THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AS AMENDED BY SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

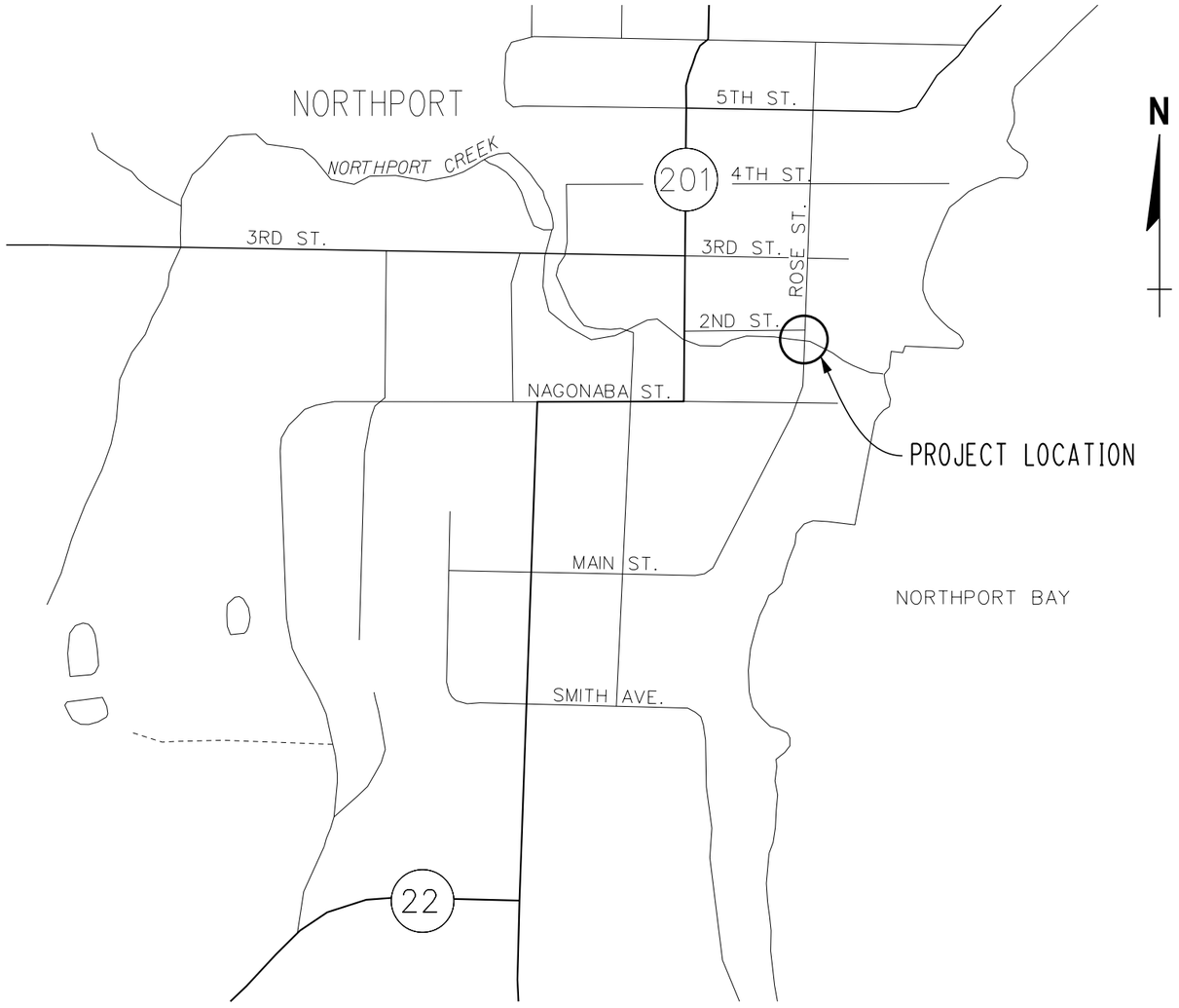
THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE MDOT LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS ON LOCAL AGENCY PROJECTS, 2017 EDITION, SECTION B: NEW CONSTRUCTION/RECONSTRUCTION (4R).

