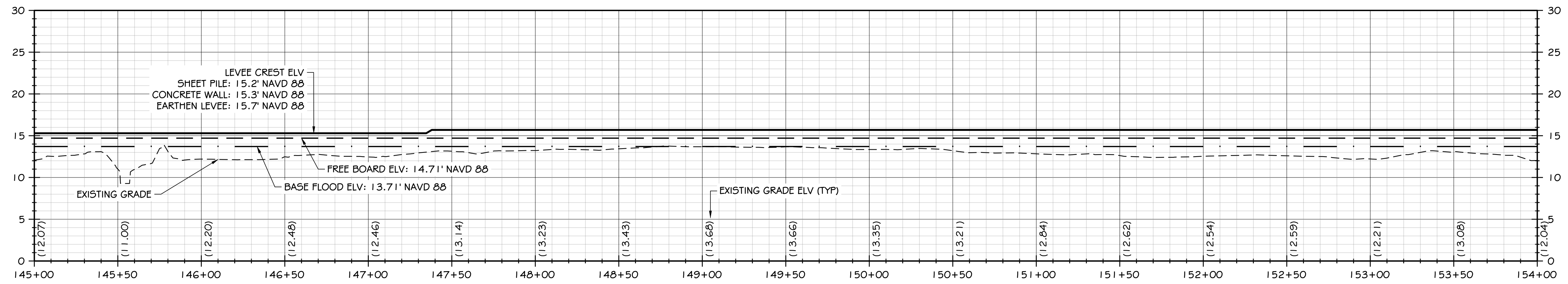
◆ STOPLOG NUMBER

DESIGNED BY: SDS		APPROVED BY: MRS		DATE: 12-30-2020	
DRAWN BY: NILA		CHECKED BY: SDS		JOB NO.: 10181900007	
<p>NORTH SHORE LEVEE WEST SEGMENT CLOMR PLANS HOQUIAM, WASHINGTON</p> <p>LEVEE CREST PROFILES</p>					
CLOMR PLAN SET					
C7.6					
SHEET 57 OF 58					

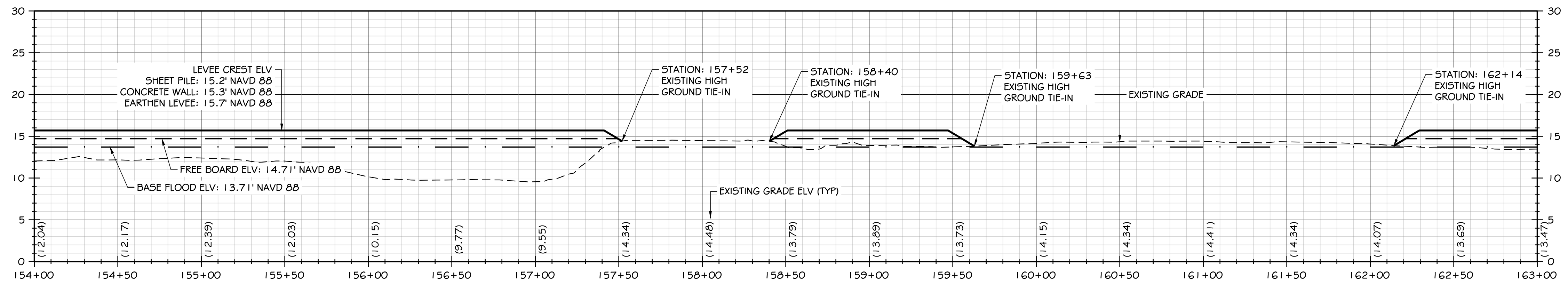



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Lacey, WA 98503
360.292.7230
www.kpff.com

