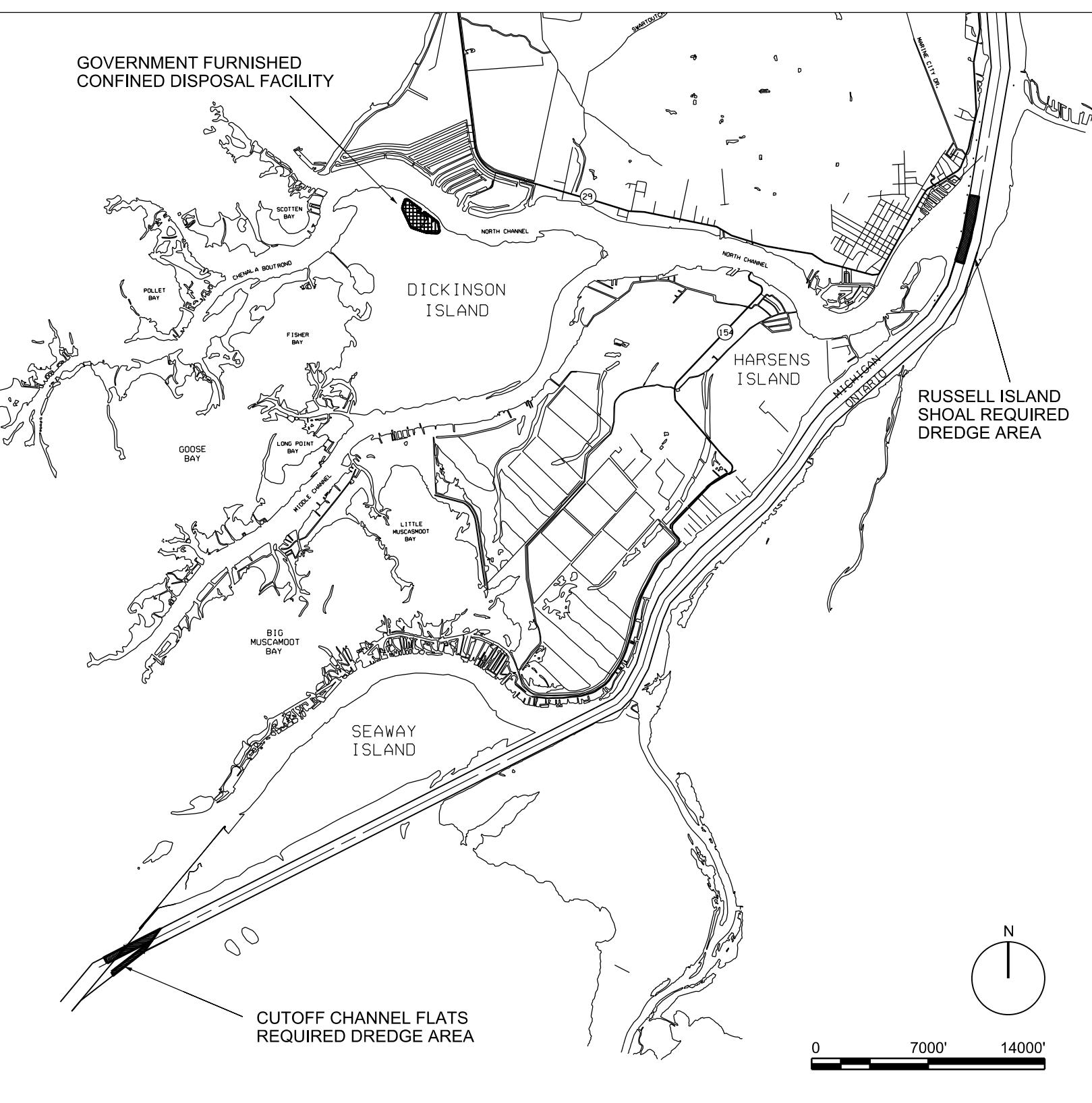
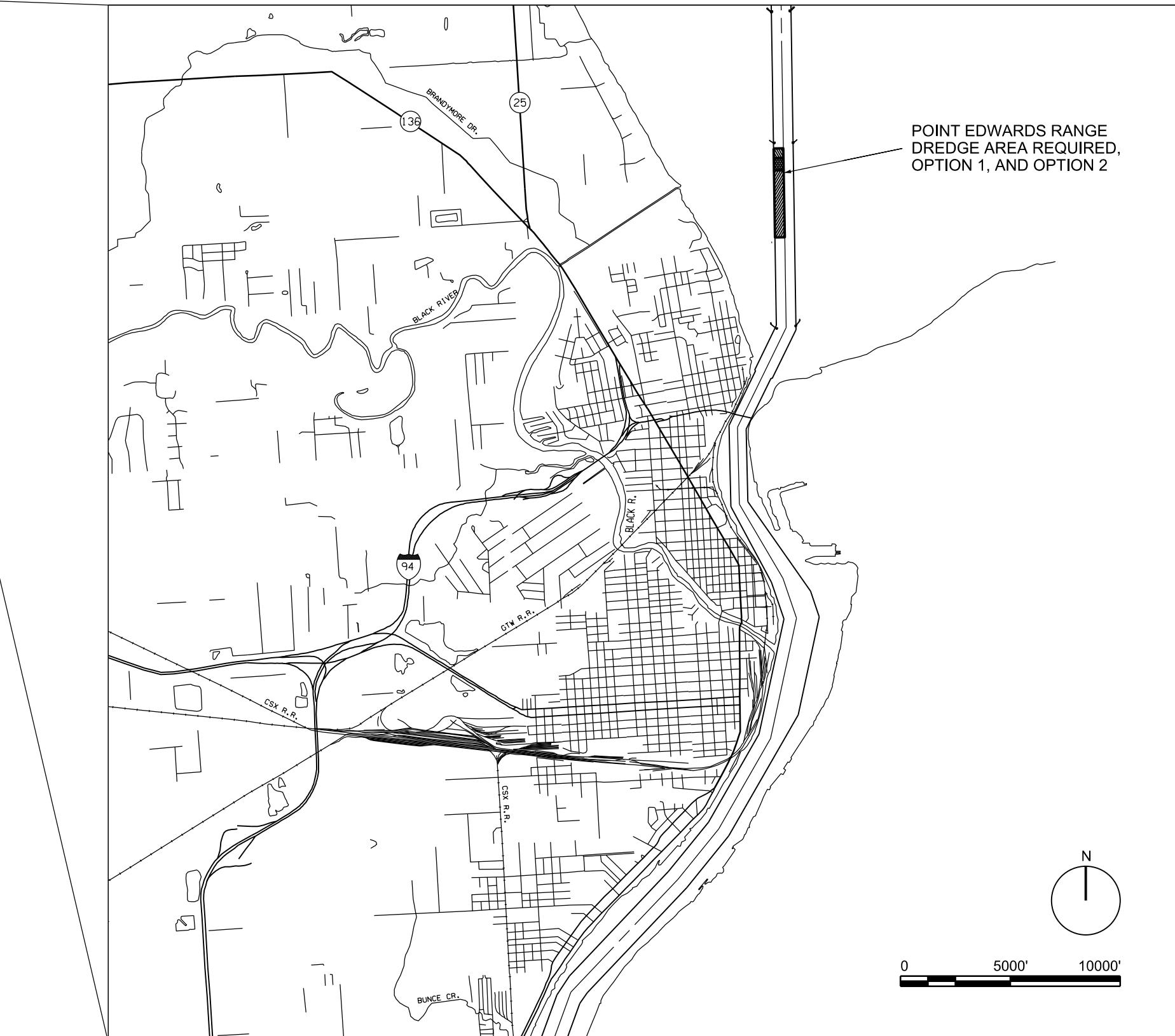
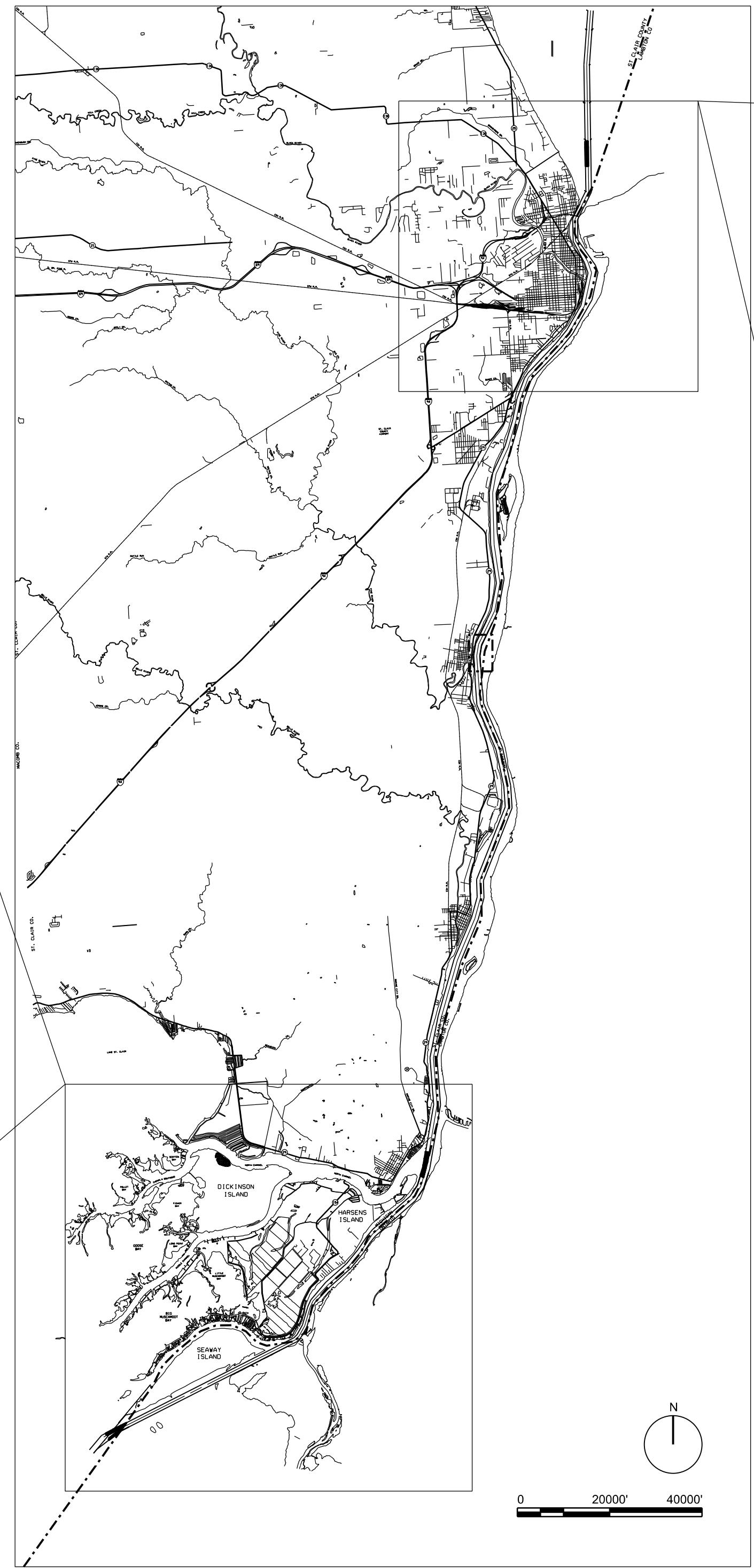