PLACING OF TEMPORARY TRAFFIC CONTROL ITEMS SHALL BE DONE IN ACCORDANCE WITH THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
THIS PROJECT SHALL BE OPEN TO LOCAL TRAFFIC THROUGHOUT CONSTRUCTION.
THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES,A ND SHALL BE RESPONSIBLE FOR CONSTRUCTION SIGNING WITHIN THE PROJECT LIMITS.

VILLAGE OF NORTHPORT

PLANS FOR IMPROVEMENTS

ROSE STREET BOX CULVERT



PLAN SHEET INDEX	
SHT NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL CROSS SECTIONS
3-5	PLAN AND PROFILE SHEETS
6	BOX CULVERT DETAILS
7	SOIL BORINGS

THESE PLANS WERE PREPARED FOR THE
VILLAGE OF NORTHPORT
BY

ERIC E. SEGUIN, P.E. — REGISTERED PROFESSIONAL ENGINEER
6201055666 — REGISTRATION NUMBER

PREIN & NEWHOF
100 E. CHAPIN STREET SUITE A
CADILLAC, MI 49601
(231) 468-3456

VILLAGE OF NORTHPORT

APPROVALS

RECOMMENDED FOR APPROVAL BY:

CHRIS HOLTON, DPW SUPERINTENDENT — DATE

PROJECT DESCRIPTION: CULVERT REMOVAL, HMA REMOVAL, CULVERT REPLACEMENT, ROAD DRAINAGE IMPROVEMENTS, CURB AND GUTTER, SIDEWALK AND NEW ROAD CONSTRUCTION

811 MISS DIG System, Inc. 1-800-482-7171

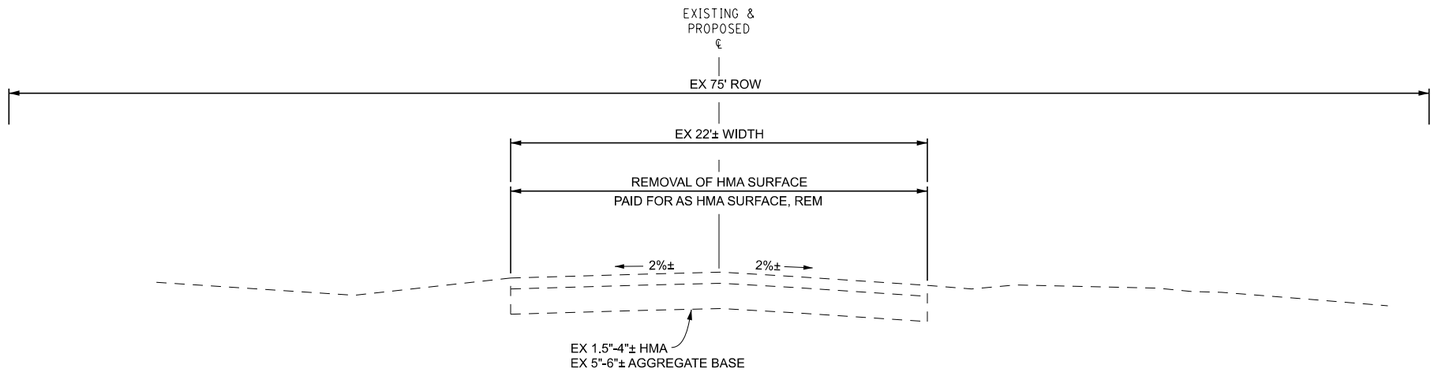
Prein&Newhof Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

