STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	A.1

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

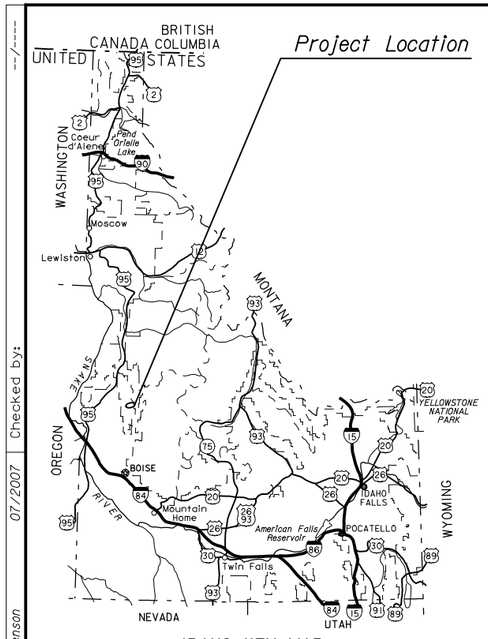
PLANS FOR PROPOSED PROJECT

ID PFH 22–1(11)

CASCADE – WARM LAKE ROAD

BOISE NATIONAL FOREST
VALLEY COUNTY
IDAHO

LENGTH 21.565 KILOMETERS



IDAHO KEY MAP

TYPE OF CONSTRUCTION:

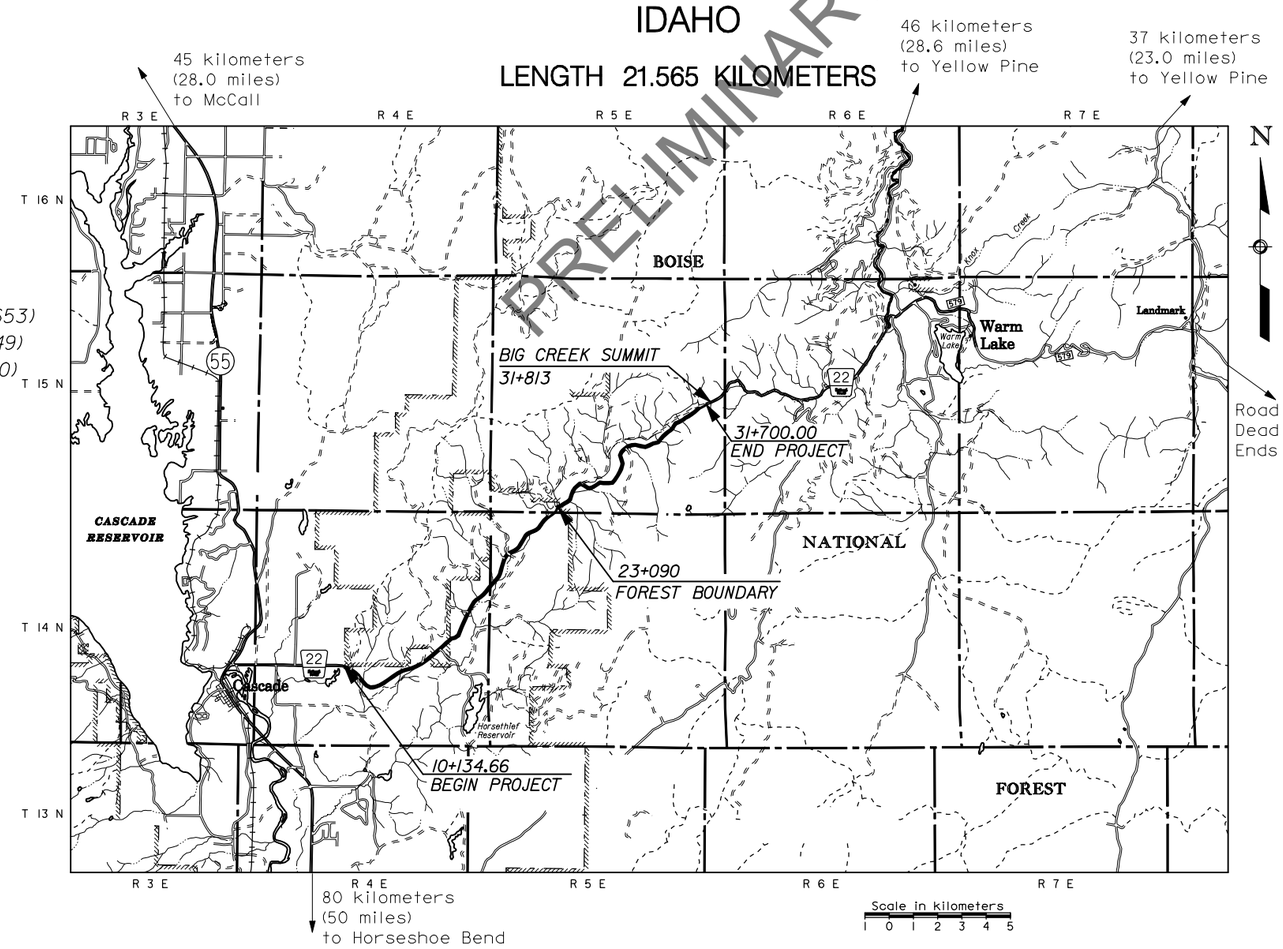
Subexcavation, Base, Drainage, and Paving

DESIGN DESIGNATION:

ADT (2005)	341
ADT (2025)	408
T	19%
V	50 km/h (10+134.66 - 16+653)
	100 km/h (16+653 - 22+849)
	50 km/h (22+849 - 31+700)
e (max)	0.060

SPECIFICATION:

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-03, Metric Units



PRELIMINARY

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A.3 VICINITY MAP

B. SUMMARIES
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C.4-6 SUBEXCAVATION DETAILS

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RECOMMENDED:

_____ DATE _____
Project Manager,
Western Federal Lands Highway Division

APPROVED:

_____ DATE _____
Director, Project Delivery,
Western Federal Lands Highway Division

FEDERAL LANDS HIGHWAY
Metric
COMMITMENT TO EXCELLENCE

PLANS PREPARED BY
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION
VANCOUVER, WASHINGTON

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Curtis Jorgenson | 07/2007 | Checked by: | Designed by:

STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(1)	A.2

Δ	total central angle
Δc	curve central angle
Ø	diameter
θs	spiral central angle
abut.	abutment
ADT	average daily traffic
AH	ahead
appr.	approach
BK	back
BM	bench mark
BP	balance point
br.	bridge
brg.	bearing
cc or c. to c.	center to center
℄	centerline
clr.	clear
CMP	corrugated metal pipe
col.	column
conc.	concrete
conn.	connection
constr. jt.	construction joint
cont.	continuous
CS	point of curve to spiral
ctrs.	centers
culv.	culvert
D	diameter
DHV	design hourly volume
dia.	diameter
diag.	diagonal
diaph.	diaphragm
dist.	distance
drwg(s).	drawing(s)
E	east
e	superelevation rate
El. 94.061 m	elevation with number
elev.	elevation
emb.	embankment
EP	edge of pavement
EQ or eq.	equation
ER	edge of road
EW	edge of water
exc.	excavation
exp. jt.	expansion joint
fin.	finish
flg.	flange
ftg.	footing
ga.	gage (gauge)
galv.	galvanized
hdwl.	headwall
hex.	hexagon
HW	high water
ID	inside diameter
jt.	joint
K.P.	kilometer post
L	length of curve
lam.	lamination
lat.	latitude
long.	longitudinal
LPSM	lump sum
Ls	length of spiral
lt. or LT	left
LW	low water
M.L.	main line
M.P.	mile post
m2	square meter
m3	cubic meter
matl.	material
max.	maximum
min.	minimum
mon.	monument
N	north
NC	normal crown
o. c.	on center
o. to o.	out to out
OD	outside diameter
OG	original ground
PC	point of curve
PCC	point of compound curve
PCS	point of curve to spiral
PI	point of intersection
pl.	plate
POC	point on curve
POS	point on spiral
POT	point on tangent
PS	point of tangent to spiral
PSC	point of spiral to curve
PST	point of spiral to tangent
PT	point of tangent
pvmt.	pavement
R	radius
R.	range
R/W	right-of-way
rdwy.	roadway
reinf.	reinforcement
reqd.	required
rt. or RT	right
rte.	route
S	south
SADT	seasonal average daily traffic
SC	point of spiral to curve
sec.	section
shldr.	shoulder
slry	slurry unit
spa.	spacing, spaces or spaced
SRS	point of spiral to reverse spiral
SS	point of spiral to spiral (no curve)
ST	point of spiral to tangent
Sta.	station
std.	standard
stgr.	stringer
stiff.	stiffener
struc.	structural
STS	point of spiral to tangent spiral
sym.	symmetrical
T	tangent distance
T.	township
TBM	temporary bench mark
thd.	thread
TS	point of tangent to spiral
Ts	tangent distance (spiraled curve)
typ.	typical
V	design speed
vph	vehicles per hour
VPI	vertical point of intersection
W	west

		EXISTING	PROPOSED
NATIONAL BOUNDARY			
STATE BOUNDARY			
COUNTY BOUNDARY			
CITY BOUNDARY			
TOWNSHIP or RANGE LINE			
SECTION LINE			
¼ SECTION LINE			
1/16 SECTION LINE			
NATIONAL PARK or FOREST BOUNDARY			
PROPERTY LINE		P/L	
RIGHT-OF-WAY LINE	EXISTING	R/W	
	PROPOSED	R/W	
RIGHT-OF-WAY LINE with MONUMENT	EXISTING	R/W	
	PROPOSED	R/W	
EASEMENT (Permanent; Non-Permanent)		P/E C/E	
SLOPE STAKE	TOP OF CUT		
	TOE OF FILL		
	TRANSITION		
ROADWAY, EXISTING			
RAILROAD	SINGLE TRACK		
	MULTIPLE TRACK		
WATTLE			
SILT FENCE			
TRAIL			
INTERMITTENT DRAINAGE and SMALL CREEK			
LARGE CREEK/RIVER			
LAKE, POND or RESERVOIR; MARSHLAND			
SPRING			
TREELINE; TREE			
MATERIAL SOURCE			
		FOUND	PROJECTED
SECTION CORNER		36 31 1 6	36 31 1 6
¼ SECTION CORNER		15 22	15 22
1/16 SECTION or PROPERTY CORNER			
PROPERTY CORNER		●	No Symbol
PARCEL NUMBER		No Symbol	400

NOTE:

1. Other symbols used in the plans will be shown in a legend on the appropriate plan sheet.
2. Dimensions in this plan set are in millimeters unless otherwise noted.

		EXISTING	PROPOSED
NORTH ARROW		N	
FENCE			
GATE with FENCE			
CATTLEGUARD			
GUARDRAIL			
SIGNS	Post mounted, single		
	Post mounted, double		
	Portable	No Symbol	
RETAINING WALL			wall face
POWER POLE UTILITIES P=power, T=telephone		P	P
UNDERGROUND UTILITIES G=gas, O=oil, P=power, SA= sanitary sewer, SS=storm sewer, T=telephone, W=water		P	P
SUPPORT POLE with ANCHOR			
TELEPHONE BOOTH or PEDESTAL		TB or TP	TB or TP
STREET LIGHT			
BRIDGE			
PIPE CULVERT (arrow shows flow)			
PIPE CULVERT with END SECTION			
PIPE CULVERT with HEADWALL			
BOX CULVERT			
CULVERT with DROP INLET			
UNDERDRAIN		UD	UD
CONTROL POINT		CP 12345	No Symbol
SURVEY MONUMENT		▲	No Symbol
HUB & TACK		⊙	No Symbol
SPOT ELEVATION		x EL. 1234.56 ft	No Symbol
COORDINATE GRID TICK		N m	No Symbol
BUILDING			
BORING LOCATION			No Symbol
RIPRAP		No Symbol	

PRELIMINARY

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

PLAN SYMBOLS AND ABBREVIATIONS

DETAIL APPROVED FOR USE 11/2001

REVISED: 9/2005 1/2007 6/2007

DETAIL WM101-1A

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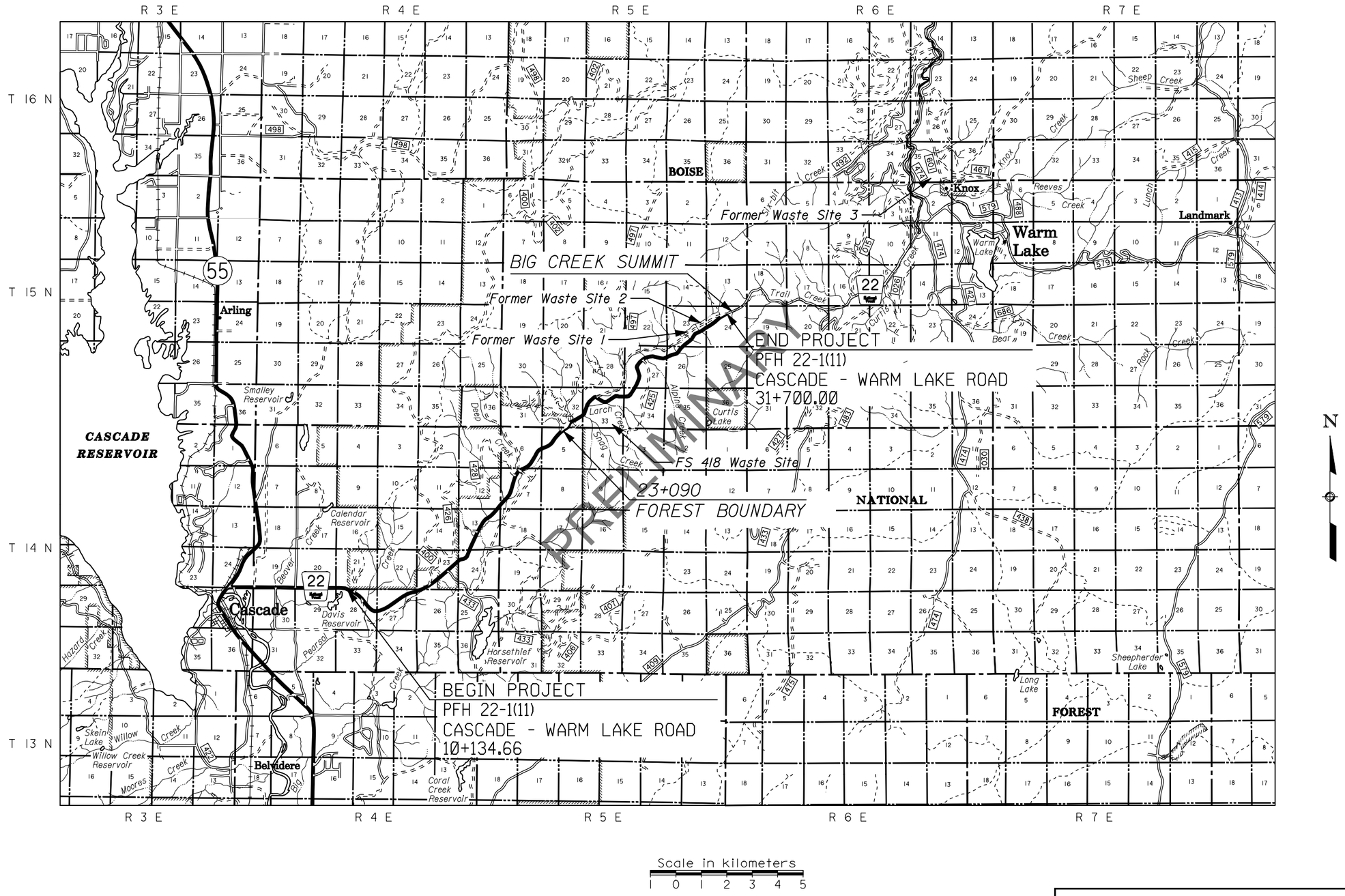