**US Army Corps
of Engineers®
DETROIT DISTRICT**

ST. CLAIR COUNTY PORT HURON, MI ST. CLAIR RIVER FY19 MAINTENANCE DREDGING



SOLICITATION NO.: W911XK19B0010
CONTRACT NO.:
ISSUE DATE: 25 APR 2019



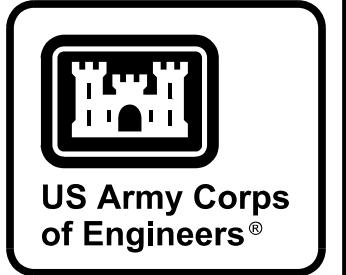
/S/ WILLIAM D. MERTE
WILLIAM D. MERTE P.E., CHIEF COST & GENERAL ENGINEERING BRANCH

/S/ PHILLIP C. ROSS
PHILLIP C. ROSS P.E., CHIEF ENGINEERING & CONSTRUCTION OFFICE

/S/ MARIE STRUM
MARIE STRUM P.E., CHIEF ENGINEERING & TECHNICAL SERVICES

THE PROJECT WAS DESIGNED BY THE DETROIT DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECTS DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152

SHEET ID
G-001



US Army Corps
of Engineers®

DETROIT DISTRICT

DATE

U.S. ARMY CORPS OF ENGINEERS	DESIGNED BY:	ISSUE DATE:
DETROIT DISTRICT	E. MALLURG	25 APR 2019
477 MICHIGAN AVE	DRAWN BY:	SOLICITATION NO.:
DETROIT, MI 48226	A. MASTERTON	W911XK19B0010
	CHECKED BY:	CONTRACT NO.:
	T. SMITH	
	SUBMITTED BY:	PROJECT NUMBER:
	PHIL ROSS	
	SIZE:	FILENAME:
	ANSI D.	SCRIVER, FY19MD_G-001.dwg

ST. CLAIR COUNTY PORT HURON, MI ST. CLAIR RIVER FY19 MAINTENANCE DREDGING	COVER SHEET
--	-------------



GENERAL NOTES

1. DREDGE WORK UNDER THIS CONTRACT IS MARKED REQUIRED, OPTION 1, AND OPTION 2.
 2. ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD 85) LOW WATER DATUM (L.W.D.).
 3. COORDINATES SHOWN ARE BASED ON LAMBERT PROJECTION, MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (2113), 1983 NORTH AMERICAN DATUM (NAD83), U.S. SURVEY FOOT.
 4. THE GOVERNMENT WILL PROVIDE DETAILED DESCRIPTIONS OF THE VERTICAL AND HORIZONTAL CONTROLS.
 5. PROJECT DEPTHS ARE PROVIDED IN FEET BELOW L.W.D. (IGLD 85). 1 FOOT OVERDEPTH IS ALLOWED.
 6. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE SCOPE OF WORK AND SECTION 35 20 23 OF THE SPECIFICATIONS FOR INFORMATION REGARDING REQUIREMENTS FOR PLACEMENT OF DREDGED MATERIAL WITHIN THE PLACEMENT AREA.
 7. THE REQUIRED AND OPTION MAINTENANCE DREDGING AREAS WILL BE REVISED BY THE COR WITHIN THE LIMITS STATED HEREIN BASED ON PRIOR-TO-DREDGING SOUNDINGS CONDUCTED BY THE GOVERNMENT.
 8. VERIFY THE LOCATION OF AUTHORIZED CROSSINGS. SEE SPECIFICATION SECTION 01 35 13 FOR UTILITY LOCATING REQUIREMENTS.
 9. SOUNDINGS HAVE BEEN THINNED AND DISPLAYED BASED ON NAVIGATION NEEDS AND ARE NOT INTENDED FOR USE IN CALCULATING DREDGE QUANTITIES.
 10. ALIGNMENT STATIONING ZERO REFERENCES FOR THE FEDERAL NAVIGATION CHANNEL ARE AS SHOWN ON EACH SHEET.