NO SCALE

DATE: 4/15/2024
DESIGN: SEGUIN
P&N JN: 2210486

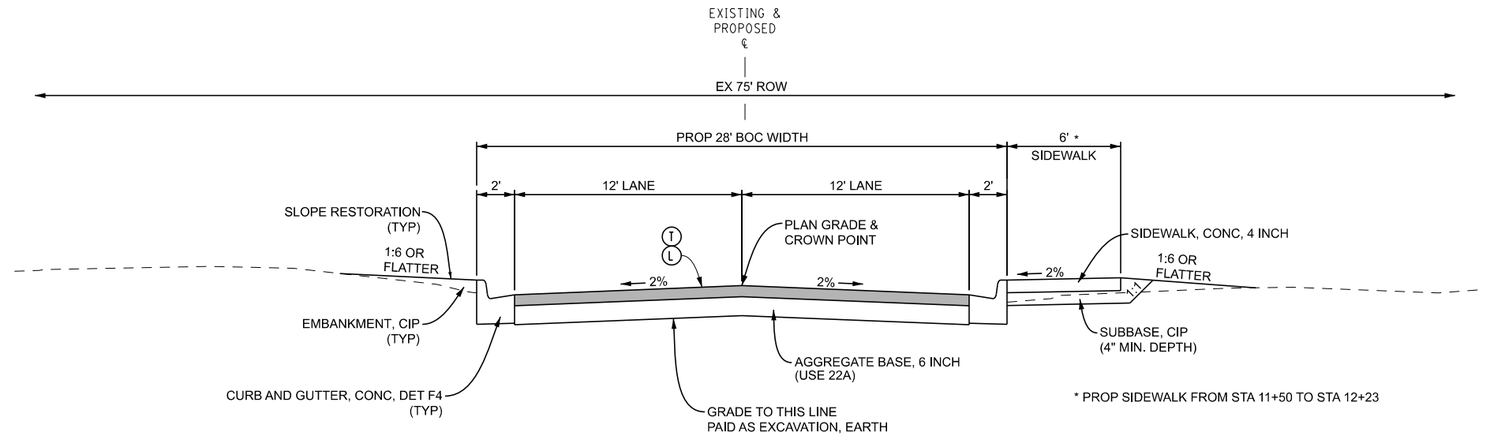
ROSE STREET OVER NORTHPORT CREEK
TITLE SHEET

SHEET 1



EXISTING TYPICAL SECTION

SECTION APPLIES: POB STA 11+14 TO POE STA 13+16



PROPOSED TYPICAL SECTION

SECTION APPLIES: POB STA 11+14 TO POE STA 13+16

HMA APPLICATION ESTIMATE

IDENT. No.	ITEM	RATE: lbs/syd	PERFORMANCE GRADE	REMARKS
T	HMA, 4EL	165	58-28	TOP COURSE, AWI=260 MIN.
L	HMA, 4EL	165	58-28	LEVELING COURSE
APP1	HMA APPROACH	385	58-28	TOP COURSE & LEVELING COURSE HMA, 4EL FOR INTERSECTION APPROACHES
	HAND PATCHING	VAR	58-28	HMA, 4EL (MATCH EX HMA THICKNESS: AS DIRECTED BY ENGINEER)
	HMA BOND COAT	0.05-0.15 gal/syd		FOR INFORMATION ONLY