VICINITY MAP

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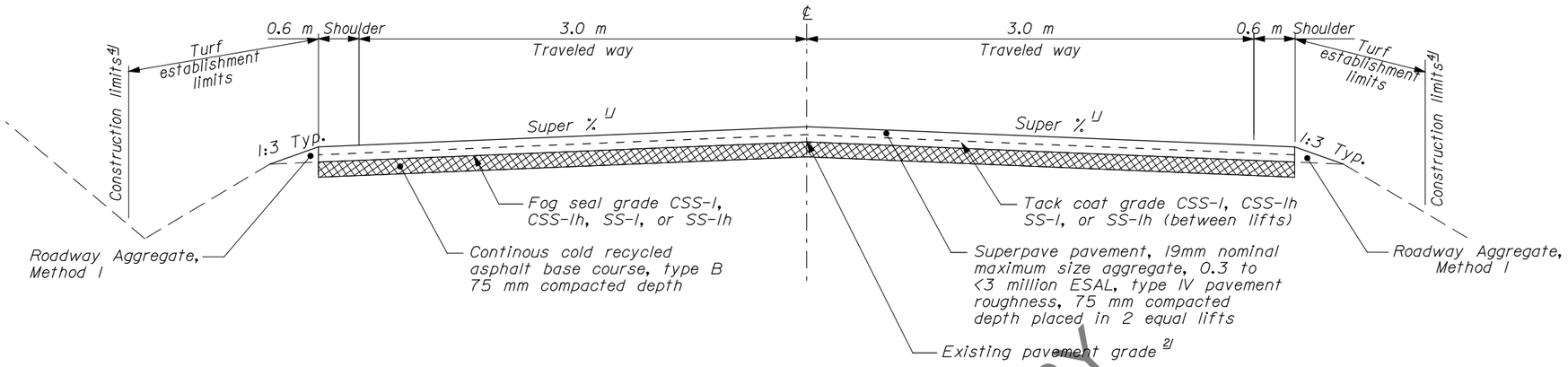
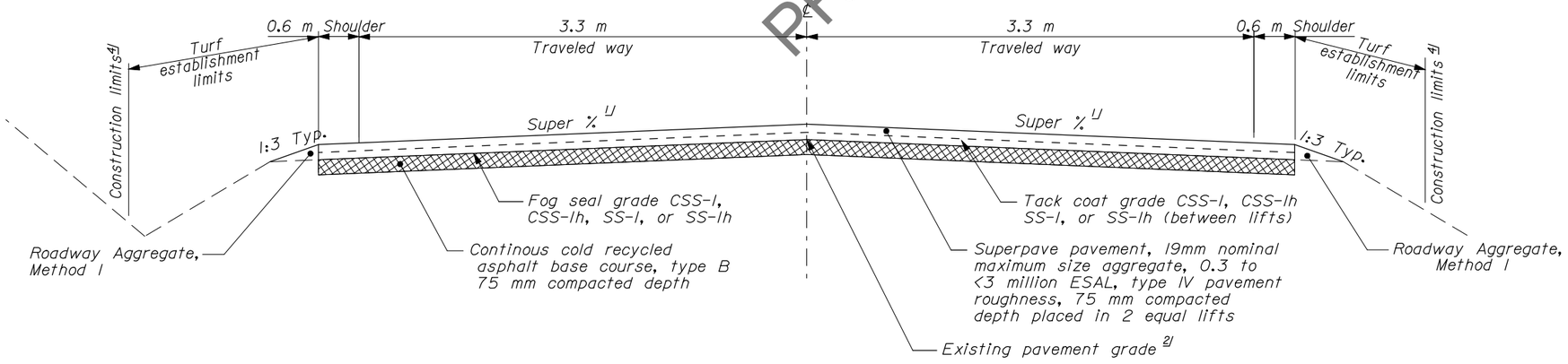
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	C.3



TYPICAL SECTION NO. 1

10+134.66 to 24+190 3/

PRELIMINARY



TYPICAL SECTION NO. 2

24+200 3/ to 31+700

NOTE:

1. See Sheet D.3 and D.18 for connection details.
2. Existing shoulder width varies 0.4 to 1.2 m. Recycle the existing asphalt pavement to full width.

FOOTNOTE:

1/ Match existing superelevation or crown.

2/ Top of recycled aggregate course.

3/ Transition traveled way width from 3.0 m to 3.3 m from 24+190 to 24+200.

4/ Construction limit is at toe of roadway aggregate, except in subexcavation areas where it is at the outside edges of subexcavation.

TYPICAL SECTIONS

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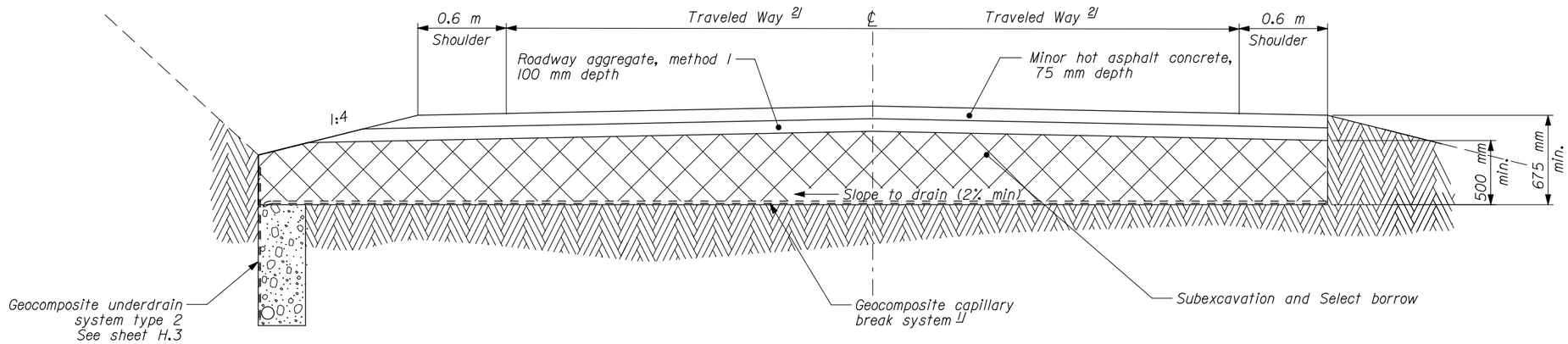
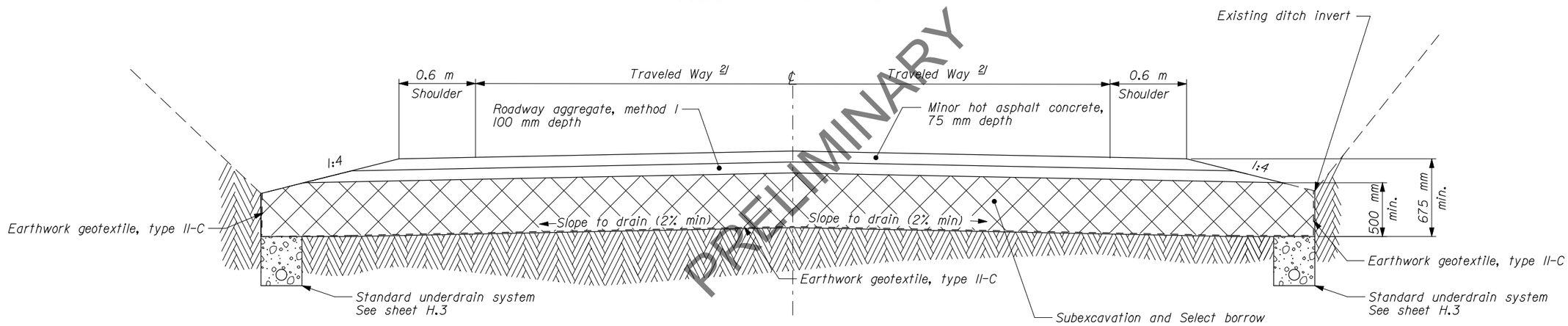
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	C.4

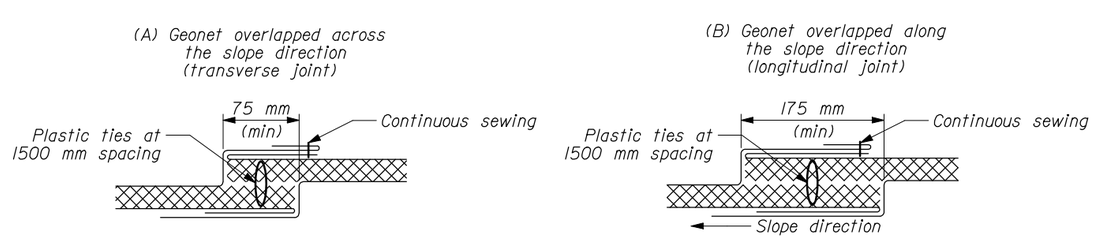


SUBEXCAVATION TYPE 1



PRELIMINARY

SUBEXCAVATION TYPE 2



GEOCOMPOSITE CAPILLARY BREAK SYSTEM SPLICING DETAILS

NOTE:

1. See sheet C.2 for locations and quantities.
2. See sheet C.3 for pavement structures
3. Existing shoulder width varies 0.4 to 1.2 m. Depth of existing pavement varies from 4 to 8 inches. Pulverize and conserve full width and depth of existing asphalt concrete pavement in subexcavation areas.

FOOTNOTE:

1/ Splice geocomposite capillary break system according to Section 605 and the details on this sheet.

2/ Travelway width = 3.0 m from 10+134.66 to 24+200.
Travelway width = 3.3 m from 24+200 to 31+700.

SUBEXCAVATION DETAILS

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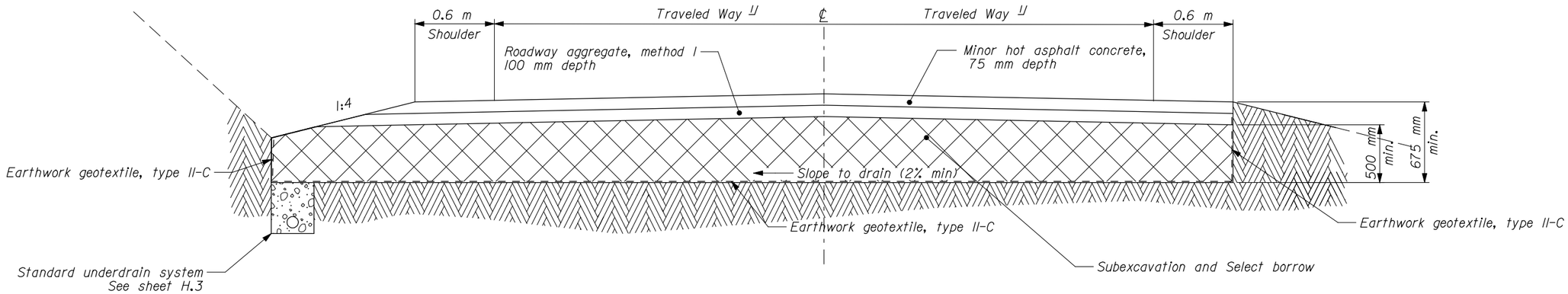
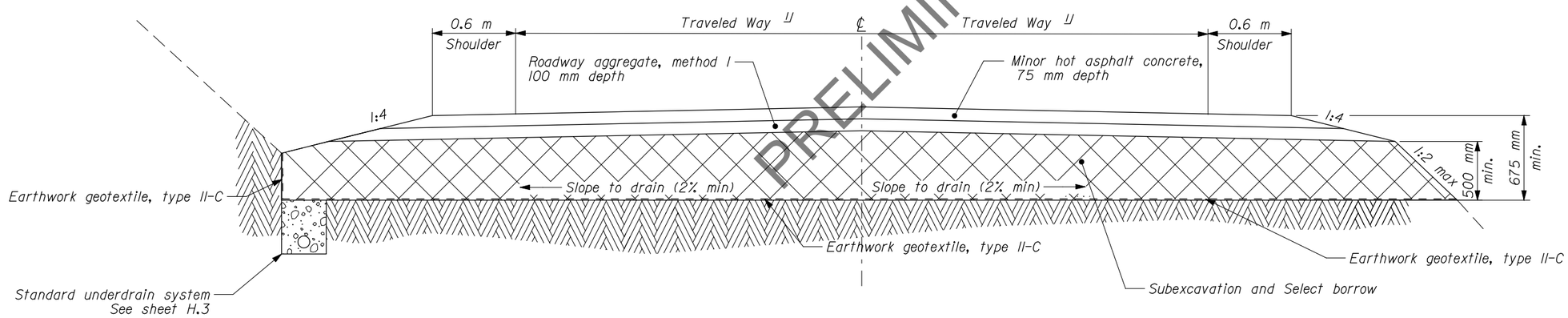
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	C.5



SUBEXCAVATION TYPE 3

PRELIMINARY



SUBEXCAVATION TYPE 3A

NOTE:

1. See sheet C.2 for locations and quantities.
2. See sheet C.3 for pavement structures
3. Existing shoulder width varies 0.4 to 1.2 m. Depth of existing pavement varies from 4 to 8 inches. Pulverize and conserve full width and depth of existing asphalt concrete pavement in subexcavation areas.

FOOTNOTE:

1/ Travelway width = 3.0 m from 10+134.66 to 24+200.
Travelway width = 3.3 m from 24+200 to 31+700.

SUBEXCAVATION DETAILS

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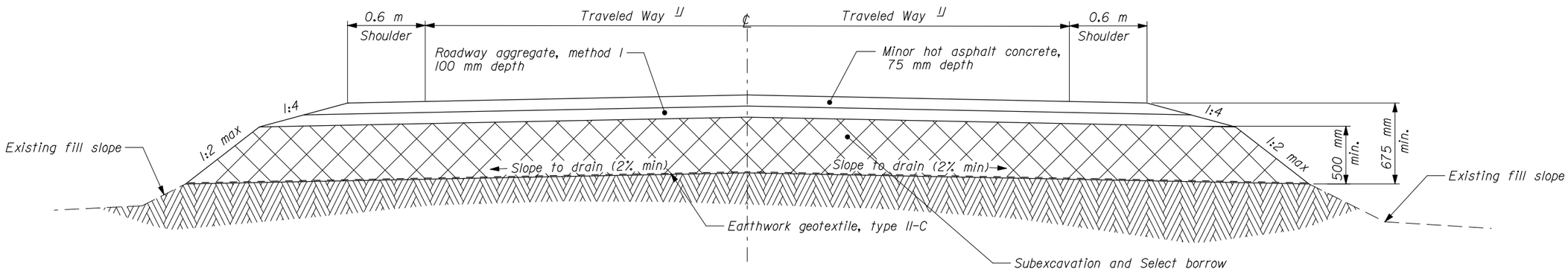
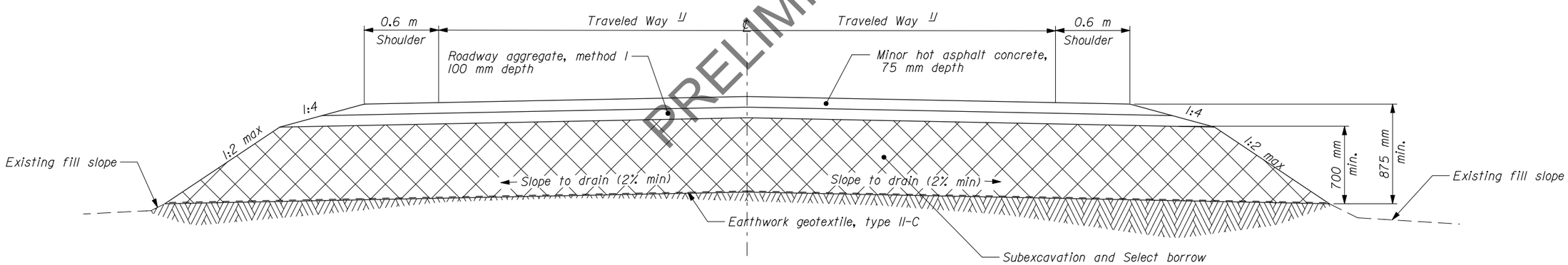
Curtis Jorgenson | 07/2007 | Checked by: | Designed by: | --/---

STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	C.6



SUBEXCAVATION TYPE 4

PRELIMINARY



SUBEXCAVATION TYPE 4A

NOTE:

1. See sheet C.2 for locations and quantities.
2. See sheet C.3 for pavement structures
3. Existing shoulder width varies 0.4 to 1.2 m. Depth of existing pavement varies from 4 to 8 inches. Pulverize and conserve full width and depth of existing asphalt concrete pavement in subexcavation areas.

FOOTNOTE:

1/ Travelway width = 3.0 m from 10+134.66 to 24+200.
Travelway width = 3.3 m from 24+200 to 31+700.