**S Army Corps
f Engineers®**

INDEX

GENERAL

G-001 COVER SHEET
GI001 GENERAL INFORMATION

SCRIVER_FY19MD_G-001.DGN
SCRIVER_FY19MD_GI001.DGN

CIVIL

CN101	REQUIRED DREDGE AREA CUTOFF CHANNEL FLATS
CN102	REQUIRED DREDGE AREA CUTOFF CHANNEL FLATS
CN103	REQUIRED DREDGE AREA RUSSELL ISLAND SHOAL
CN104	REQUIRED DREDGE AREA RUSSELL ISLAND SHOAL
CN105	REQUIRED DREDGE AREA POINT EDWARDS RANGE
CN106	REQUIRED, OPTION 1, AND OPTION 2 DREDGE AREAS POINT EDWARDS RANGE
CN301	REQUIRED AND OPTION DREDGING TYPICAL CROSS SECTION

SCRIVER_FY19MD_CN101.DGN
SCRIVER_FY19MD_CN102.DGN
SCRIVER_FY19MD_CN103.DGN
SCRIVER_FY19MD_CN104.DGN
SCRIVER_FY19MD_CN105.DGN
SCRIVER_FY19MD_CN106.DGN
SCRIVER_FY19MD_CN301.DGN

RESOURCES

PP101 REQUIRED PLACEMENT AREA DICKINSON ISLAND CDF WEST CELL PLAN VIEW **SCRIPPER FY18MD_PP101.DGN**

U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT 477 MICHIGAN AVE DETROIT, MI 48226		DESIGNED BY: E. MALBURG	ISSUE DATE: 25 APR 2019
		DRAWN BY: A. MASTERTON	SOLICITATION NO.: W911XK19B0010
		CHECKED BY: T. SMITH	CONTRACT NO.:
		SUBMITTED BY: PHIL ROSS	PROJECT NUMBER:
		SIZE: ANSI D	FILENAME: SCRiver FY19MD_GI001.dgn
 <p>INCREASE PROFIT...SUBMIT VECP'S</p>			
			

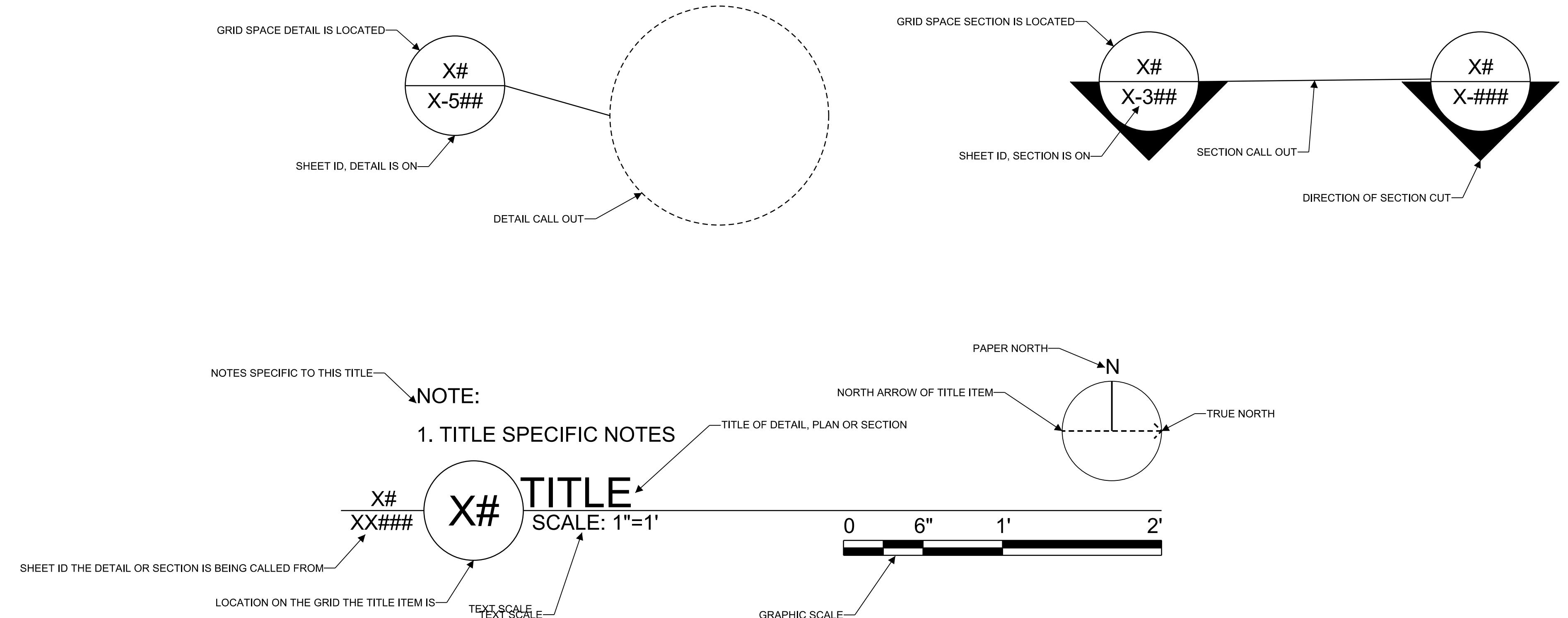
**ST. CLAIR COUNTY
PORT HURON, MI
ST. CLAIR RIVER
FY19 MAINTENANCE DREDGING**

GENERAL INFORMATION

SHEET ID
GI001

STANDARD ABBREVIATIONS:

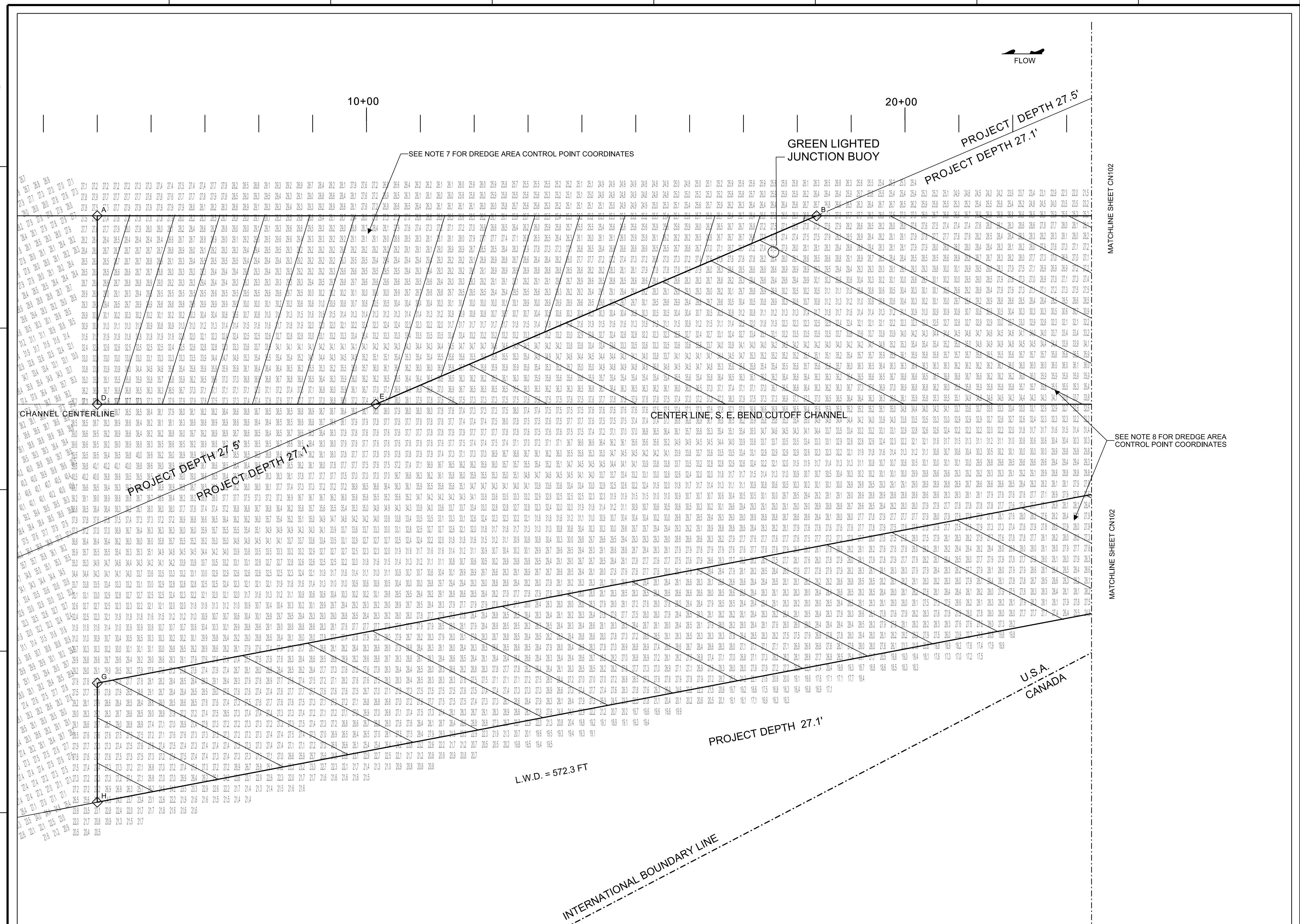
ALT	ALTERNATE	MAX	MAXIMUM
&	AND	MIN	MINIMUM
APPROX	APPROXIMATE	MISC	MISCELLANEOUS
@	AT	MTL	METAL
BOTT	BOTTOM	NGVD	NATIONAL GEODETIC VERTICAL DATUM
C OR C/L	CENTERLINE	NO.	NUMBER
C/C	CENTER-TO-CENTER	NOM	NOMINAL
CLR	CLEAR	NTS	NOT TO SCALE
CONC	CONCRETE	OC	ON CENTER
CONN	CONNECTION	OD	OUTSIDE DIAMETER
CNTJ	CONSTRUCTION JOINT	OHWM	ORDINARY HIGH WATER MARK
CTJ	CONTRACTION JOINT	PL	PLATE
COV	COVERAGE	PSF	POUNDS PER SQUARE FOOT
CY	CUBIC YARD	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	R	RADIUS
DIAG	DIAGONAL	REINF	REINFORCING
DIA	DIAMETER	REQ'D	REQUIRED
DIM	DIMENSION	SECT	SECTION
D/S	DOWNSTREAM	SHT	SHEET
DWG	DRAWING	SPEC	SPECIFICATION
K	KIP	SSP	STEEL SHEET PILE
L	ANGLE	ST STL	STAINLESS STEEL
LD	DEVELOPMENT LENGTH	STA	STATION
ELEC	ELECTRICAL	STD	STANDARD
ELEV	ELEVATION	STL	STEEL
EQ	EQUAL	STIFF	STIFFENER
EXIST	EXISTING	STIR	STIRRUP
EXPJ	EXPANSION JOINT	STR	STRAIGHT
FT	FOOT	SQ	SQUARE
GALV	GALVANIZED	SYMM	SYMMETRICAL
HORIZ	HORIZONTAL	THK	THICK
HT	HEIGHT	TRANS	TRANSVERSE
ID	INSIDE DIAMETER	(TYP) OR TYP	TYPICAL
INV	INVERT	U/S	UPSTREAM
MATH	MATERIAL		