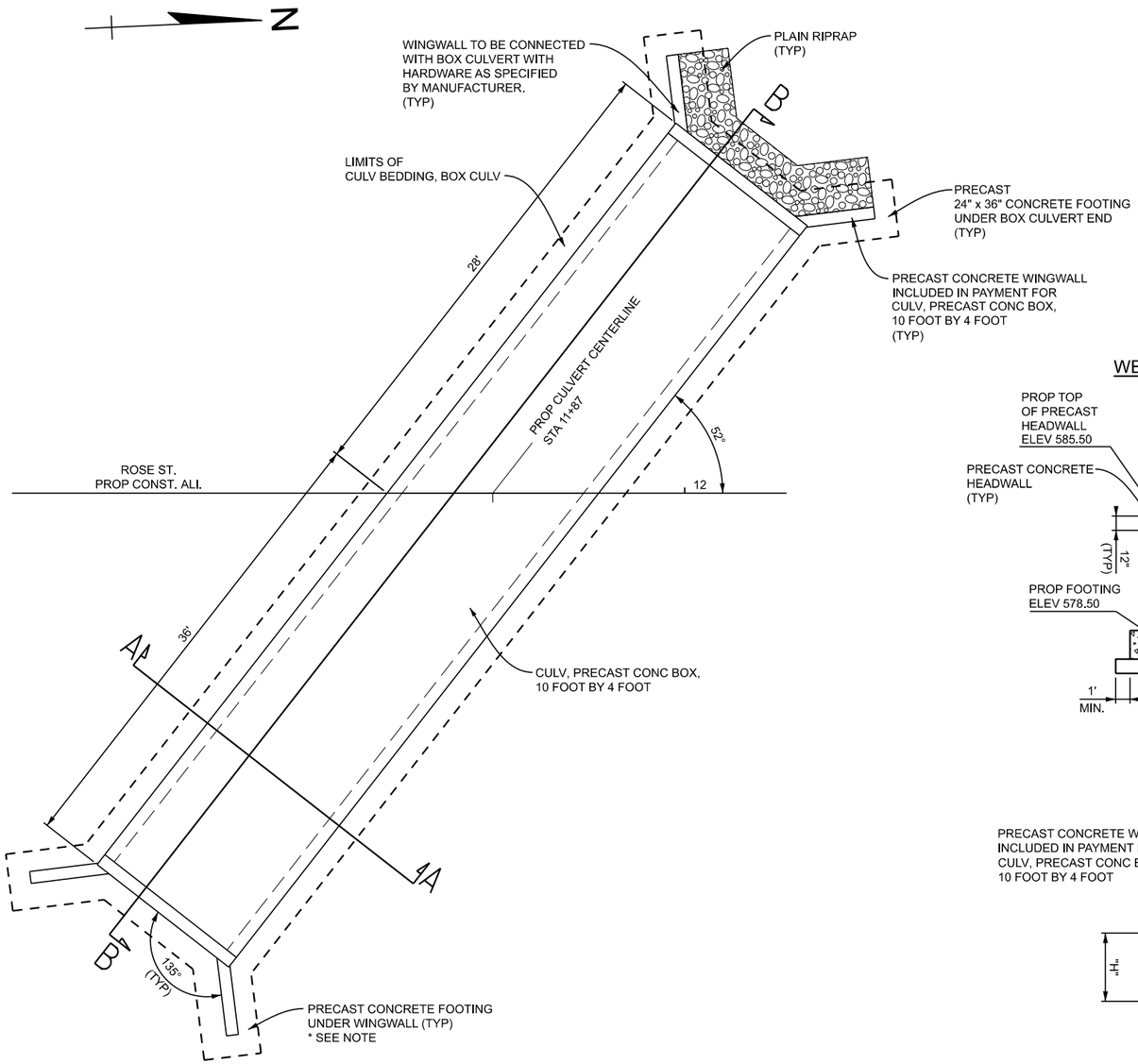
Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Lat ory