SUBEXCAVATION DETAILS

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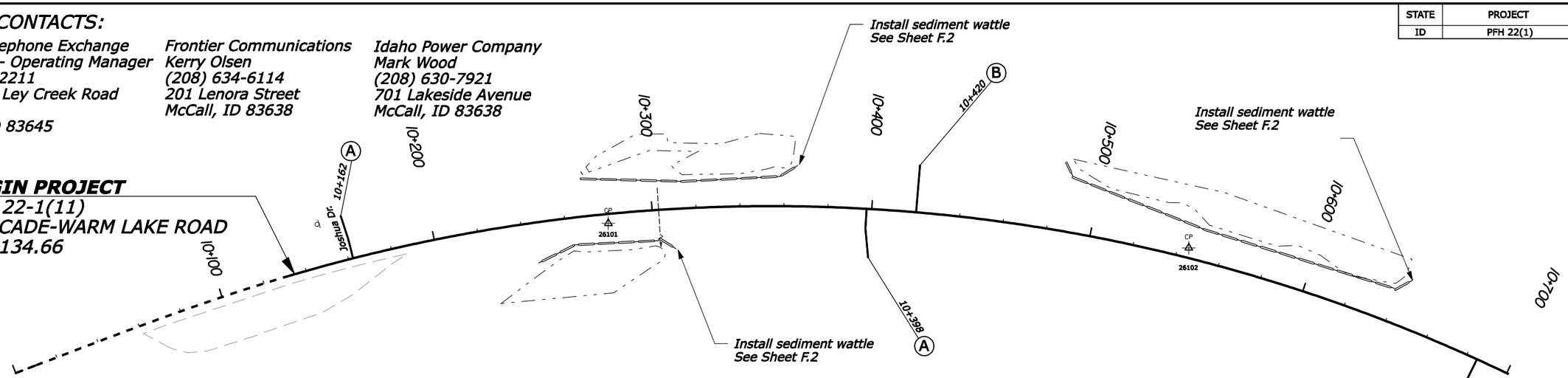
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(1)	D.3

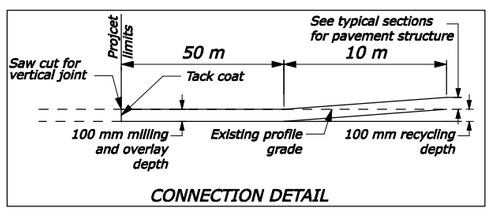
UTILITY CONTACTS:

Midvale Telephone Exchange
Rod Vowel - Operating Manager
(208) 355-2211
2205 Keith Ley Creek Road
P.O. Box 7
Midvale, ID 83645

Frontier Communications
Kerry Olsen
(208) 634-6114
201 Lenora Street
McCall, ID 83638

Idaho Power Company
Mark Wood
(208) 630-7921
701 Lakeside Avenue
McCall, ID 83638





CONNECTION DETAIL

CONTROL POINTS

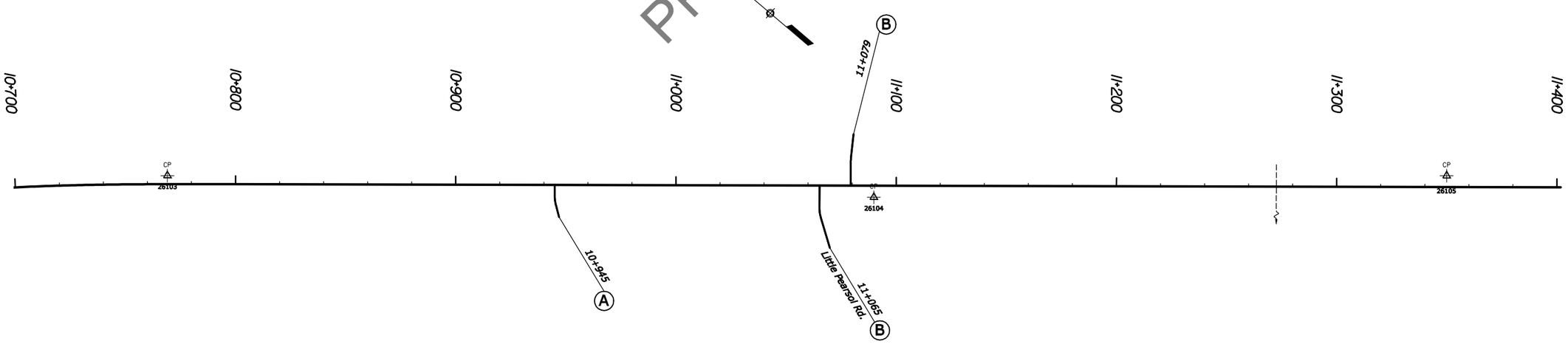
NAME	NORTHING	EASTING	ELEVATION
26101	317832.859	781575.732	1478.778
26102	317726.354	781817.523	1483.683

NOTE: Centerline is for illustrative purpose only.

LEGEND

Wetland Boundary
Existing Turnout
Existing Paved Waterway
Road Approach Type (see sheet E.3) — XX+XXX (X)

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26103	317571.553	781980.221	1489.795
26104	317321.276	782181.080	1493.617
26105	317129.791	782357.359	1493.570

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
10+134.66 to 11+400

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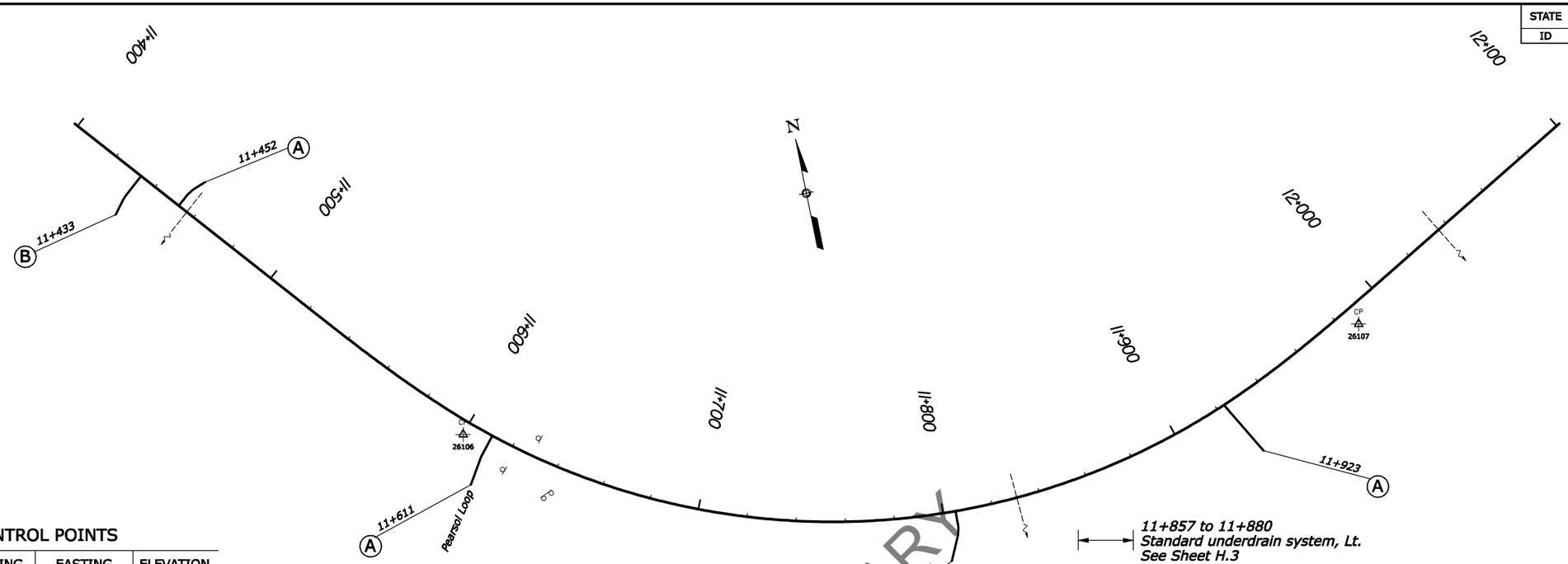
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(11)	D.4



11+857 to 11+880
Standard underdrain system, Lt.
See Sheet H.3

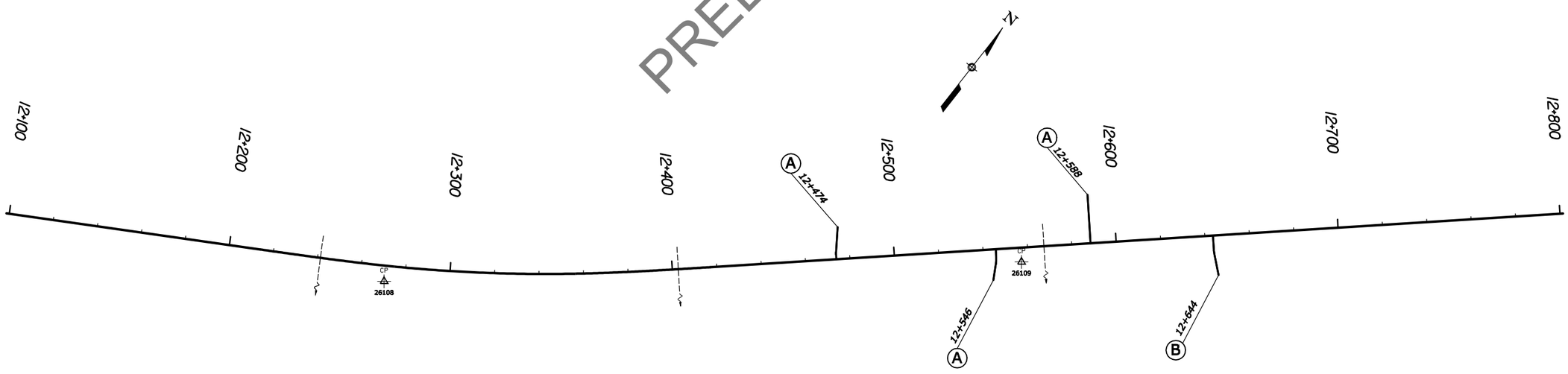
11+857 to 11+880
Subexcavation Type 3A
See Sheet C.5

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26106	316934.322	782514.703	1499.742
26107	316906.466	782880.491	1514.661

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26108	317049.336	783126.897	1526.207
26109	317232.772	783347.403	1534.167

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
11+400 to 12+800

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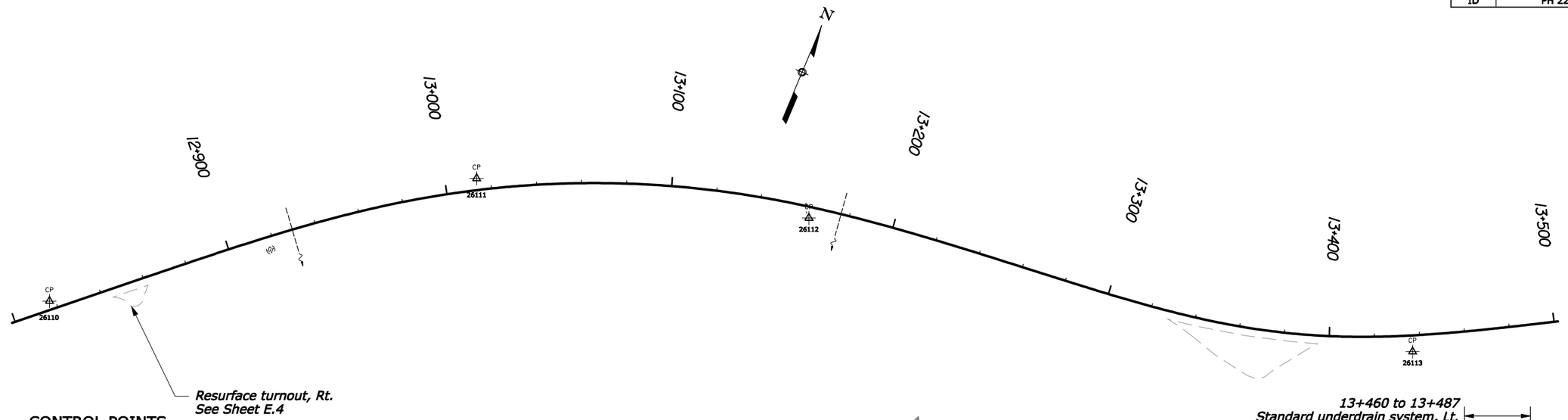
STATE	PROJECT	Sheet NUMBER
ID	PH 22(11)	D.5

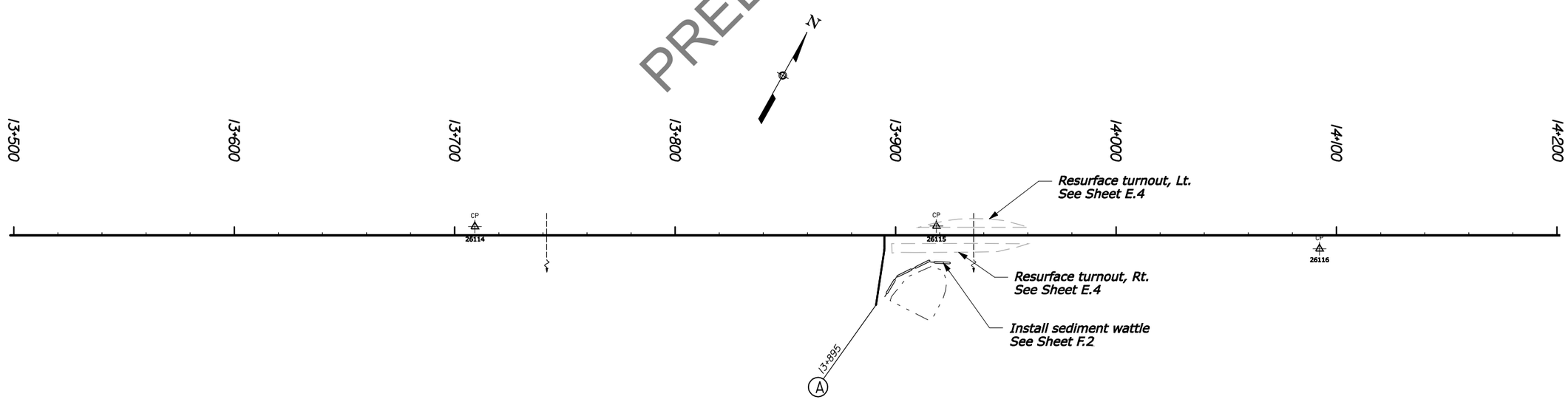


CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26110	317413.411	783535.338	1536.888
26111	317536.898	783688.954	1537.550
26112	317577.775	783831.651	1538.348
26113	317626.880	784101.469	1552.399

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26114	317769.202	784334.599	1567.235
26115	317871.915	784517.043	1579.387
26116	317947.992	784673.619	1588.572

NOTE: Centerline is for illustrative purpose only.

13+625 to 13+655
Standard underdrain system, Lt.
See Sheet H.3

13+625 to 13+655
Subexcavation Type 3A
See Sheet C.5

13+777 to 13+939
Geocomposite underdrain system, type 2, Lt.
See Sheet H.3

13+777 to 13+939
Subexcavation Type 1
See Sheet C.4

CASCADE - WARM LAKE ROAD
12+800 to 14+200

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STATE	PROJECT	SHEET NUMBER
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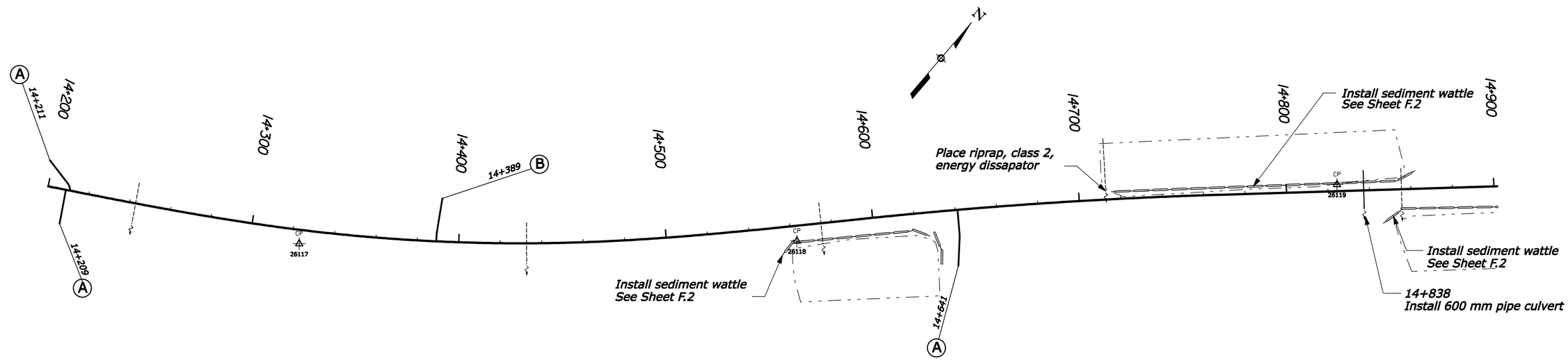


CONTROL POINTS

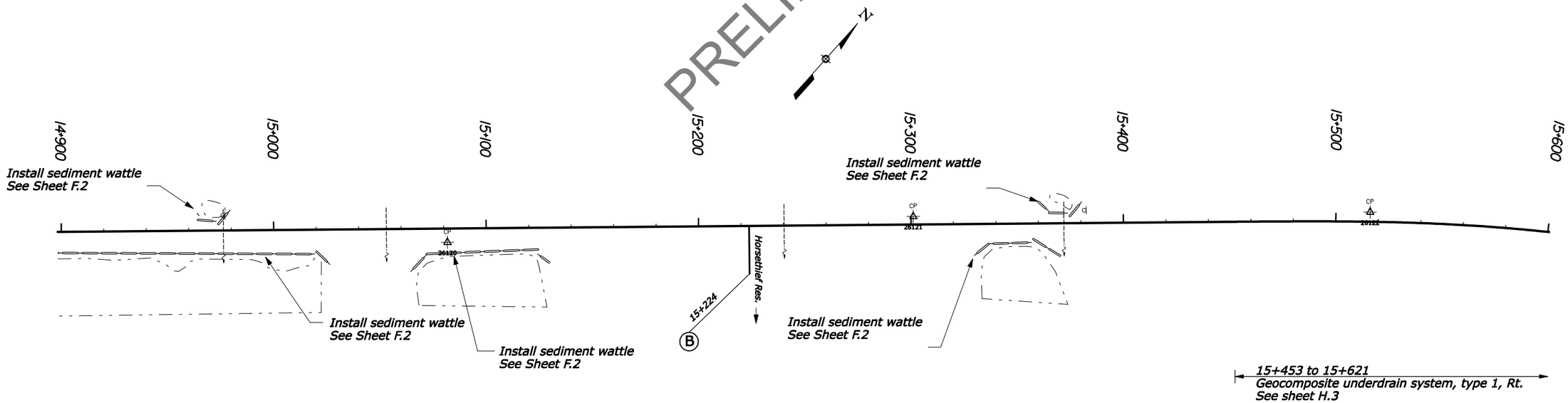
NAME	NORTHING	EASTING	ELEVATION
26117	318063.641	784874.523	1594.515
26118	318220.638	785055.966	1592.780
26119	318410.674	785236.022	1589.003

NOTE: Centerline is for illustrative purpose only.