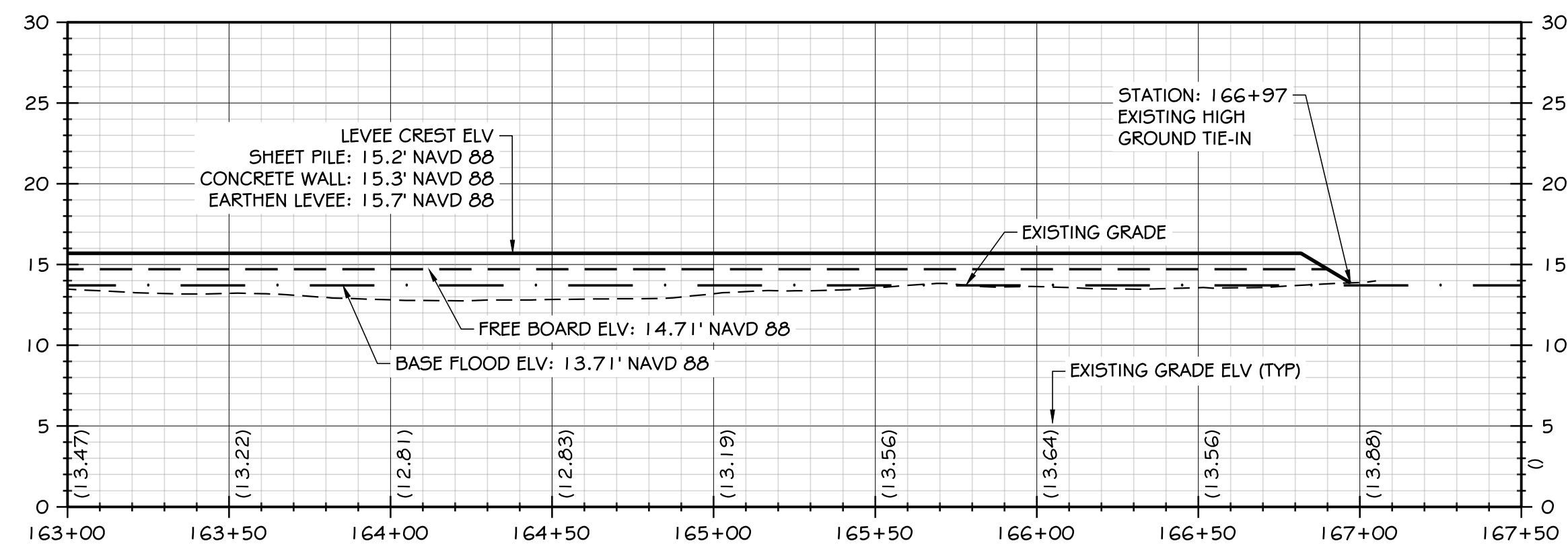
NO	DATE	BY	CHKD	APPR	REVISION



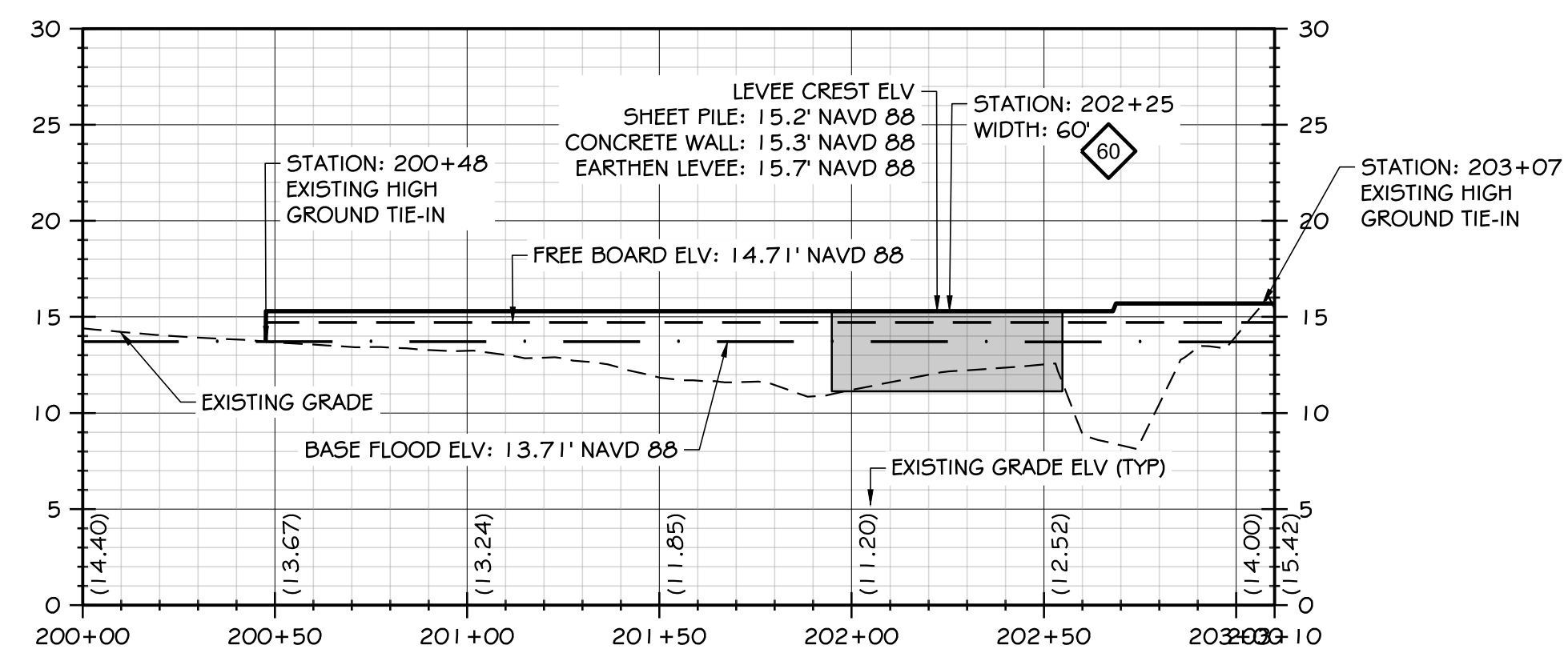
17 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



18 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



19 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'



20 LEVEE CREST PROFILE
SCALE: HORZ: 1" = 40'; VERT: 1" = 8'

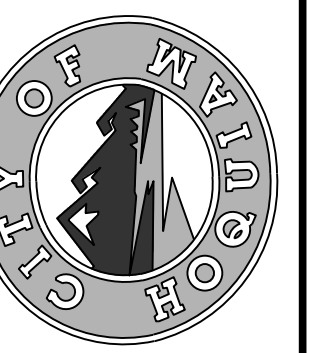
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CALL UNDERGROUND LOCATE TWO (2) WORKING DAYS BEFORE YOU DIG 811

DESIGNED BY: NILA	DESIGNED BY: SDS	DATE: 12-30-2020
CHECKED BY: SDS	CHECKED BY: MRS	JOB NO: 10181900007

NORTH SHORE LEVEE WEST SEGMENT
CLOMR PLANS
HOQUIAM, WASHINGTON
LEVEE CREST PROFILES

CLOMR PLAN SET

C7.7
SHEET 58 OF 58