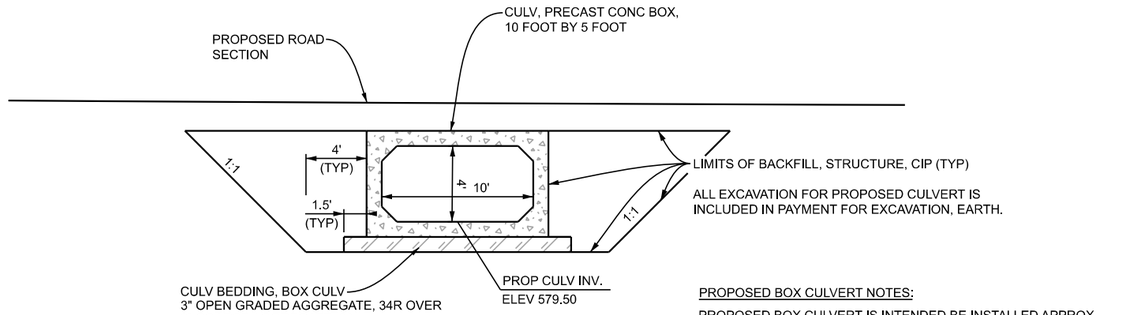
0 HORZ. (FT) 8

DATE: 4/15/2024
DESIGN: SEGUIN
P&N JN: 2210486

ROSE STREET OVER NORTHPORT CREEK
TYPICAL CROSS SECTIONS

SHEET
2





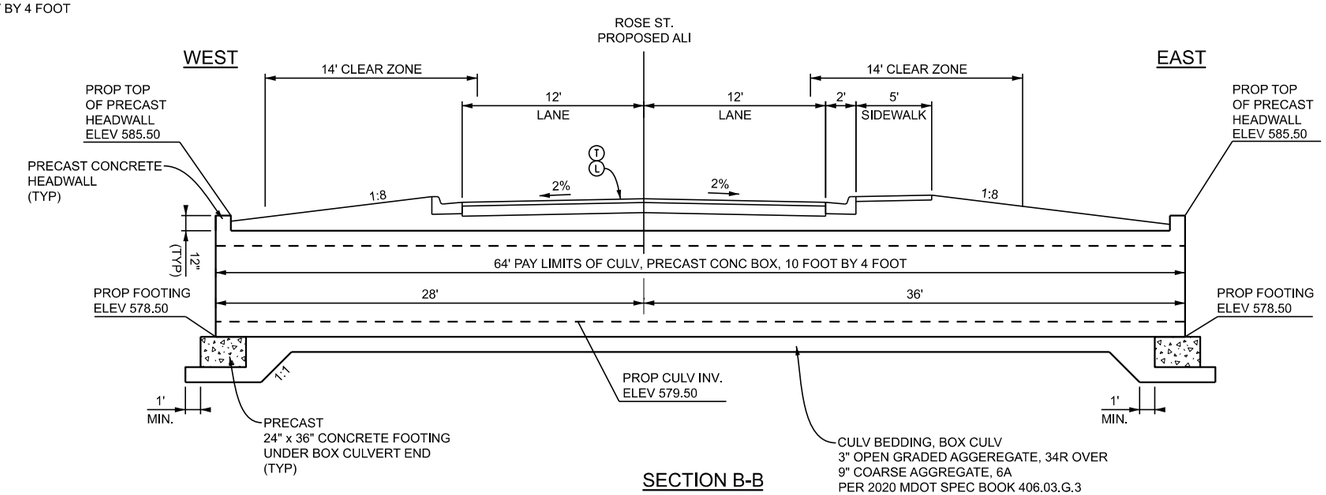
SECTION A-A

PROPOSED BOX CULVERT NOTES:

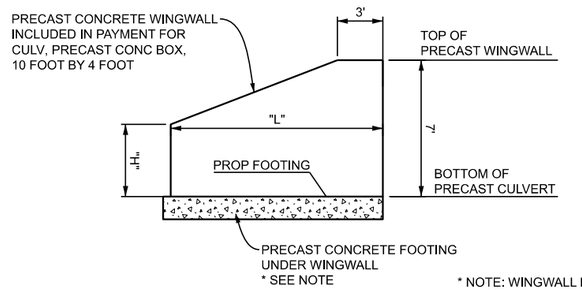
PROPOSED BOX CULVERT IS INTENDED BE INSTALLED APPROX 1.0 FT MIN. BELOW THE EXISTING NATURAL DITCH BOTTOM (APPROX DITCH BOTTOM ELEV 580.5)

THE OUTER 3 SEGMENTS OF BOX CULVERT SHALL BE MECHANICALLY CONNECTED TO PREVENT SEPARATION ON THE ENDS.

BOX CULVERT TO BE DESIGNED TO HL-93 LOAD RATING.