14+701 to 14+838
Standard underdrain system, Lt.
See sheet H.3

14+701 to 14+838
Subexcavation Type 3
See sheet C.5

PRELIMINARY



15+453 to 15+621
Geocomposite underdrain system, type 1, Rt.
See sheet H.3

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26120	318576.802	785432.709	1585.392
26121	318732.101	785587.965	1582.385
26122	318877.076	785746.819	1579.298

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
14+200 to 15+600

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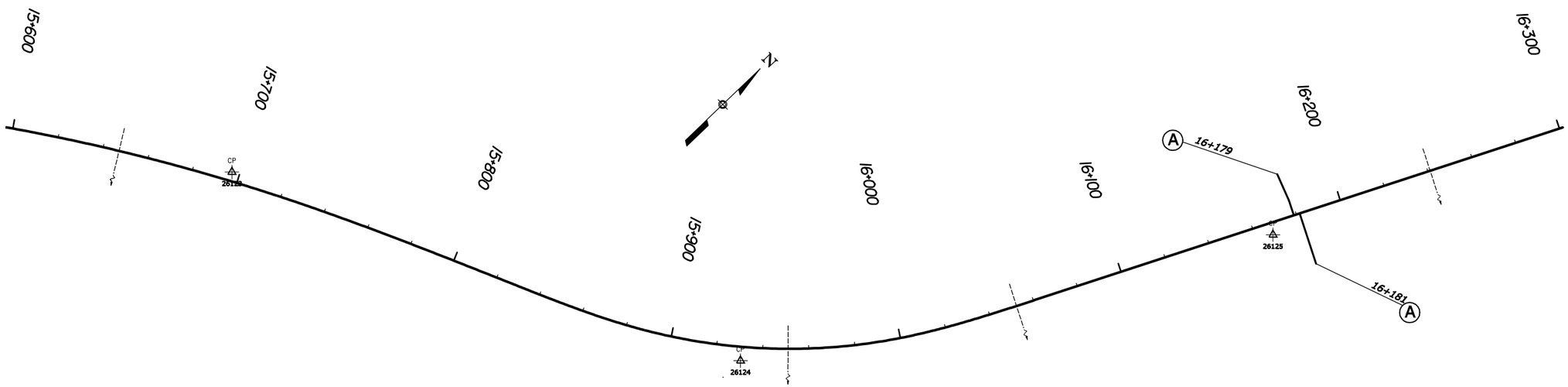
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.7



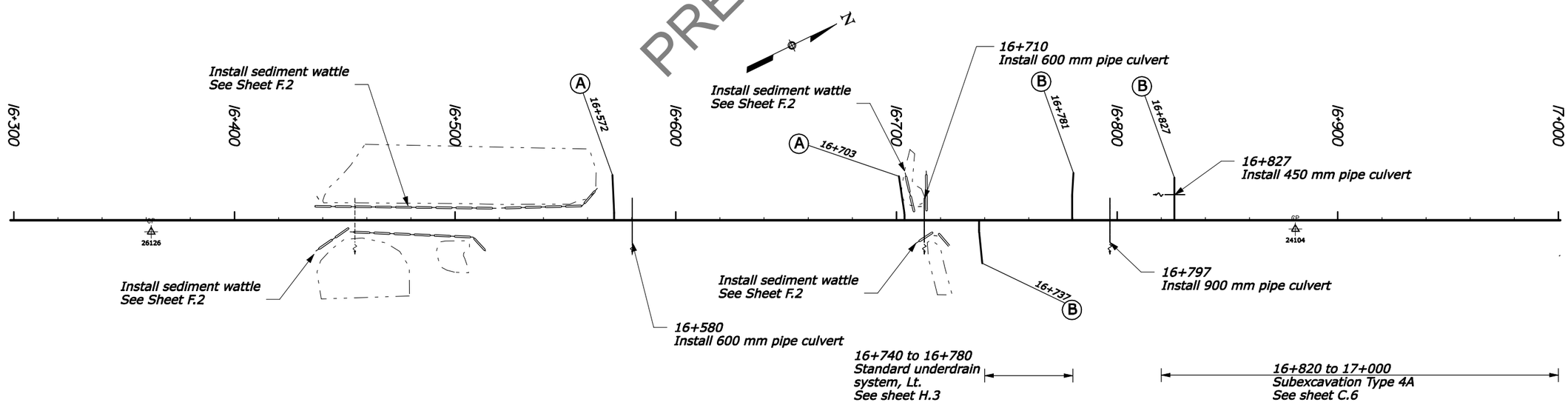
15+453 to 15+621
Geocomposite underdrain system, type 1, Rt.
See sheet H.3

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26123	318981.525	785894.780	1573.620
26124	319084.320	786106.338	1566.736
26125	319288.857	786226.666	1563.619

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26126	319464.238	786311.021	1562.901
24104	319932.130	786534.532	1563.310

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
15+600 tp 17+000

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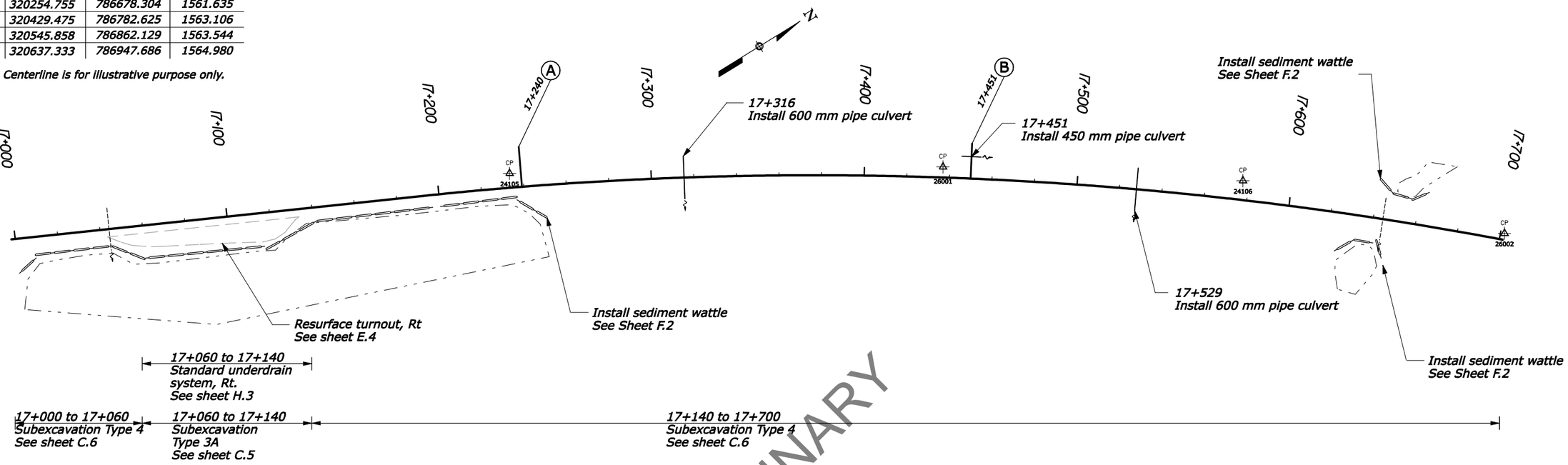
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.8

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
24105	320254.755	786678.304	1561.635
26001	320429.475	786782.625	1563.106
24106	320545.858	786862.129	1563.544
26002	320637.333	786947.686	1564.980

NOTE: Centerline is for illustrative purpose only.

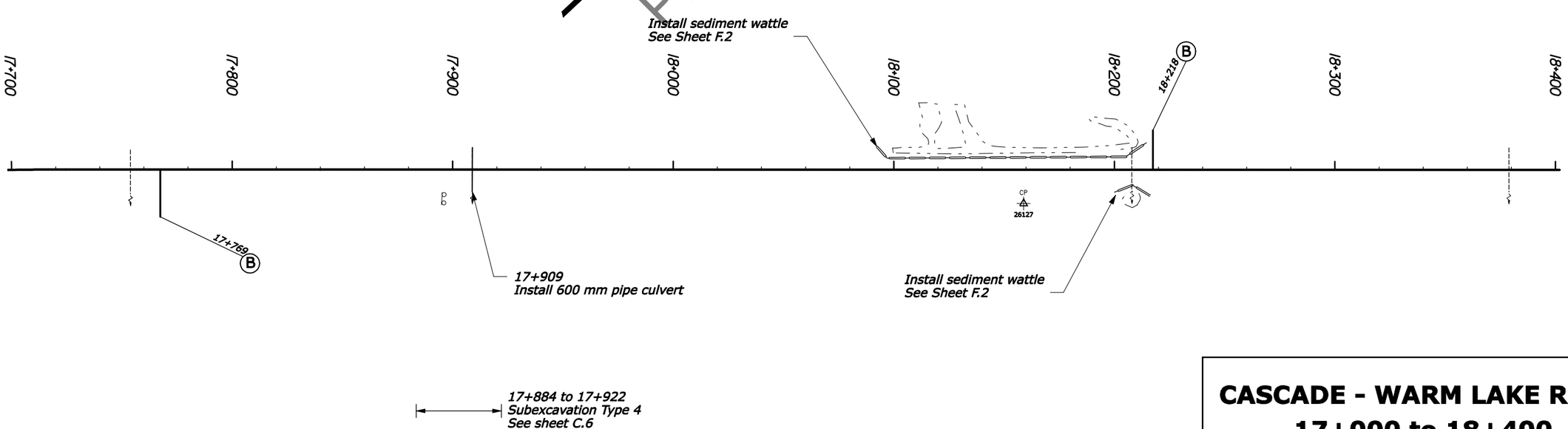


PRELIMINARY

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26127	320958.438	787273.675	1564.050

NOTE: Centerline is for illustrative purpose only.



CASCADE - WARM LAKE ROAD
17+000 to 18+400

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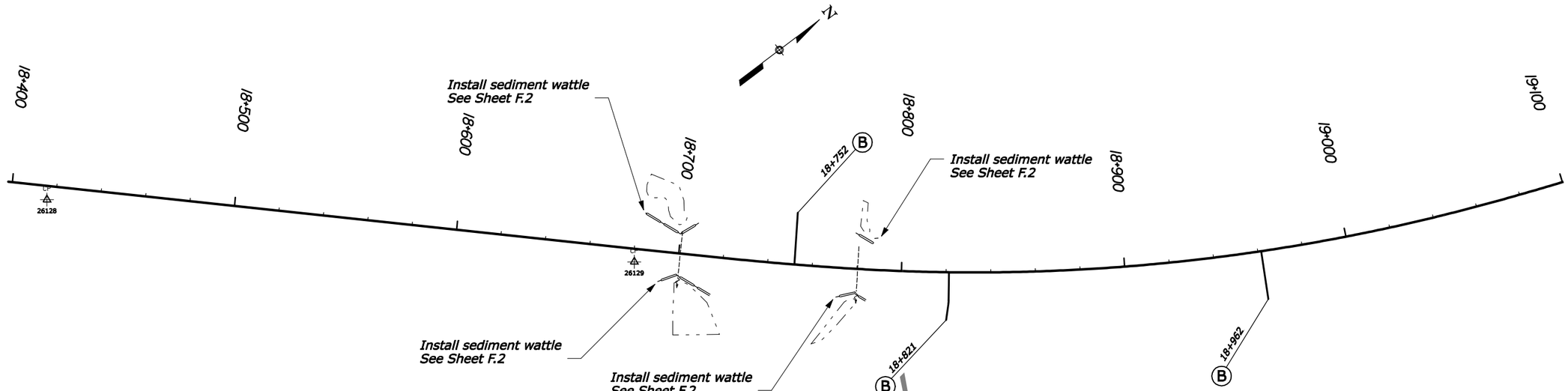
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.9

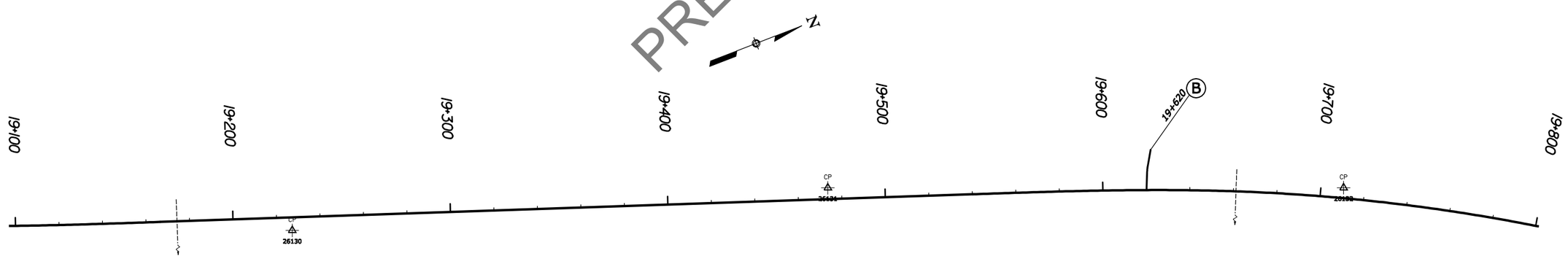


CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26128	321152.446	787443.023	1563.289
26129	321345.528	787623.634	1562.536

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



19+690 to 19+911
Subexcavation Type 4
See sheet C.6

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26130	321816.632	787893.030	1567.948
26131	322053.398	787963.150	1569.498
26132	322274.652	788048.224	1569.167

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
18+400 to 19+800

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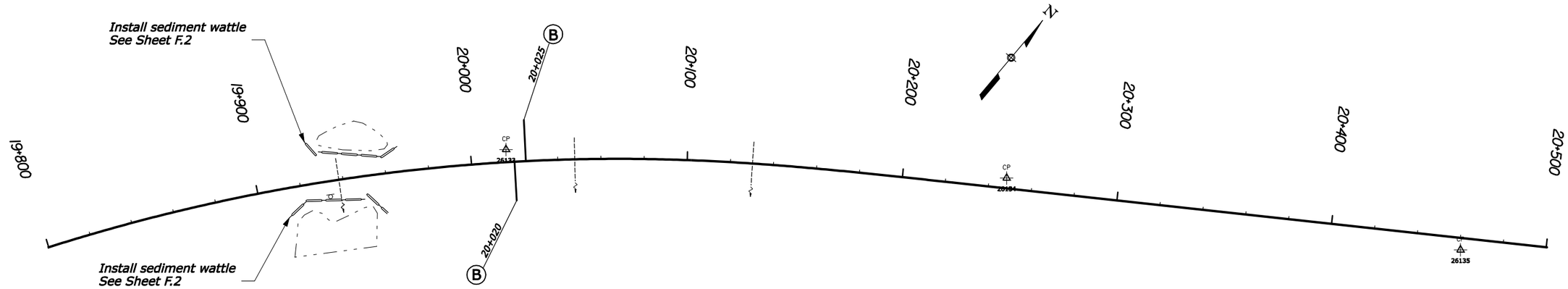
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.10



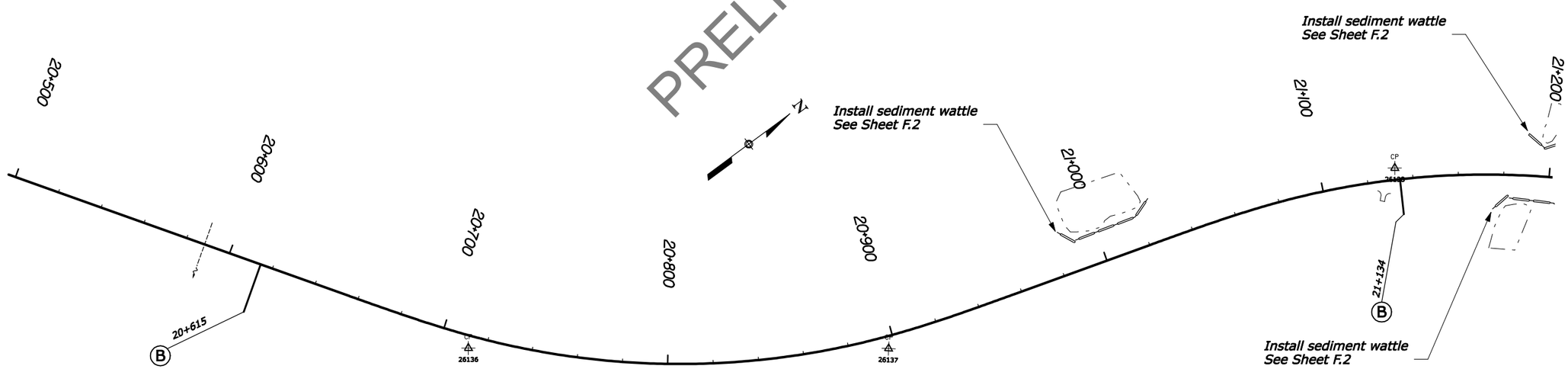
19+690 to 19+911
Subexcavation Type 4
See sheet C.6

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26133	322522.003	788228.885	1568.635
26134	322661.595	788414.535	1572.790
26135	322771.905	788596.615	1577.546

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26136	322914.151	788805.006	1580.083
26137	323062.883	788914.959	1578.724
26138	323289.304	788983.321	1575.144

NOTE: Centerline is for illustrative purpose only.