GENERAL SHEET NOTES

US Army Corps
of Engineers®

DATE



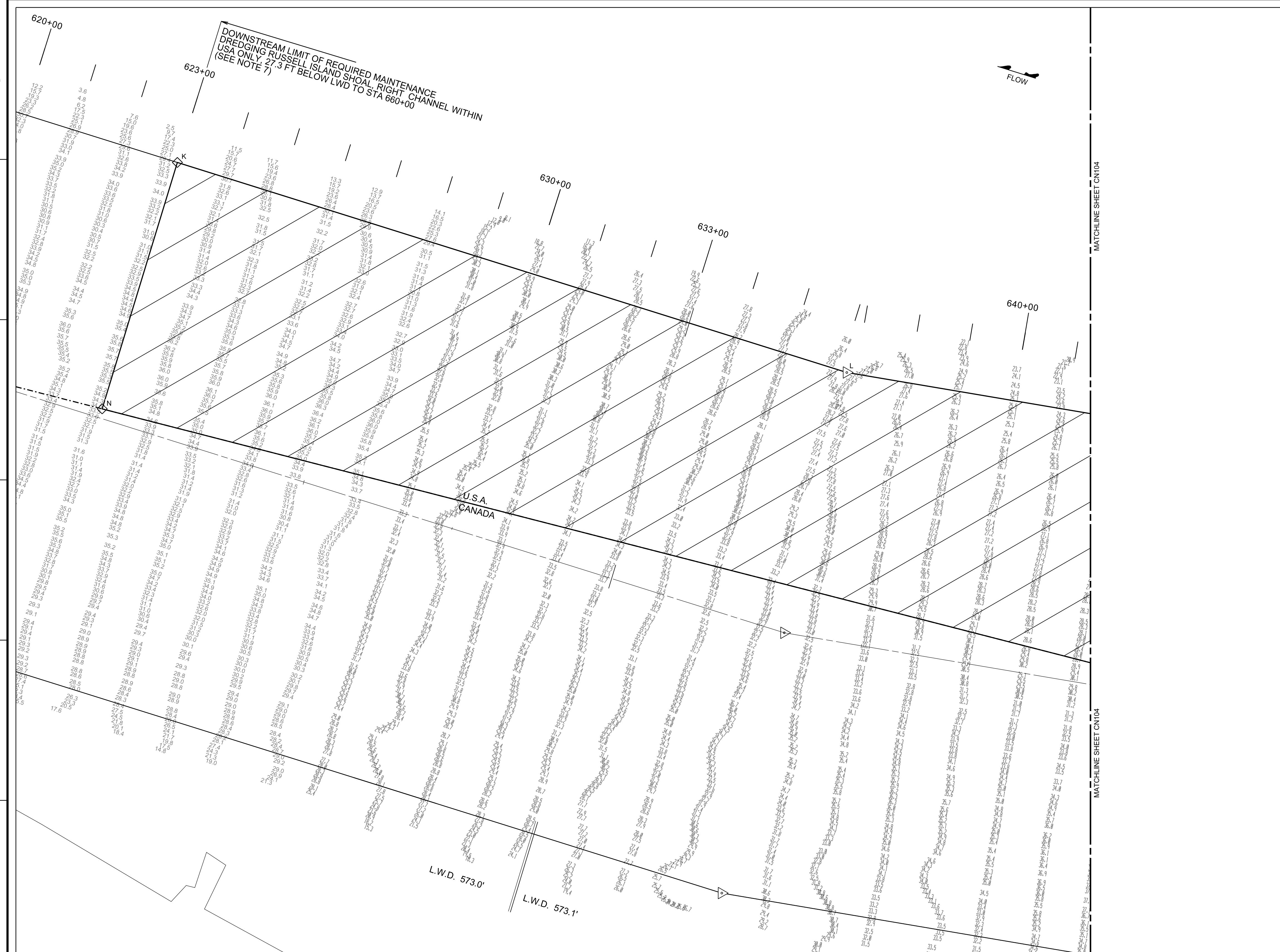
1 2 3 4 5 6 7 8 9 10

GENERAL SHEET NOTES

- THE INFORMATION DEPICTED ON THESE DRAWINGS REPRESENTS THE RESULTS OF AUTOMATED HYDROGRAPHIC SURVEYS MADE BY THE DETROIT AREA OFFICE ON 14-25 OCTOBER 2016 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE THAT TIME.
- WATER ELEVATIONS USED WERE OBTAINED FROM THE NOAA GAGES:
ST CLAIR POLICE, MI (#9014080) @ 01%
ALGONAC, MI (39014070) @ 99%
- POSITIONS WERE DETERMINED BY APPLANIX POS-MV4 W/DGPS.
- SOUNDINGS REPRESENT THE AVERAGE DEPTH MEASURED EVERY 10 FT ALONG SURVEY LINE.
- STATIONING REFERENCED TO 0+00 AT 373718.9 NORTHING AND 13574000.7 EASTING.
- L.W.D. IS SHOWN (IGLD85).
- REQUIRED MAINTENANCE DREDGING TO 27.3 FEET BELOW L.W.D. IS ENCLOSED BY THE PERIMETER DEFINED BY THE FOLLOWING COORDINATES:

PT	NORTHING	EASTING
K	411907.0	13620297.8
L	413160.5	13620691.0
M	415444.1	13621076.7
Q	415357.9	13621569.3
P	414080.1	13621353.4
N	411766.1	13620759.1

- DREDGING OUTSIDE THE BOUNDARIES OF THE UNITED STATES IS PROHIBITED.



A1 REQUIRED DREDGE AREA RUSSELL ISLAND SHOAL PLAN VIEW

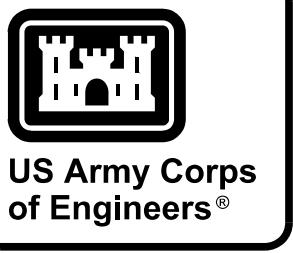
U.S. Army Corps of Engineers		DATE	
DESIGNED BY:	E. MALLBURG	ISSUE DATE:	23 APR 2019
DRAWN BY:		SOLICITATION NO.:	W91XK19B0010
CHECKED BY:		CONTRACT NO.:	
SUBMITTED BY:	T. SMITH	PROJECT NUMBER:	
SIZE:	FILENAME:	ANSID:	MARK
PHIL ROSS	FY19MD_CN103.dwg		
<p>U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT 477 MICHIGAN AVE DETROIT, MI 48226 VALVE ENGINEERING INCORPORATED IN THE STATE OF MICHIGAN</p>			
<p>ST. CLAIR COUNTY PORT HURON, MI ST. CLAIR RIVER FY19 MAINTENANCE DREDGING REQUIRED DREDGE AREA RUSSELL ISLAND SHOAL</p>			
<p>CN103</p>			

GENERAL SHEET NOTES

- THE INFORMATION DEPICTED ON THESE DRAWINGS REPRESENTS THE RESULTS OF AUTOMATED HYDROGRAPHIC SURVEYS MADE BY THE DETROIT AREA OFFICE ON 14-25 OCTOBER 2016 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- WATER ELEVATIONS USED WERE OBTAINED FROM THE NOAA GAGES:
ST CLAIR POLICE, MI (#9014080) @ 01%
ALGONAC, MI (39014070) @ 99%
- POSITIONS WERE DETERMINED BY APPLANIX POS-MV4 W/DGPS.
- SOUNDINGS REPRESENT THE AVERAGE DEPTH MEASURED EVERY 10 FT ALONG SURVEY LINE.
- 0.0 L.W.D. = 573.1 FEET (IGLD85).
- STATIONING REFERENCED TO 0+00 AT 373718.9 NORTHING AND 13574000.7 EASTING.
- REQUIRED MAINTENANCE DREDGING TO 27.3 FEET BELOW L.W.D. IS ENCLOSED BY THE PERIMETER DEFINED BY THE FOLLOWING COORDINATES:

PT	NORTHING	EASTING
K	411907.0	13620297.8
L	413160.5	13620691.0
M	415444.1	13621076.7
Q	415357.9	13621569.3
P	414080.1	13621353.4
N	411766.1	13620759.1

- DREDGING OUTSIDE THE BOUNDARIES OF THE UNITED STATES IS PROHIBITED.

US Army Corps
of Engineers®

DATE

SIZE:	FILENAME:	ANSI:	SCRIVER:	MARK:	DESCRIPTION:



LEGEND

REQUIRED MAINTENANCE
DREDGING AREA TO 27.3 FT
BELOW L.W.D.