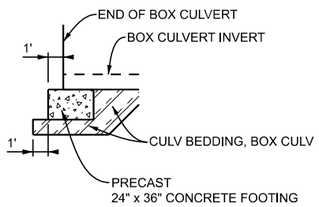
SECTION B-B



WINGWALL DETAIL

WINGWALL	ANGLE FROM CULVERT	"L" WALL LENGTH	"H" END HEIGHT
NORTH WEST	135°	8'	4'
NORTH EAST	135°	8'	4'
SOUTH WEST	135°	8'	4'
SOUTH EAST	135°	8'	4'

* NOTE: WINGWALL FOOTINGS/ANCHORING SHALL BE PER SUPPLIER DESIGN AND APPROVED BY ENGINEER. COST INCLUDED IN CULV, PRECAST CONC BOX, 10 FOOT BY 5 FOOT



BOX END FOOTING DETAIL

BM#1
NAIL/CAP IN POWER POLE
ELEV: 587.06
STA 12+71, 19' LT

CP#1
1/2" IRON W/ P&N CONTROL CAP
N=663804.83
E=19363122.84
ELEV: 586.40
STA 13+10, 15' LT

SECOND STREET

SECTION 34
T31N ,R11W
VILLAGE OF NORTHPORT

EX 66' ROW

N

METAL BRICK, LLC.
042-450-025-00

BARBARA J. CHARPENTIER TRUST
042-450-002-00

PAMELA C. LEONARD
042-450-026-00

WILLIAM J. & KATHLEEN BRENDEL TRUST
042-450-030-00

POB STA 11+14

POB STA 13+16

CAUTION - CRITICAL UTILITY

HAZARDOUS OR FLAMMABLE MATERIAL

EX 8" SAN

EX 12" STM

EX SIDEWALK

EX 8" SAN FORCE MAIN

EX POSTS & CABLES

EX HEADWALLS (TYP)

EX 48" CMP

EX 10" SAN

EX 75' ROW

EX 45' ROW

OLD 50' R.R. ROW

PC 10+81.67

PT 11+12.13

HPI 10+99.91

POT 12+47.81

47'

N02°39'37"E

N01°19'52"E

11

12

13

GRAND TRAVERSE BAND OF OTTAWA & CHIPPEWA INDIANS

VILLAGE OF NORTHPORT
042-150-007-00

EX 66' ROW

NOTE:
VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITIES BEFORE CONSTRUCTION. RELOCATE AS NECESSARY.

REMOVAL QUANTITIES THIS SHEET

50	Cyd	Excavation, Earth
805	Syd	HMA Surface, Rem
10	Syd	Sidewalk, Rem
1	LSUM	Structures, Rem (Posts, Cable, Headwalls)
1	Ea	Culv, Rem, 24 inch to 48 inch
30	Ft	Sewer, Rem, Less than 24 inch

SECTION 34
T31N ,R11W
VILLAGE OF NORTHPORT

Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

0 HORZ. (FT) 20

DATE: 4/15/2024
DESIGN: SEGUIN
P&N JN: 2210486

ROSE STREET OVER NORTHPORT CREEK
POB STA 11+14 TO POE STA 13+16
REMOVAL SHEET

SHEET 3

BM#1
NAIL/CAP IN POWER POLE
ELEV: 587.06
STA 12+71, 19' LT

CP#1
1/2" IRON W/ P&N CONTROL CAP
N=663804.83
E=19363122.84
ELEV: 586.40
STA 13+10, 15' LT

SECTION 34
T31N ,R11W
VILLAGE OF NORTHPORT

SECOND STREET

EX 66' ROW

N

BARBARA J. CHARPENTIER TRUST
042-450-002-00

PAMELA C. LEONARD
042-450-026-00

METAL BRICK, LLC.
042-450-025-00

WILLIAM J. & KATHLEEN BRENDEL TRUST
042-450-030-00

STA 11+87
PLACE 64' OF 10' X 4' PRECAST BOX CULVERT
WITH PRECAST WING WALLS
SEE BOX CULVERT DETAIL SHEET

64 Ft Culv, Precast Conc Box, 10 foot by 4 foot
15 Cyd Culv Bedding, Box Culv
30 Syd Riprap, Plain
20 Cyd Backfill, Structure, CIP

POB STA 11+14

POB STA 13+16

CAUTION - CRITICAL UTILITY

HAZARDOUS OR FLAMMABLE MATERIAL

EX 8" SAN

EX 12" STM

PROP 12" STM

ADJ-K

ADJ-G

ADJ-Q

ADJ

(2)