20+772 to 20+940
Standard underdrain system, Lt. & Rt.
See sheet H.3

20+772 to 20+940
Subexcavation Type 2
See sheet C.4

CASCADE - WARM LAKE ROAD
19+800 to 21+200

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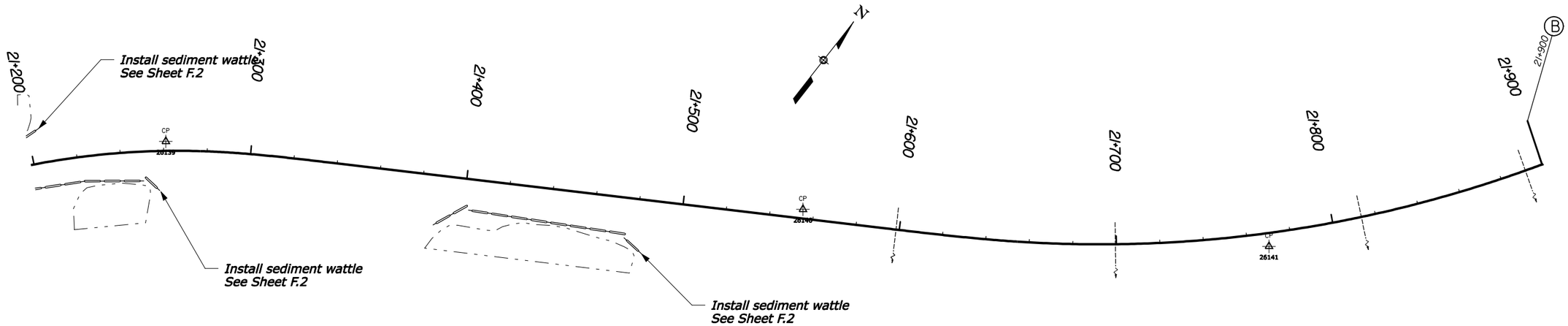
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.11



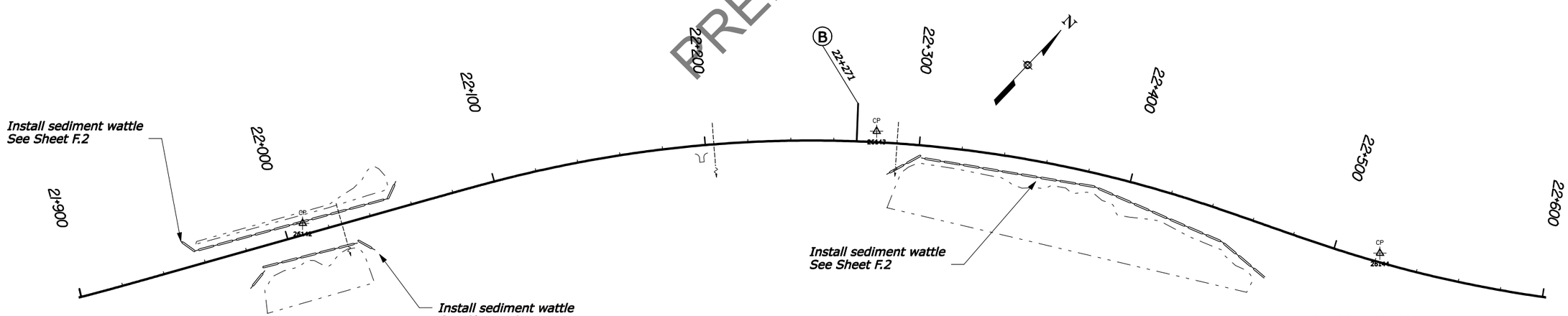
21+245 to 21+367
Subexcavation Type 4
See sheet C.6

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26139	323387.356	789068.079	1575.743
26140	323543.568	789317.548	1579.265
26141	323662.408	789496.459	1582.107

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



22+479 to 22+631
Standard underdrain system, Lt. & Rt.
See sheet H.3

22+479 to 22+631
Subexcavation Type 2
See sheet C.4

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26142	323865.629	789622.693	1581.378
26143	324081.833	789786.348	1582.453
26144	324203.038	789995.310	1584.580

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
21+200 to 22+600

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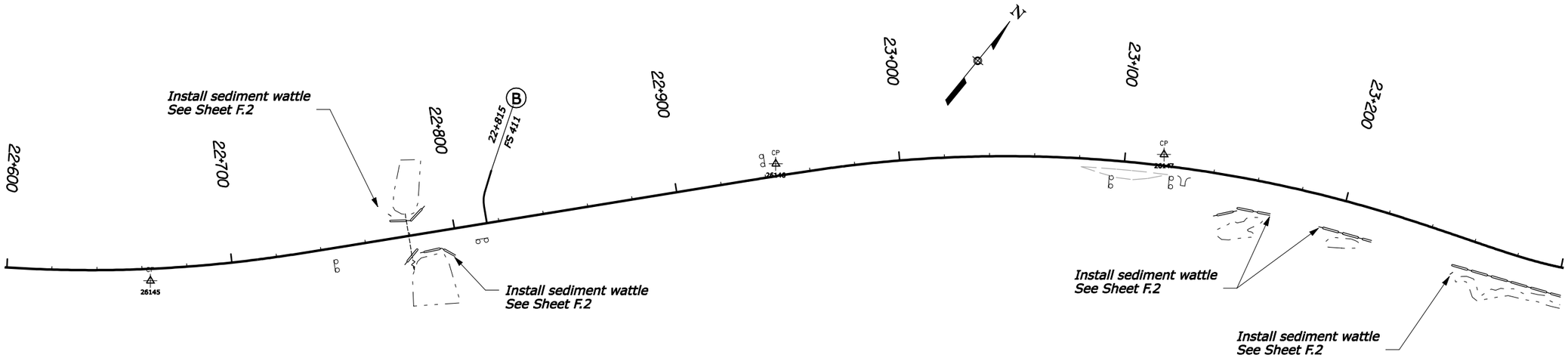
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.12



22+479 to 22+631
Standard underdrain system, Lt. & Rt.
See Sheet H.3

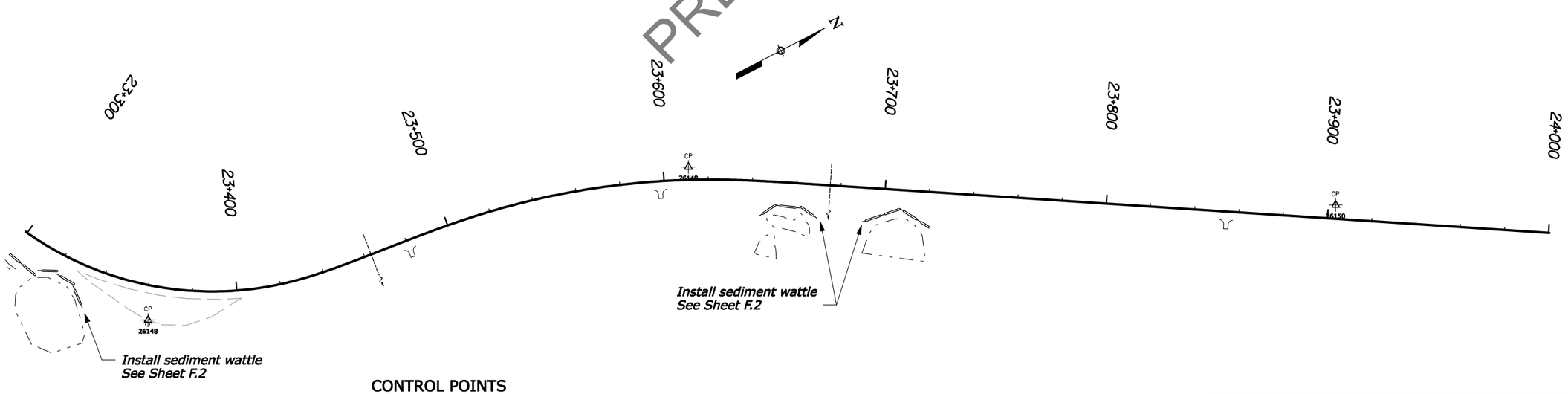
22+479 to 22+631
Subexcavation Type 2
See Sheet C.4

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26145	324276.524	790117.267	1586.324
26146	324492.594	790299.226	1589.248
26147	324605.024	790429.987	1592.099

NOTE: Centerline is for illustrative purpose only.

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26148	324708.395	790658.062	1599.229
26149	324956.814	790708.326	1606.679
26150	325208.608	790857.240	1612.989

NOTE: Centerline is for illustrative purpose only.

23+759 to 23+820
Standard underdrain system, Lt. & Rt.
See Sheet H.3

23+759 to 23+820
Subexcavation Type 2
See Sheet C.4

CASCADE - WARM LAKE ROAD
22+600 to 24+000

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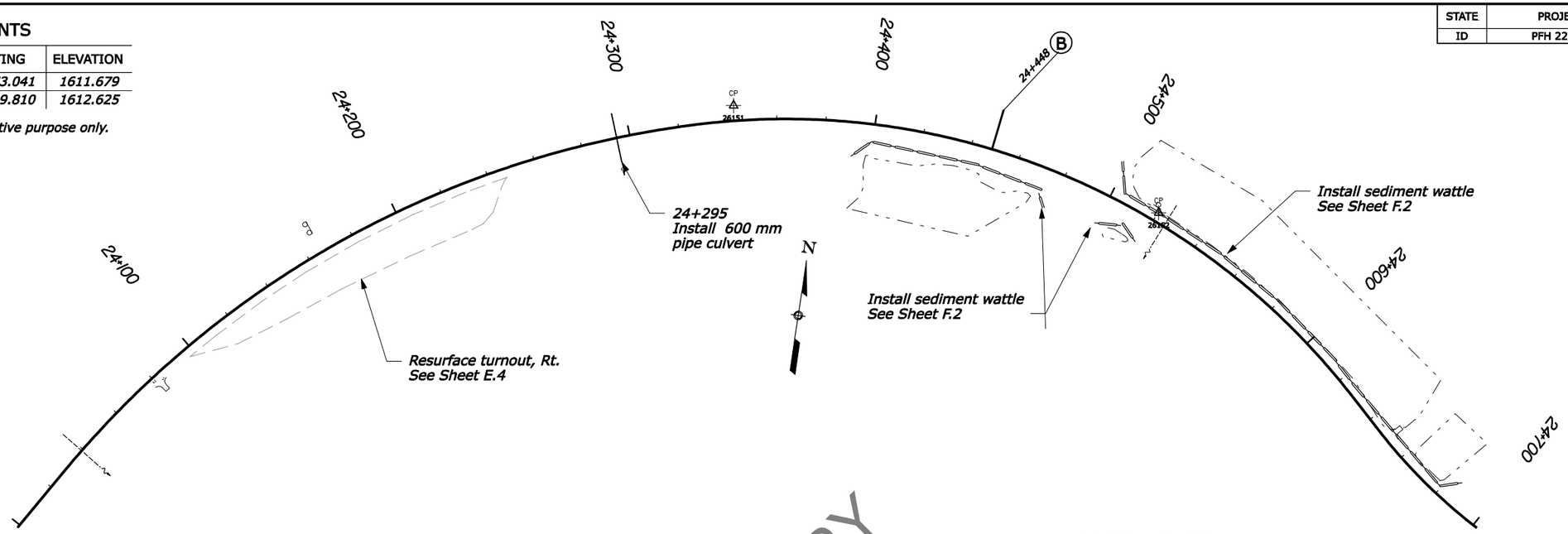
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.13

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26151	325499.378	791173.041	1611.679
26152	325482.033	791349.810	1612.625

NOTE: Centerline is for illustrative purpose only.



24+262 to 24+384
Standard underdrain system, Lt. & Rt.
See Sheet H.3

24+262 to 24+384
Subexcavation Type 2
See Sheet C.4

24+552 to 24+597
Standard underdrain system, Rt.
See Sheet H.3

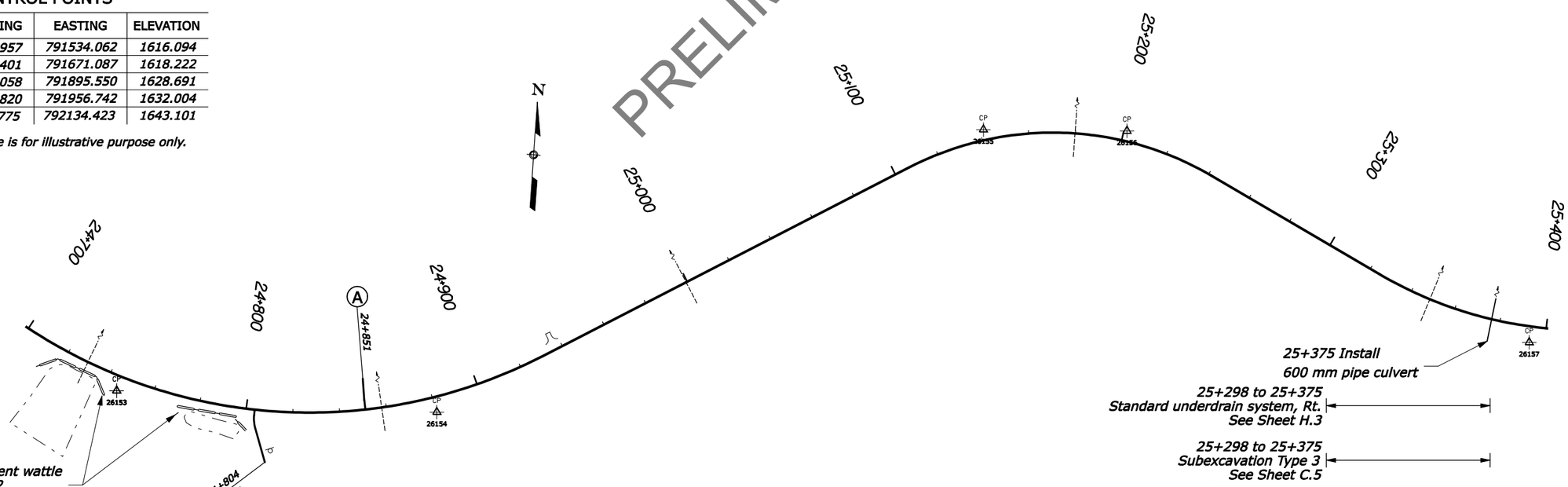
24+552 to 24+597
Subexcavation Type 3A
See Sheet C.5

PRELIMINARY

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26153	325351.957	791534.062	1616.094
26154	325352.401	791671.087	1618.222
26155	325489.058	791895.550	1628.691
26156	325492.820	791956.742	1632.004
26157	325414.775	792134.423	1643.101

NOTE: Centerline is for illustrative purpose only.