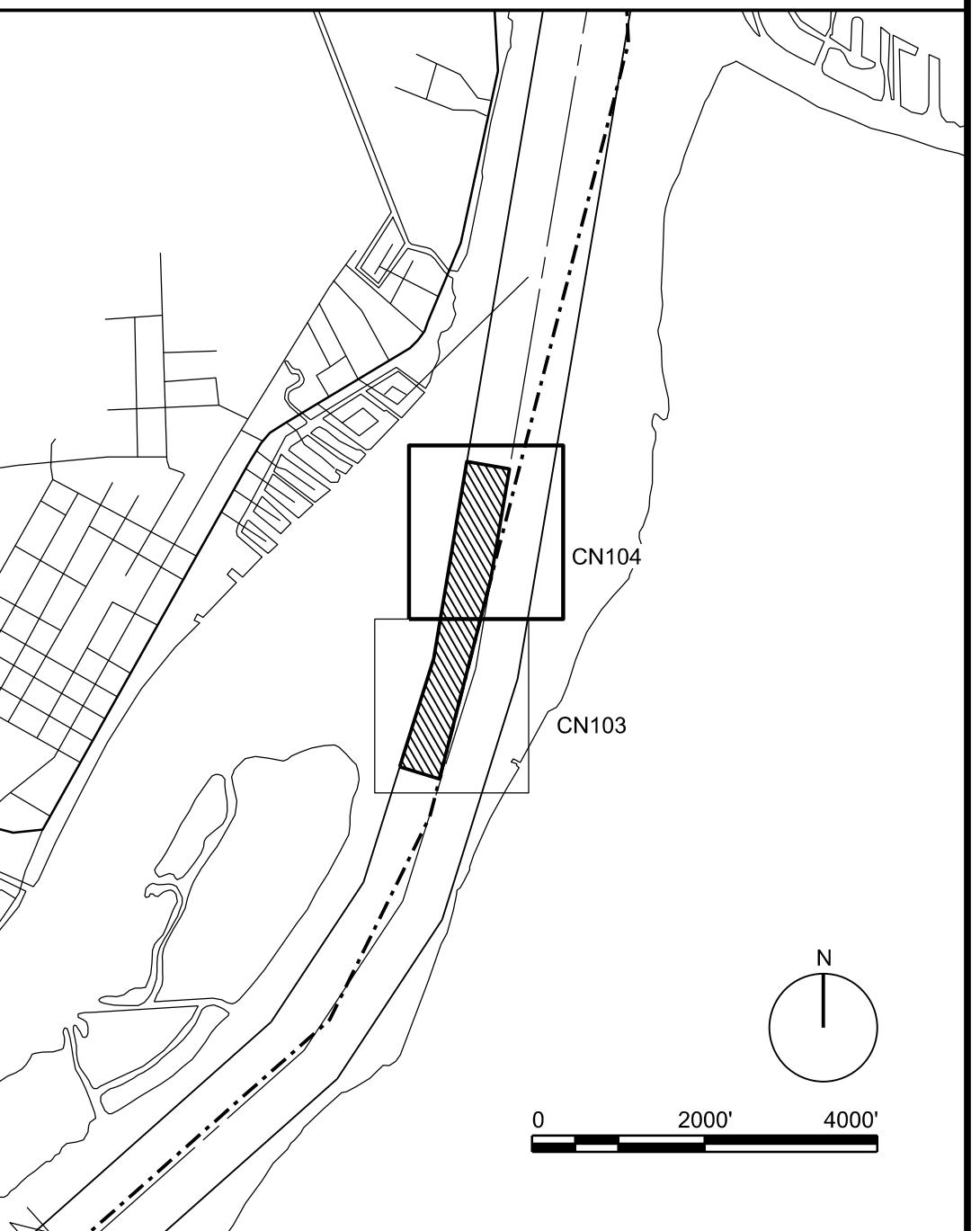
CHANNEL LINE

CHANNEL CENTER LINE

INTERNATIONAL BOUNDARY LINE

DREDGE AREA CONTROL POINT

SHEET KEY MAP

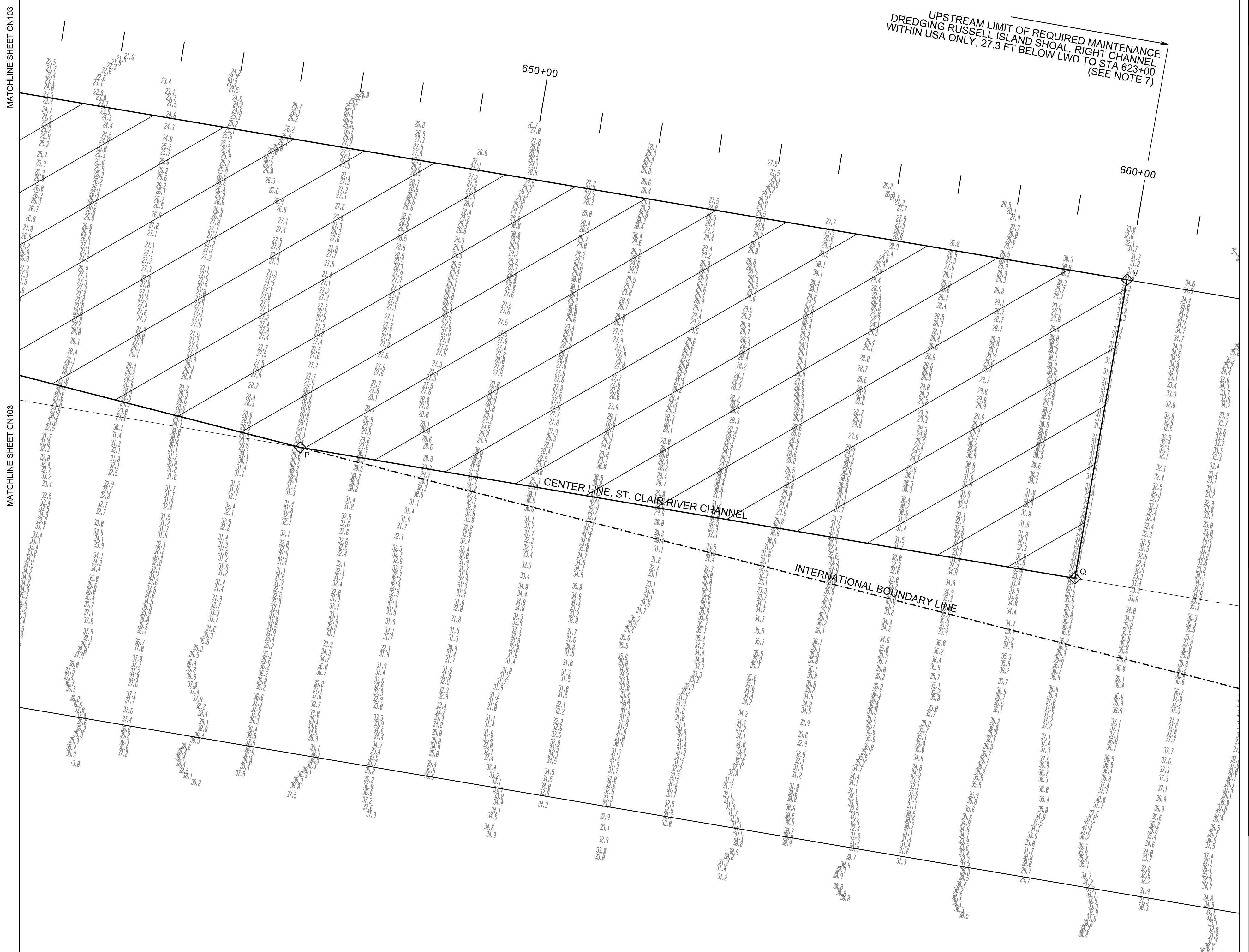


U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT 477 MICHIGAN AVE DETROIT, MI 48226	ISSUE DATE: 23 APR 2019
DRAWN BY: E. MALLURG	SOLICITATION NO.: W91XK19B0010
CHECKED BY: A. MASTERSON	CONTRACT NO.: W91XK19B0010
SUBMITTED BY: T. SMITH	PROJECT NUMBER: FY19MD CN104.dgn