PROP CONC SPILLWAY

20'

25' TAPER

R 25'

R 15'

47'

MATCH EX

PC 10+87.67

PT 11+12.13

POT 12+47.81

EX 8" SAN FORCE MAIN

EX 10" SAN

12' LANE

SAWCUT

N02°39'37"E

N01°19'52"E

11

12

13

64' PROPOSED 10'X4' CONCRETE BOX CULVERT

EX 75' ROW

EX 45' ROW

HPI 10+99.91

OLD 50' R.R. ROW

30'

PROPOSED
PRECAST CONCRETE HEADWALLS
(TYP)

GRAND TRAVERSE BAND
OF OTTAWA & CHIPPEWA
INDIANS

VILLAGE OF NORTHPORT
042-150-007-00

+50

PROP 5' SIDEWALK
(TO BE COORDINATED WITH MARINA PROJECT)

NOTE:
VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITIES BEFORE CONSTRUCTION. RELOCATE AS NECESSARY.

CONSTRUCTION QUANTITIES THIS SHEET

100	Cyd	Embankment, CIP
495	Syd	Aggregate Base, 6 inch
85	Ton	HMA, 4EL
360	Ft	Curb and Gutter, Conc, Det F4
400	Sft	Sidewalk, Conc, 4 inch
200	Syd	Slope Restoration
300	Syd	Approach, Cl I, 6 Inch
50	Ton	HMA Approach
30	Ft	Curb Ramp Opening, Conc
230	Sft	Curb Ramp, Conc, 6 inch
30	Ft	Detectable Warning Surface, Cast Iron
2	Ea	Gate Box, Adj, Special
4	Ea	Dr Structure Cover, Adj, Case 1
2	Ea	Dr Structure Cover, Type Q - EJ SELFLEVEL
1	Ea	Dr Structure Cover, Type K
1	Ea	Dr Structure Cover, Type G
1	Ea	Dr Structure Cover, Type B
1	Ea	Dr Structure, 48 inch dia
32	Ft	Sewer, Cl A, 12 inch, Tr Det A