24+796 to 24+978
Standard underdrain system, Lt. & Rt.
See Sheet H.3

24+796 to 24+978
Subexcavation Type 2
See Sheet C.4

24+996 to 25+207
Standard underdrain system, Rt.
See Sheet H.3

24+996 to 25+207
Subexcavation Type 3
See Sheet C.5

25+298 to 25+375
Standard underdrain system, Rt.
See Sheet H.3

25+298 to 25+375
Subexcavation Type 3
See Sheet C.5

CASCADE - WARM LAKE ROAD
24+000 to 25+400

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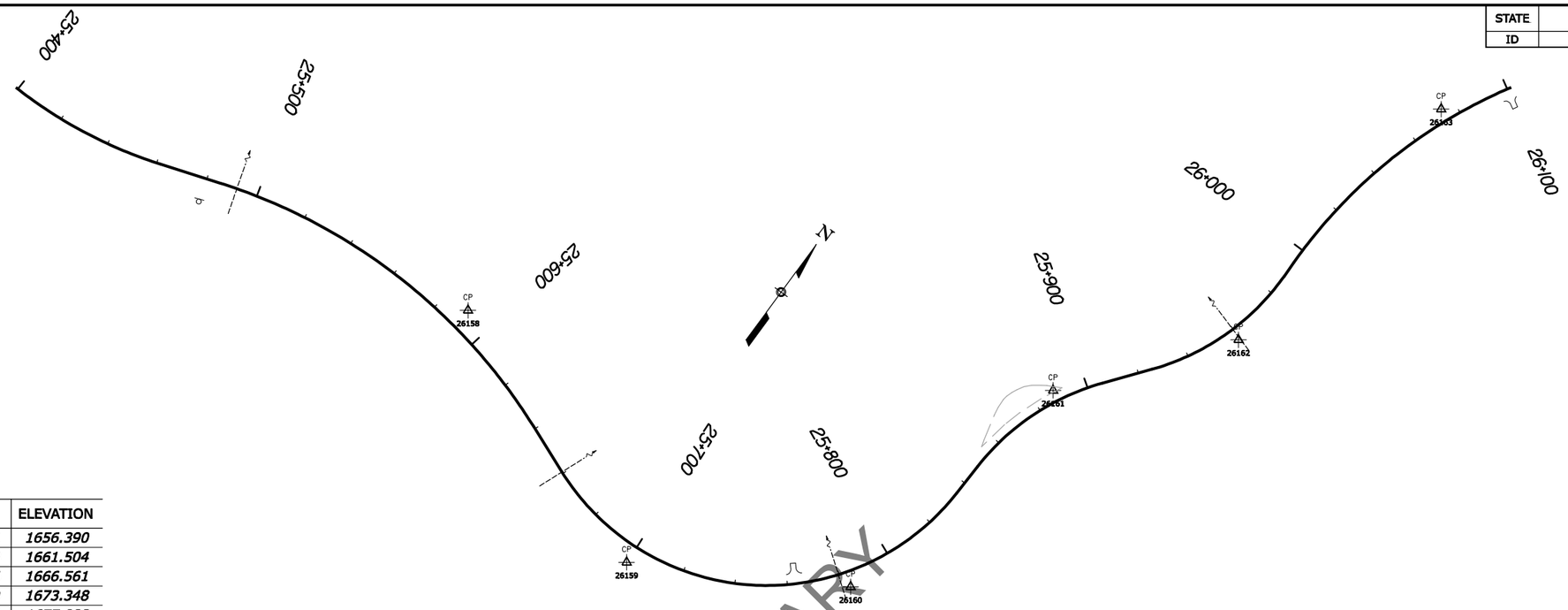
STATE	PROJECT	SHEET NUMBER
ID	PFH 22(11)	D.14



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26158	*325454.876*	*792328.661*	*1656.390*
26159	*325413.536*	*792433.814*	*1661.504*
26160	*325456.385*	*792507.836*	*1666.561*
26161	*325561.967*	*792525.599*	*1673.348*
26162	*325619.118*	*792570.928*	*1677.088*
26163	*325735.204*	*792581.084*	*1684.626*

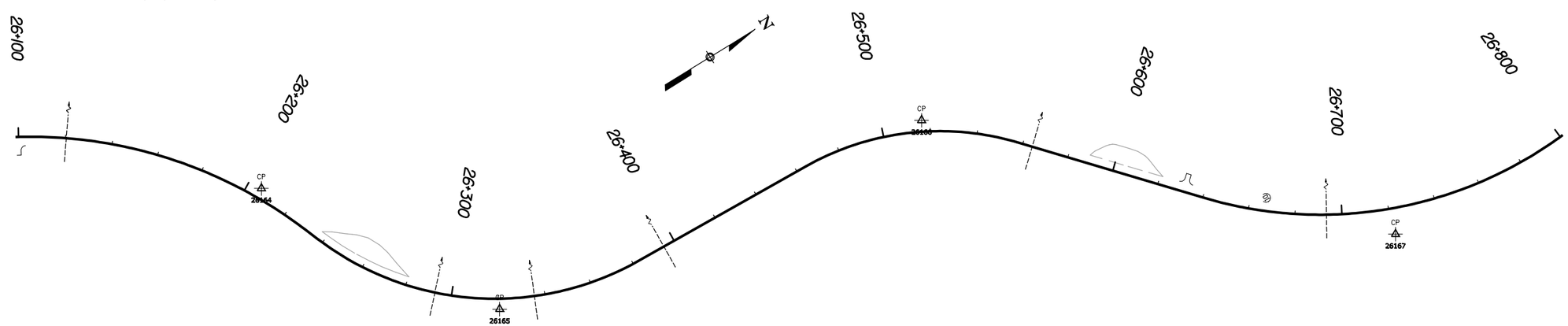
NOTE: Centerline is for illustrative purpose only.

PRELIMINARY

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26164	*325832.727*	*792669.724*	*1692.350*
26165	*325892.143*	*792766.799*	*1698.763*
26166	*326087.342*	*792792.672*	*1711.376*
26167	*326233.762*	*792939.894*	*1723.302*

NOTE: Centerline is for illustrative purpose only.



26+182 to 26+289
Standard underdrain system, Rt.
See Sheet H.3

26+182 to 26+289
Subexcavation Type 3
See Sheet C.5

26+326 to 26+396
Standard underdrain system, Rt.
See Sheet H.3

26+326 to 26+396
Subexcavation Type 3
See Sheet C.5

CASCADE - WARM LAKE ROAD
25+400 to 26+800

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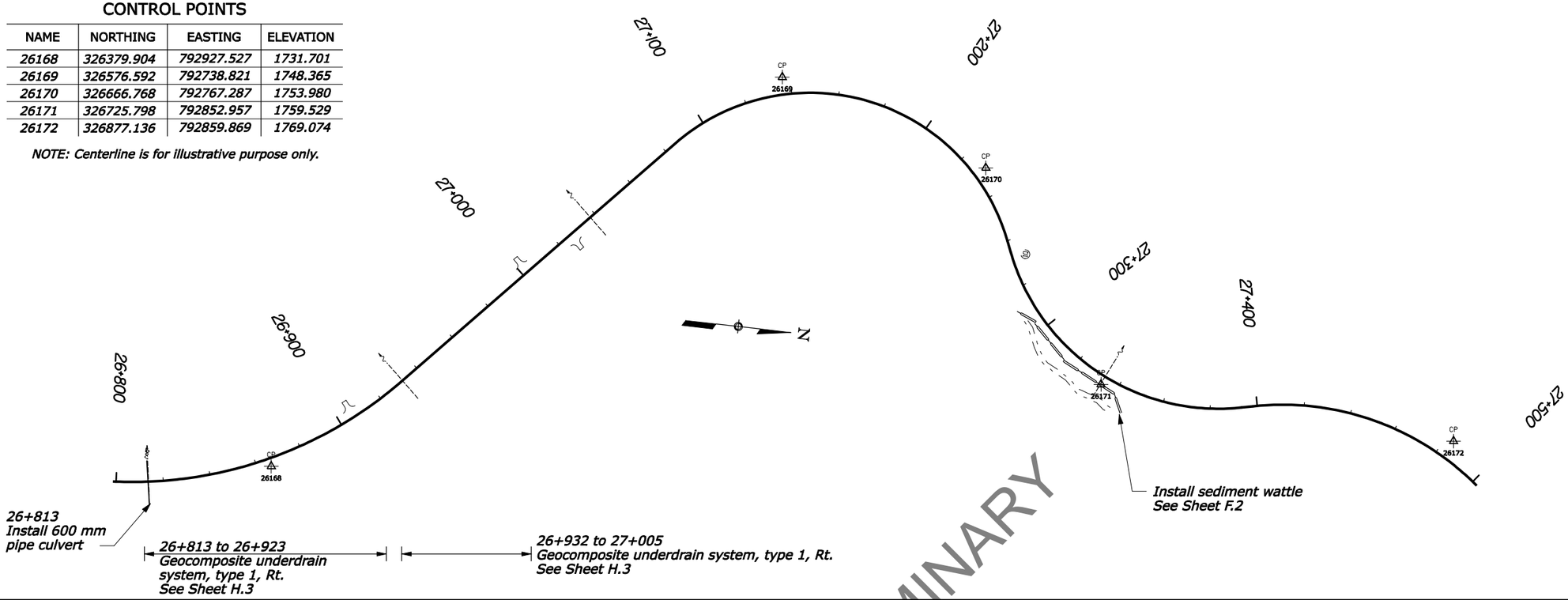
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(11)	D.15

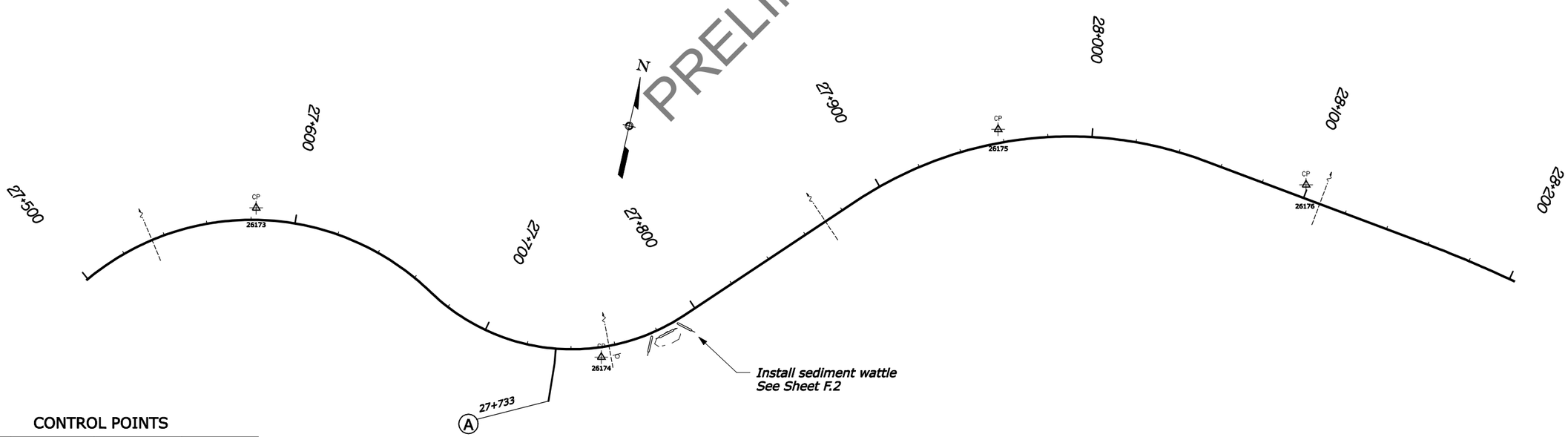
CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26168	326379.904	792927.527	1731.701
26169	326576.592	792738.821	1748.365
26170	326666.768	792767.287	1753.980
26171	326725.798	792852.957	1759.529
26172	326877.136	792859.869	1769.074

NOTE: Centerline is for illustrative purpose only.



PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26173	326935.429	792943.027	1774.486
26174	326904.291	793110.175	1783.707
26175	327044.537	793262.223	1795.853
26176	327051.001	793403.555	1802.966

NOTE: Centerline is for illustrative purpose only.

27+630 to 27+691
Standard underdrain system, Rt.
See Sheet H.3

27+630 to 27+691
Subexcavation Type 3
See Sheet C.5

CASCADE - WARM LAKE ROAD
26+800 to 28+200

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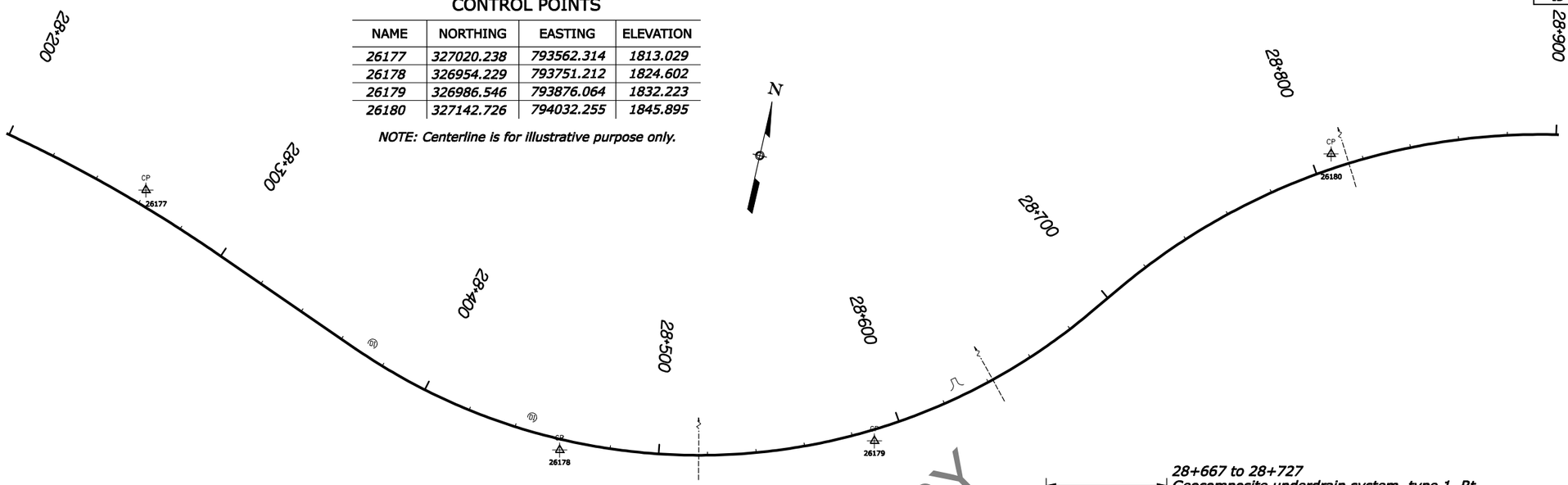
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(11)	D.16

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26177	327020.238	793562.314	1813.029
26178	326954.229	793751.212	1824.602
26179	326986.546	793876.064	1832.223
26180	327142.726	794032.255	1845.895

NOTE: Centerline is for illustrative purpose only.



28+286 to 28+423
Standard underdrain system, Rt.
See Sheet H.3

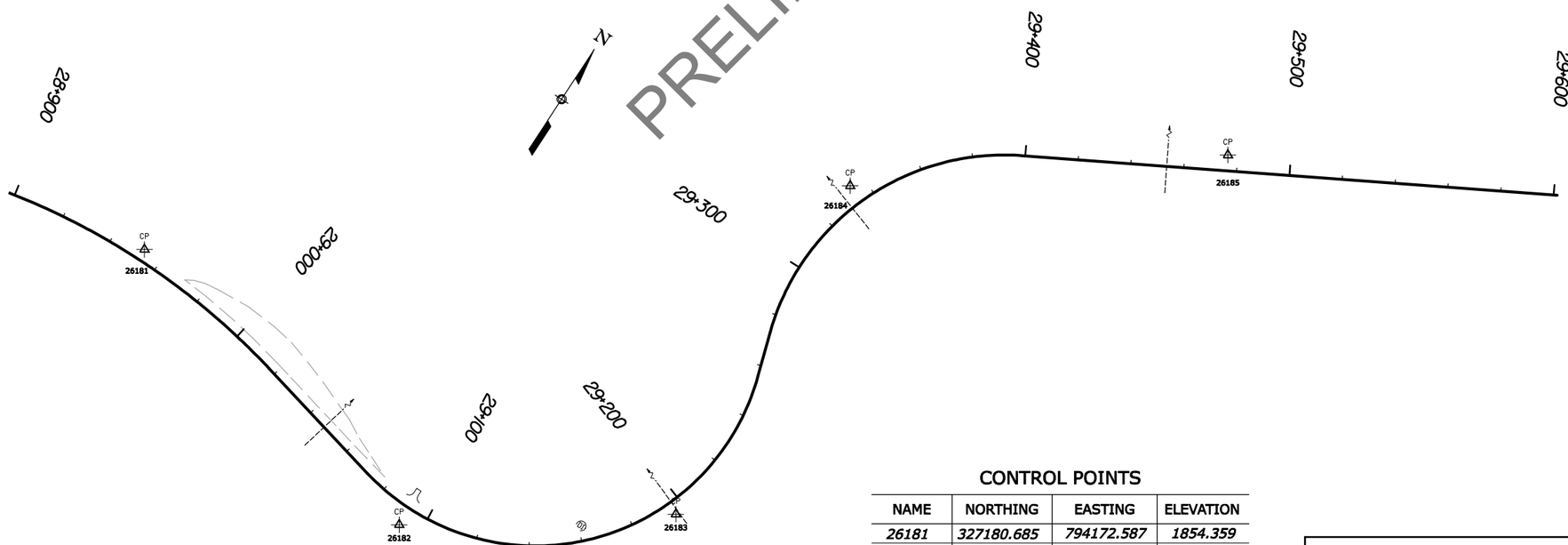
28+286 to 28+423
Subexcavation Type 3
See Sheet C.5