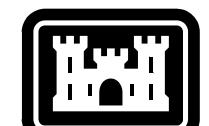
SHEET ID	
	CN104

MATCHLINE SHEET CN103

MATCHLINE SHEET CN103



GENERAL SHEET NOTES

US Army Corps
of Engineers®

- THE INFORMATION DEPICTED ON THESE DRAWINGS REPRESENTS THE RESULTS OF AUTOMATED HYDROGRAPHIC SURVEYS MADE BY THE DETROIT AREA OFFICE ON 15 OCTOBER 2015 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- WATER ELEVATION VALUES USED WERE OBTAINED FROM THE NOAA GAGE "FORT GRATIOT GAUGE, FORT GRATIOT, MI" (#9014098) AND REFERENCED TO IGLD 1985.
- POSITIONS WERE DETERMINED BY APPLANIX POS-MV4 W/DGPS CORRECTIONS, U.S.C.G. BEACON #38.
- SOUNDINGS REPRESENT THE MINIMUM DEPTH MEASURED OVER A 20 FT BY 20 FT AREA. VALUES ARE DISPLAYED AT THE CENTER OF EACH AREA.
- STATIONING REFERENCED TO 0+00 AT 555949.2 NORTHING AND 13644911.0 EASTING.
- 0.0 L.W.D. = 577.0 FEET (IGLD85).
- REQUIRED MAINTENANCE DREDGING TO 30 FEET BELOW L.W.D. IS ENCLOSED BY THE PERIMETER DEFINED BY THE FOLLOWING COORDINATES:

PT	NORTHING	EASTING
R	559642.5	13644452.8
S	562392.2	13644409.3
W	562398.5	13644809.1
V	559648.8	13644852.6

- OPTION 1 MAINTENANCE DREDGING TO 30 FEET BELOW L.W.D. IS ENCLOSED BY THE PERIMETER DEFINED BY THE FOLLOWING COORDINATES:

PT	NORTHING	EASTING
S	562392.2	13644409.3
T	562892.1	13644401.4
X	562898.4	13644801.2
W	562398.5	13644809.1

- OPTION 2 MAINTENANCE DREDGING TO 30 FEET BELOW L.W.D. IS ENCLOSED BY THE PERIMETER DEFINED BY THE FOLLOWING COORDINATES:

PT	NORTHING	EASTING
T	562892.1	13644401.4
U	563293.4	13644295.2
Y	563298.4	13644794.8
X	562898.4	13644801.2

LEGEND

REQUIRED MAINTENANCE
DREDGING AREA TO 30 FT
BELOW L.W.D.OPTION 1 MAINTENANCE
DREDGING AREA TO 30 FT
BELOW L.W.D.OPTION 2 MAINTENANCE
DREDGING AREA TO 30 FT
BELOW L.W.D.

CHANNEL LINE

DREDGE LIMIT LINE

CENTER LINE

INTERNATIONAL BOUNDARY LINE

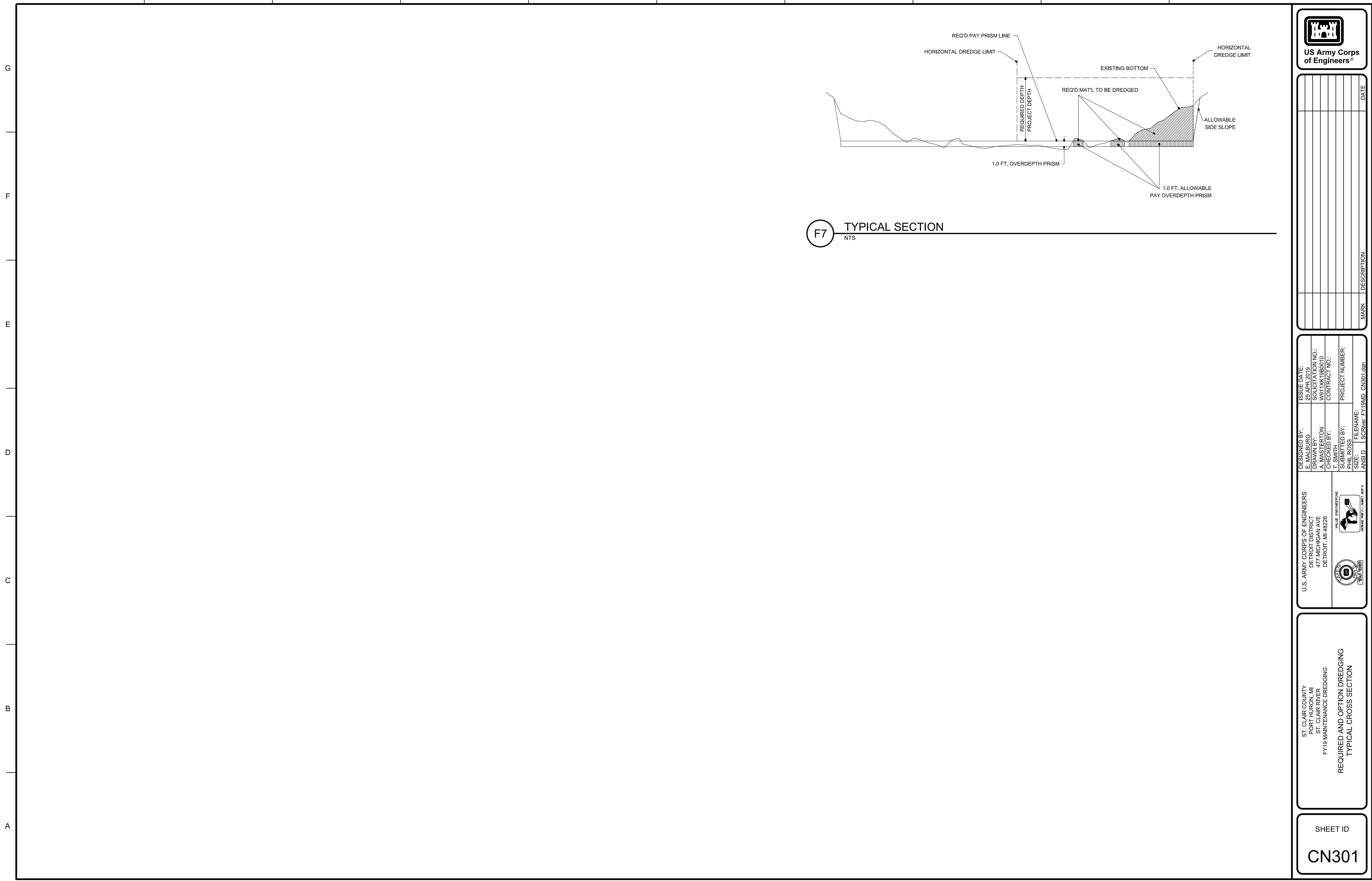
NAVIGATION LIGHT

DREDGE AREA CONTROL POINT

SHEET KEY MAP

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
477 MICHIGAN AVE
DETROIT, MI 48226DESIGNED BY:
E. MALLORG
DRAWN BY:
A.MASTERSON
CHECKED BY:
T. SMITH
SUBMITTED BY:
PHIL ROSS
FILENAME:
SCRIVER FY19MD CN106.dwg
SIZE:
ANSI-D
DATE:
25 APR 2019
SOLICITATION NO.:
W91XK19B0010
CONTRACT NO.:
PROJECT NUMBER:

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

GENERAL SHEET NOTES

1. DATE OF PHOTOGRAPHY 20 APRIL 2007.
2. HORIZONTAL: MICHIGAN STATE PLANE, SOUTH ZONE, NAD 83, US SURVEY FEET
3. THE FINAL HEIGHT OF DREDGED MATERIAL SHALL NOT EXCEED 1.0 FOOT BELOW THE TOP OF DIKES. PLACEMENT LOCATION SUBJECT TO COR APPROVAL.
4. THE CONTRACTOR SHALL EXAMINE THE EXISTING CONDITIONS OF THE DIKED DISPOSAL AREA PRIOR TO ITS USE. THERE ARE NO OFFLOADING FACILITIES. STEEL H-PILE MOORING DOLPHINS ARE AVAILABLE AS SHOWN.
5. PLACEMENT OF DREDGED MATERIAL IS LIMITED TO THE AREA SHOWN. COORDINATE WITH COR PRIOR TO START OF PLACEMENT OPERATIONS. PLACEMENT MUST OCCUR EAST OF THE LINE FORMED BY:

PT	NORTHING	EASTING
Z	414512.4	13591630.4
AA	413575.3	13591251.9

6. THE CONVEYANCE OF DREDGED MATERIAL INTO THE PLACEMENT AREA WILL BE BY HYDRAULIC METHOD ONLY.
7. SPREAD MATERIAL, CONSTRUCT DIVERSION DITCHES, OR OTHERWISE MANAGE DREDGED MATERIAL TO PREVENT PONDING AND MAINTAIN POSITIVE DRAINAGE TOWARD THE WEIR. DO NOT WINDROW MATERIAL. PLACEMENT OR MIGRATION OF DREDGE MATERIAL WITHIN 100 FEET OF THE WEIR IS PROHIBITED. IF MATERIAL IS OFFLOADED SUCH THAT WATER FLOW TO THE WEIR IS IMPEDED, CONTRACTOR WILL REMOVE MATERIAL.
8. INSTALL AND MAINTAIN WEIR BOARDS SUCH THAT 4 FEET MINIMUM FREEBOARD IS SUSTAINED AND DISCHARGE FROM THE CDF DOES NOT OCCUR. CONTACT GOVERNMENT IMMEDIATELY IF FREEBOARD BECOMES LESS THAN 4 FEET AND DISCHARGE IS REQUIRED. WEIR BOARD MAINTENANCE MAY INCLUDE REMOVAL AND REPLACEMENT OF DAMAGED, MISSING, OR ROTTED WEIR BOARDS.
9. CONTRACTOR WILL REPAIR, AT OWN EXPENSE AND TO COR SATISFACTION, ANY DAMAGE TO GOVERNMENT FACILITY CAUSED BY CONTRACTOR OPERATIONS. THE GOVERNMENT WILL INSPECT THE CDF PRIOR TO AND AFTER DREDGING OPERATIONS TO ENSURE THE SITE IS CLEAN AND HAS BEEN RESTORED TO EXISTING CONDITION.
10. ABILITY OF MATERIAL WITHIN THE CDF TO HANDLE EQUIPMENT LOADS OR PERSONNEL IS UNKNOWN. CONTRACTOR WILL MAKE ITS OWN INVESTIGATION AND DETERMINATION OF EXISTING CONDITIONS.



US Army Corps
of Engineers®

DATE



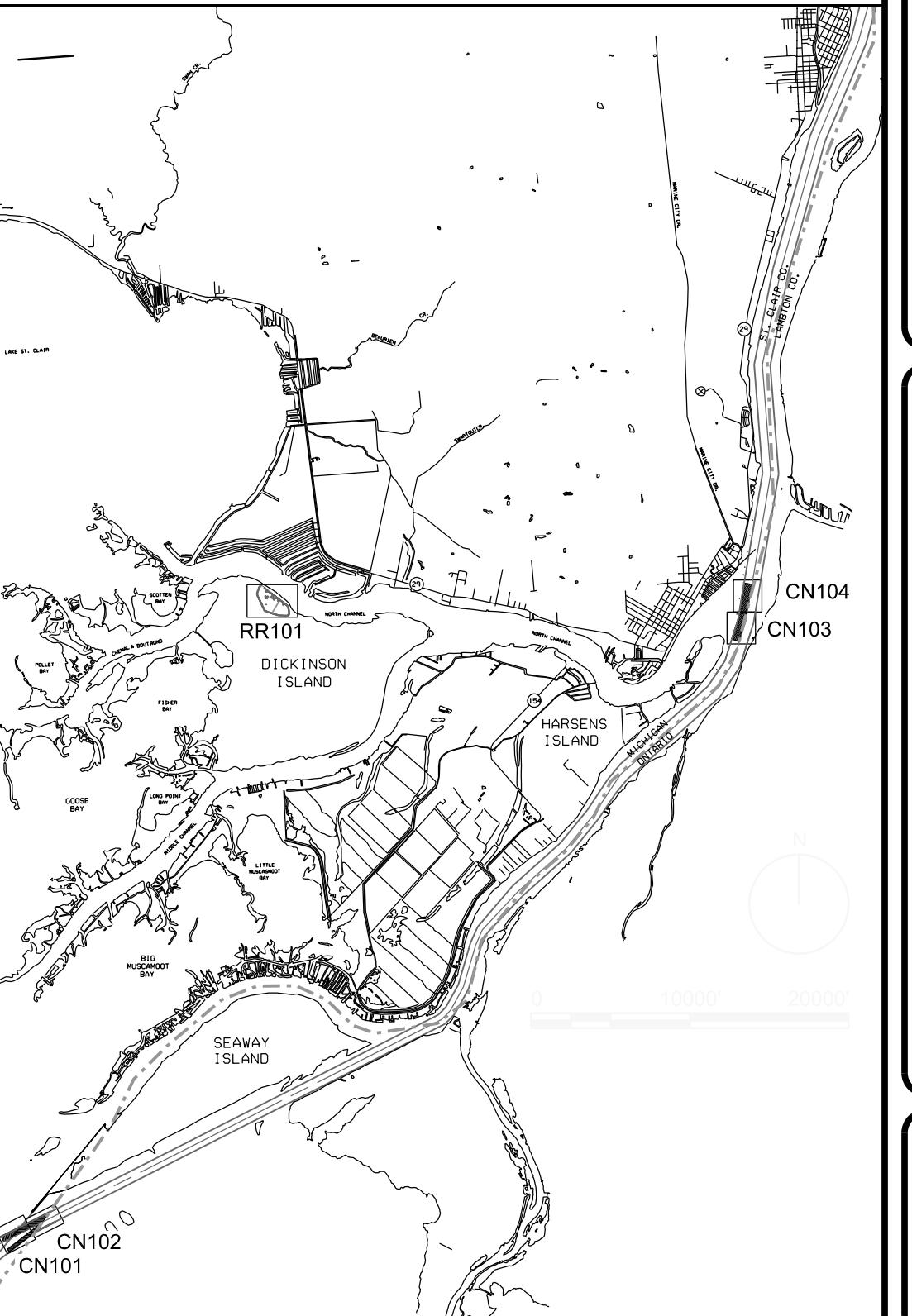
%PRODUCTION DATA 1%
%PRODUCTION DATA 2%

%PRODUCTION DATA 3% %PRODUCTION DATA 4%

LEGEND

- APPROXIMATE PLACEMENT AREA, NOT TO EXCEED 1 FOOT BELOW TOP OF DIKE
- DIKE CENTERLINE
- APPROXIMATE DOLPHIN LOCATION

SHEET KEY MAP



U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
477 MICHIGAN AVE
DETROIT, MI 48226
VALVE ENGINEERING
PHONE: (313) 223-6000
FAX: (313) 223-6000
E-MAIL: DETDET@USACE.DOD.MIL
ST. CLAIR COUNTY
PORT HURON, MI
ST. CLAIR RIVER
FY19 MAINTENANCE DREDGING
REQUIRED PLACEMENT AREA
DICKINSON ISLAND CDF WEST CELL
PLAN VIEW

SHEET ID
RR101

CERTIFIED FINAL - READY TO ADVERTISE