SECTION 34
T31N ,R11W
VILLAGE OF NORTHPORT

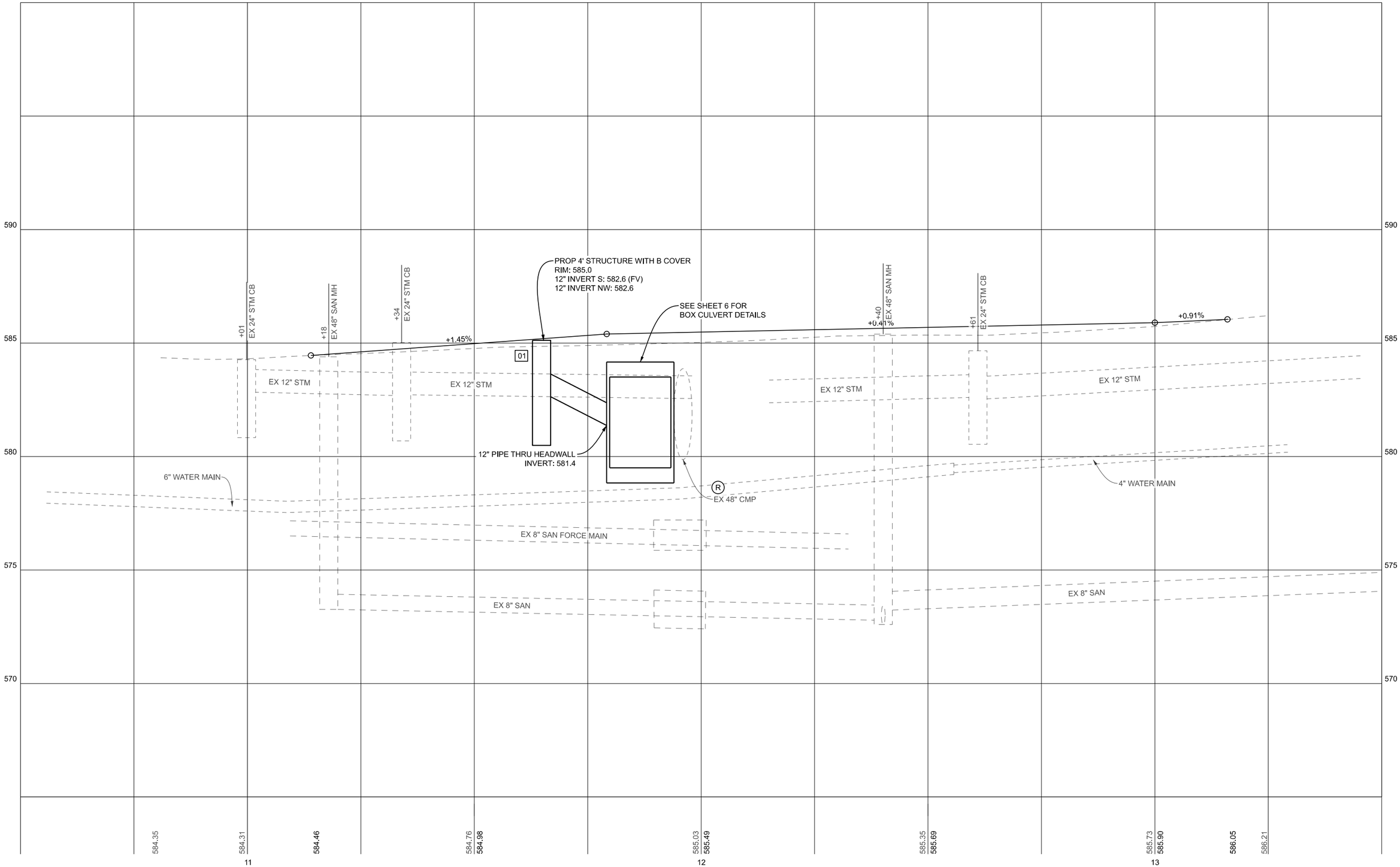
Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

0 HORZ. (FT) 20

DATE: 4/15/2024
DESIGN: SEGUIN
P&N JN: 2210486

ROSE STREET OVER NORTHPORT CREEK
POB STA 11+14 TO POE STA 13+16
CONSTRUCTION SHEET

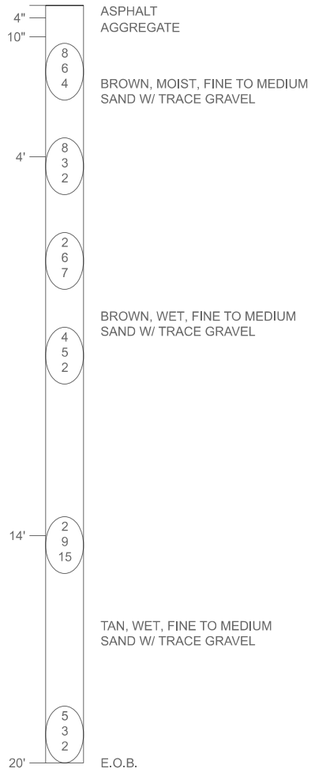
SHEET 4



	Prein&Newhof Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory	0 VERT. (FT) 4 / 0 HORZ. (FT) 20	DATE: 4/15/2024	ROSE STREET OVER NORTHPORT CREEK	SHEET
			DESIGN: SEGUIN	POB STA 11+14 TO POE STA 13+16	
			P&N JN: 2210486	PROFILE SHEET	5

SOIL BORING SB-1

STA , ' LT OF CONST ALIGN
GROUND SURFACE ELEVATION:



BORING DATE: 4/8/21
WATER DURING DRILLING: 3.5'

NOTE:

THE SOIL BORING LOGS REPRESENT POINT INFORMATION.
NO INFERENCE SHOULD BE MADE THAT SUBSURFACE OR PAVEMENT CONDITIONS ARE THE SAME AT OTHER LOCATIONS.