28+529 to 28+621
Standard underdrain system, Lt. & Rt.
See Sheet H.3

28+529 to 28+621
Subexcavation Type 2
See Sheet C.4

28+667 to 28+727
Geocomposite underdrain system, type 1, Rt.
See Sheet H.3

PRELIMINARY



28+918 to 29+002
Standard underdrain system, Rt.
See Sheet H.3

28+918 to 29+002
Subexcavation Type 3
See Sheet C.5

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26181	327180.685	794172.587	1854.359
26182	327146.623	794309.998	1862.050
26183	327207.234	794395.092	1868.250
26184	327346.944	794382.138	1877.247
26185	327434.876	794494.958	1885.001

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
28+200 to 29+600

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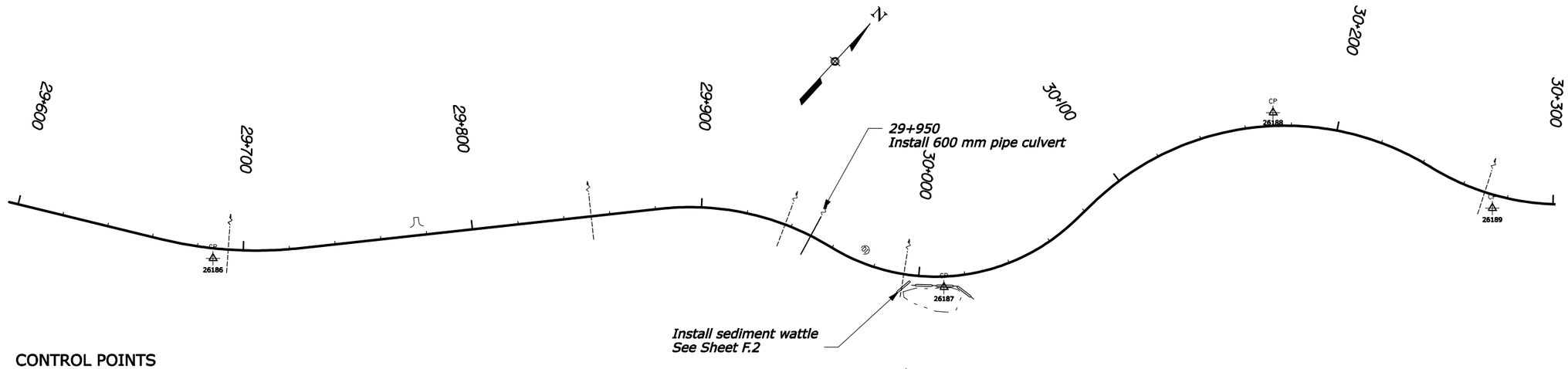
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(11)	D.17



CONTROL POINTS

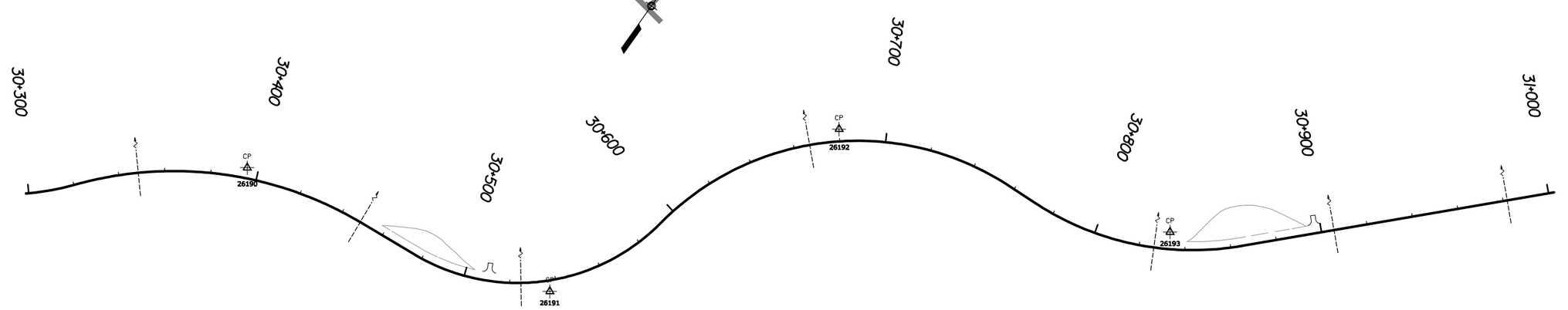
NAME	NORTHING	EASTING	ELEVATION
26186	327529.955	794684.094	1895.879
26187	327736.438	794925.621	1912.202
26188	327889.176	794979.033	1921.960
26189	327923.452	795077.098	1927.434

NOTE: Centerline is for illustrative purpose only.

29+950 to 29+992
Geocomposite underdrain system, type 2, Rt.
See Sheet H.3

29+950 to 29+992
Subexcavation Type 1
See Sheet C.4

PRELIMINARY



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26190	328006.597	795166.222	1934.919
26191	328039.186	795304.436	1942.237
26192	328169.598	795365.702	1950.553
26193	328216.718	795508.742	1957.839

NOTE: Centerline is for illustrative purpose only.

CASCADE - WARM LAKE ROAD
29+600 to 31+000

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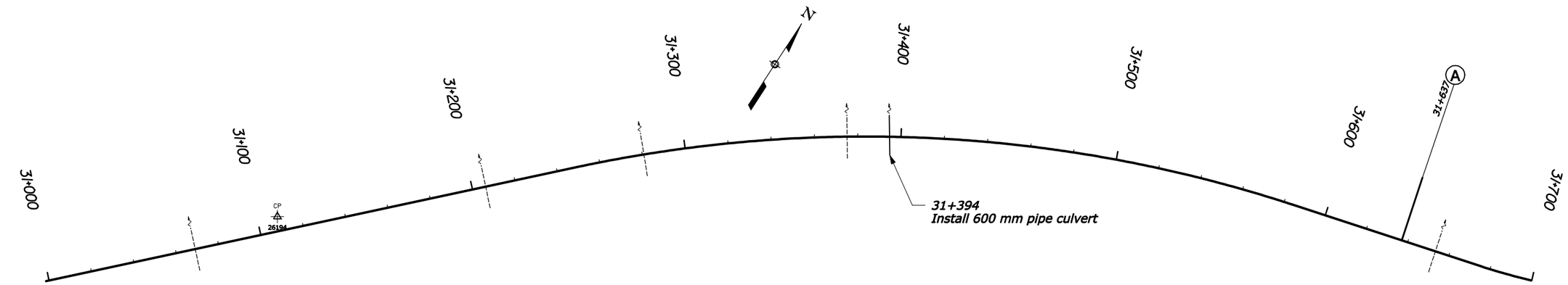
STATE	PROJECT	Sheet NUMBER
ID	PFH 22(11)	D.18



CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
26194	328408.308	795704.830	1974.131

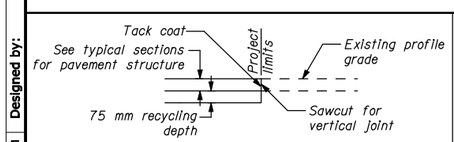
NOTE: Centerline is for illustrative purpose only.

31+564 to 31+700
Standard underdrain system, Lt. & Rt.
See Sheet H.3

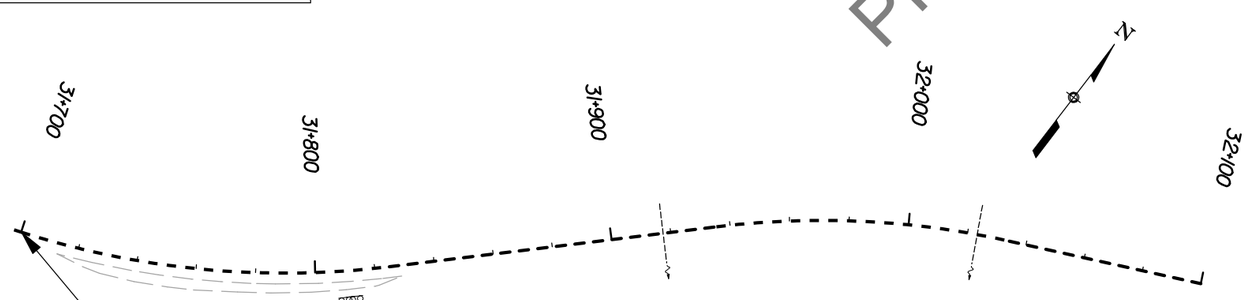
31+394 to 31+547
Geocomposite underdrain system, type 1, Rt.
See Sheet H.3

31+564 to 31+700
Subexcavation Type 2
See Sheet C.4

PRELIMINARY



Connection detail

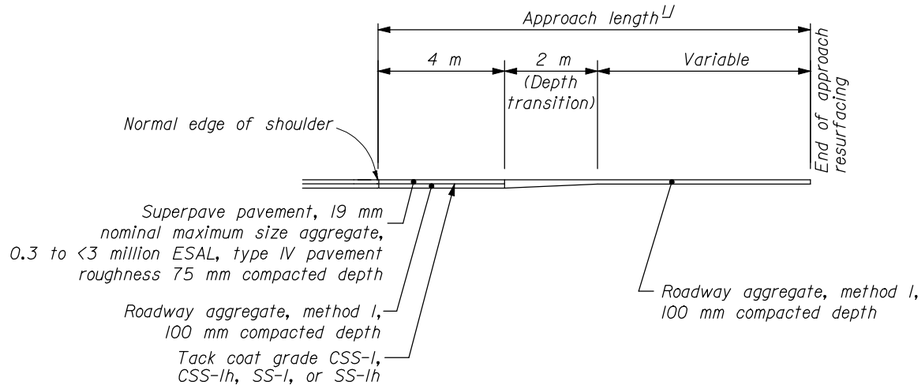


END PROJECT
PFH 22-1(11)
CASCADE-WARM LAKE ROAD
31+700.00

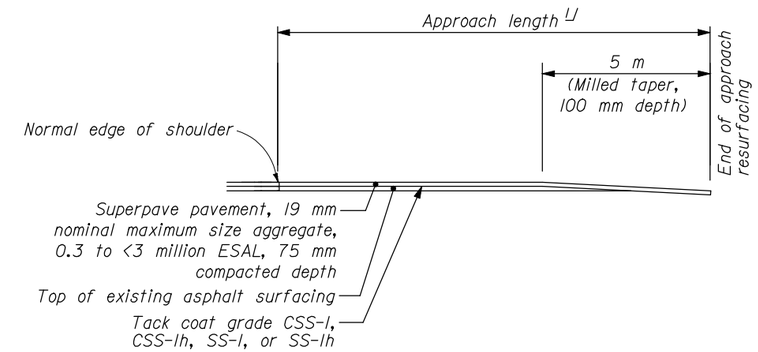
CASCADE - WARM LAKE ROAD
31+000 to 31+700

F:\Idaho\dfh\2211_Cascade\3R\Plans\D_Plan_Sheets\d22111f_NEW.dgn [Metric_2D] 26-DEC-2007 1:25PM Designed by: Curtis Jorgenson 07/2007 Checked by: --/----

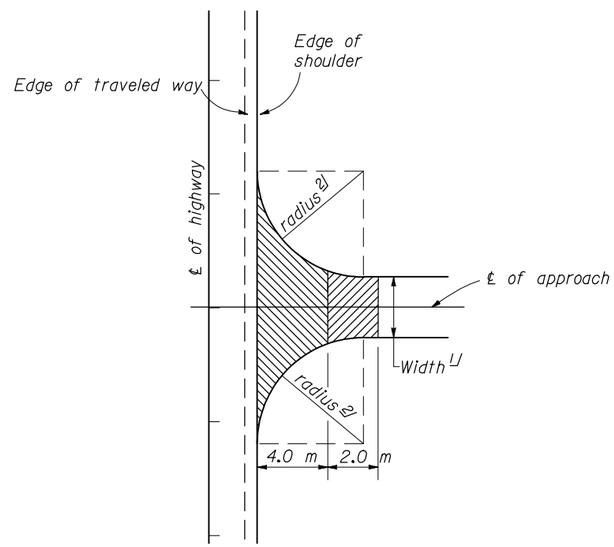
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	E.3



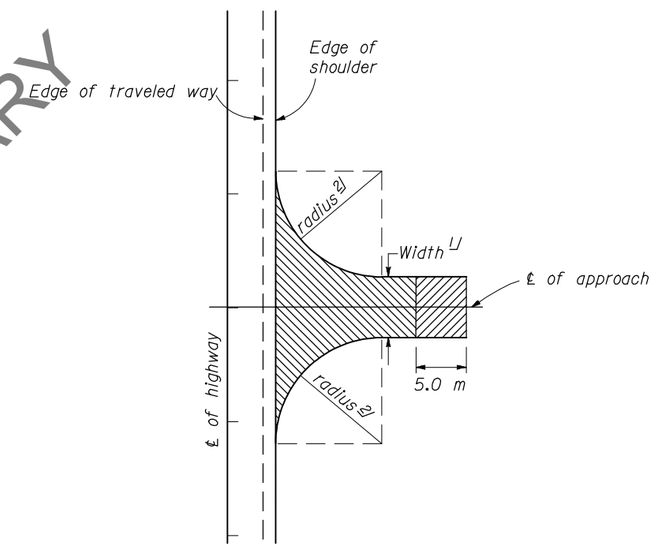
ROAD APPROACH CONNECTION DETAIL
TYPE A APPROACH



ROAD APPROACH CONNECTION DETAIL
TYPE B APPROACH



PLAN VIEW OF TYPE A
ROAD APPROACH



PLAN VIEW OF TYPE B
ROAD APPROACH

PRELIMINARY

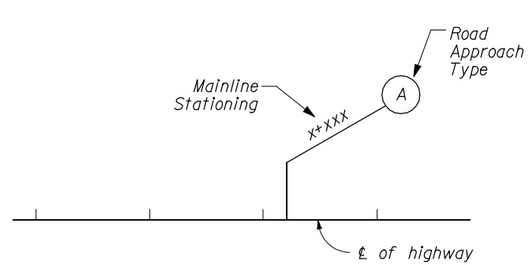


ILLUSTRATION SHOWING ROAD APPROACH
LOCATIONS ON MAINLINE PLAN SHEET

FOOTNOTE:

1/ See sheet E.1 for approach types, widths, and lengths.

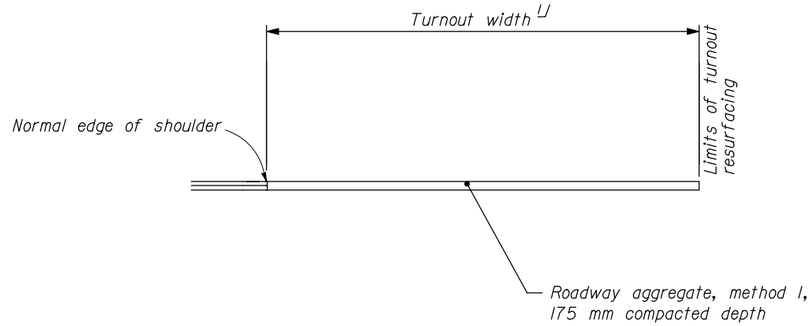
2/ Match existing approach radii.

NO SCALE

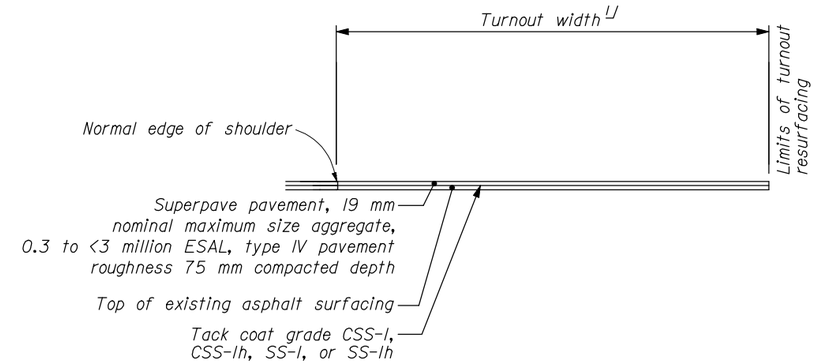
ROAD APPROACH DETAILS

F:\Idaho\Idfh22il_Cascade\3R\Plans\E_Approach_Roads\Id22ilgb.dgn [Date:06-07-2007 1:25PM] Designed by: Curtis Jorgenson | 07/2007 | Checked by: --/----

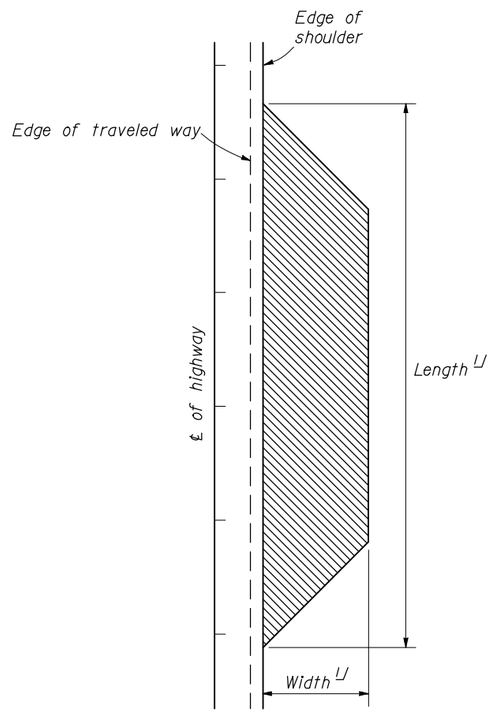
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	E.4



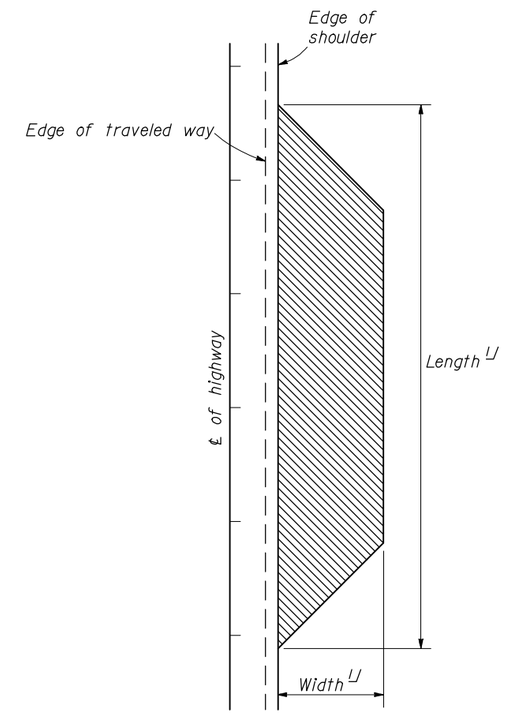
TURNOUT SURFACING DETAIL
AGGREGATE SURFACE



TURNOUT SURFACING DETAIL
ASPHALT SURFACE



PLAN VIEW OF TURNOUT
AGGREGATE SURFACE



PLAN VIEW OF TURNOUT
ASPHALT SURFACE

NOTE:

Match existing turnout grades and areas.

FOOTNOTE:

1/ See sheet E.2 for turnout widths and lengths.

PRELIMINARY

NO SCALE

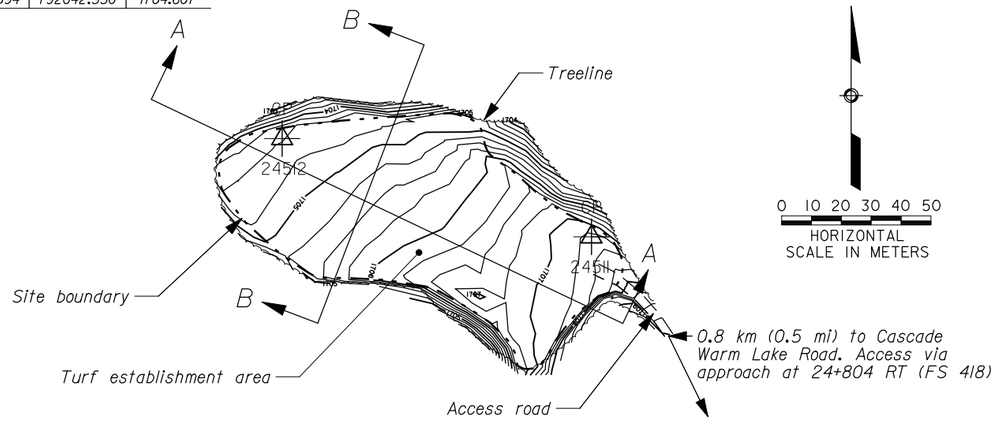
TURNOUT DETAILS

F:\Idaho\Idfh22il_Cascade\3R\Plans\E_Approach_Roads\Id22ilgb.dgn [Date:06-07-2007 1:26PM
Curtis Jorgenson | 07/2007 | Checked by: | Designed by: | --/----

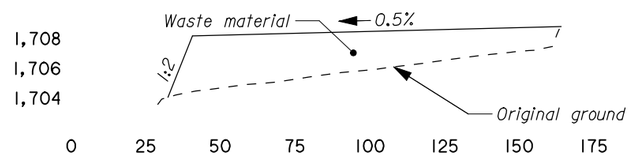
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	G.1

CONTROL POINTS

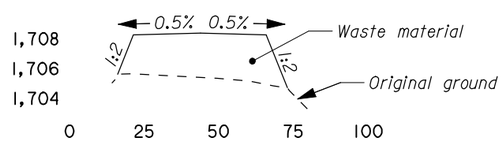
NAME	NORTHING	EASTING	ELEVATION
24511	325134.448	792146.349	1707.326
24512	325167.394	792042.550	1704.607



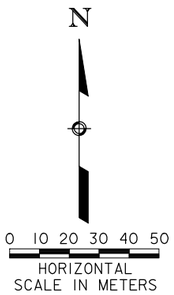
PLAN VIEW



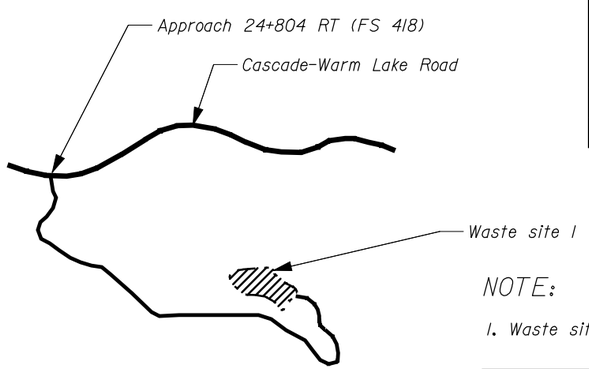
SECTION A-A



SECTION B-B



ITEM 62503-0000 TURF ESTABLISHMENT	
Site Name	Quantity (slurry unit)
Waste Site 1	6.33
TOTAL	6.33

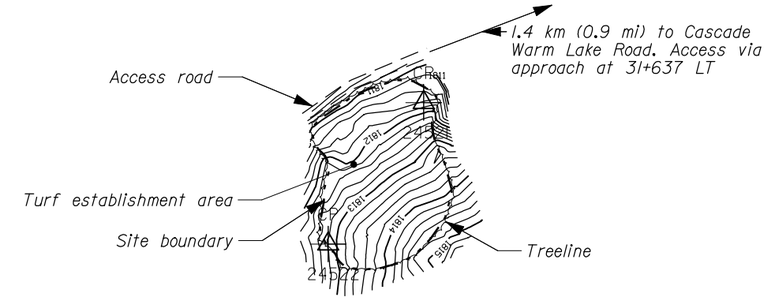


VICINITY MAP - WASTE SITE 1

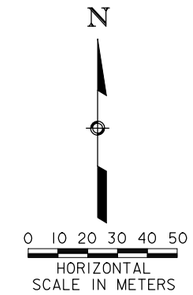
NOTE:

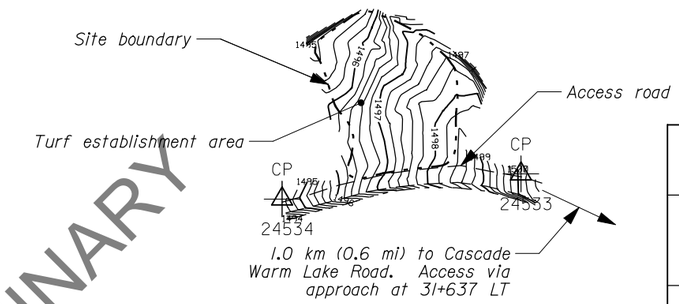
1. Waste site 1 estimated capacity = 16,000 m3

WASTE SITE 1
SLASH DISPOSAL SITE ON FS 418



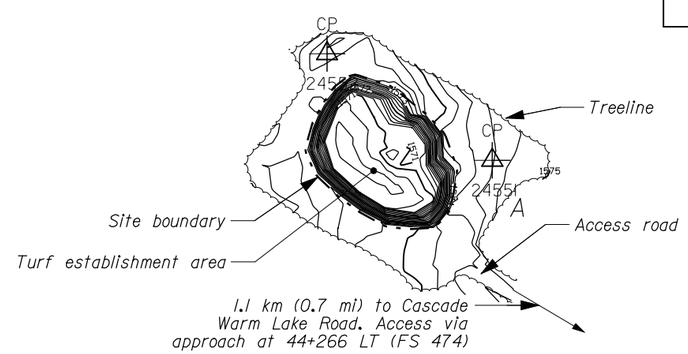
PLAN VIEW
FORMER WASTE SITE 1





PLAN VIEW
FORMER WASTE SITE 2

ITEM 62503-0000 TURF ESTABLISHMENT	
Site Name	Quantity (slurry unit)
Former Waste Site 1	2.23
Former Waste Site 2	1.92
Former Waste Site 3	1.84
TOTAL	5.99



PLAN VIEW
FORMER WASTE SITE 3

CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION
24521	327429.789	794158.574	1811.573
24522	327382.362	794126.571	1812.815
24533	30000.000	20000.000	1500.000
24534	29991.583	19919.922	1494.484
24551	334097.075	804630.349	1574.408
24552	334132.836	804574.931	1573.765

NOTE:

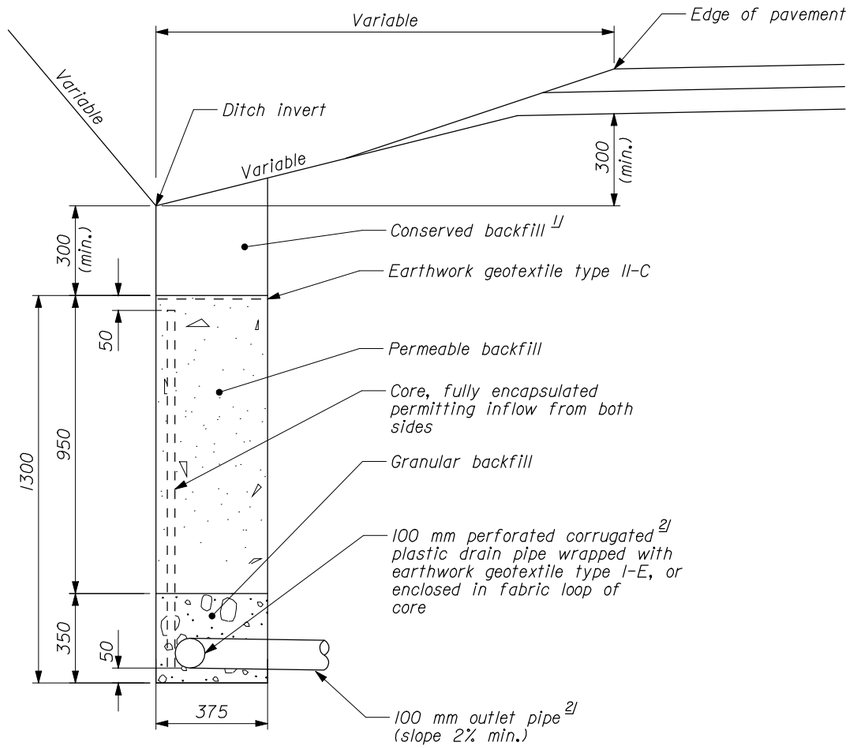
1. See sheet A.3 for vinicity map location

FORMER WASTE SITES 1, 2 AND 3

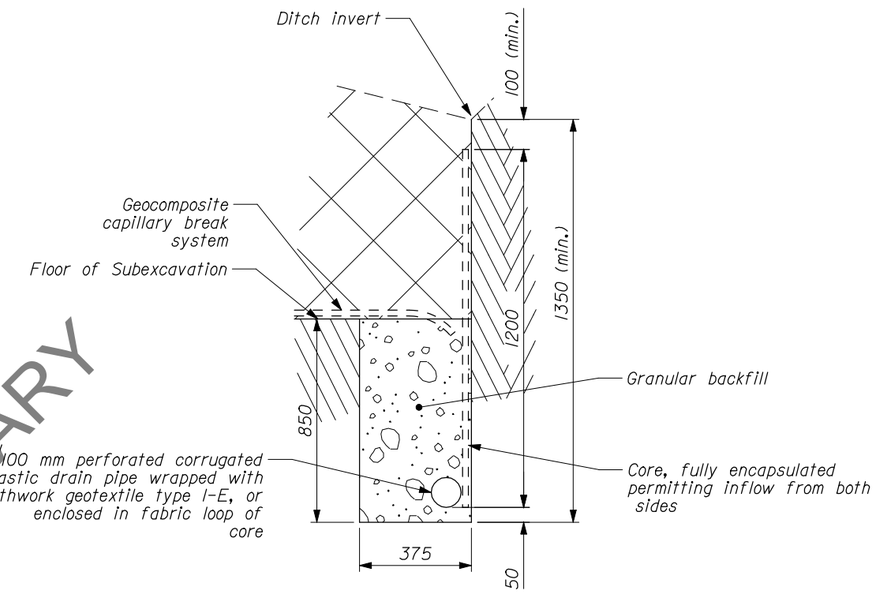
PRELIMINARY

F:\Idaho\Idfh22IL_Cascade\3R\Plans\G_Mat_S_Waste_S\Id22ilmd.dgn [Metric] 07/26/2007 2:18PM
Designed by: Curtis Jorgenson
Checked by: 07/2007
-/----

STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	H.3

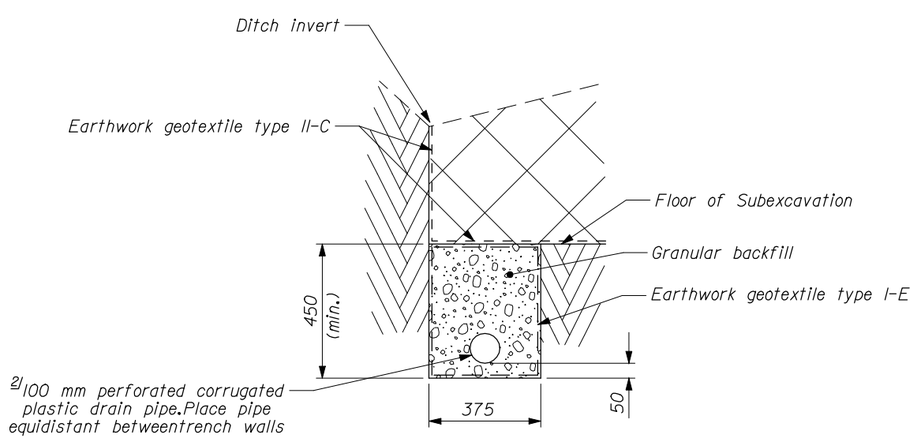


GEOCOMPOSITE UNDERDRAIN SYSTEM, TYPE 1



GEOCOMPOSITE UNDERDRAIN SYSTEM, TYPE 2

PRELIMINARY



STANDARD UNDERDRAIN SYSTEM

NOTE:

1. See sheet H.2 for locations and quantities.

FOOTNOTE:

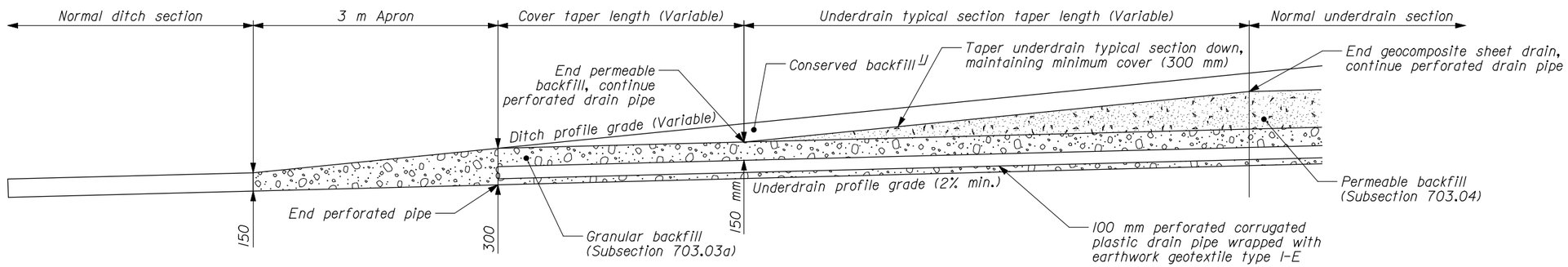
1/ Conserve material from trench excavation for top 300 mm of trench.

2/ Underdrain outlet options (subject to approval by the CO):
1. Outlet to existing culvert.
2. Daylight to ditch (See sheet H.4).
3. Outlet to 100 mm outlet pipe.

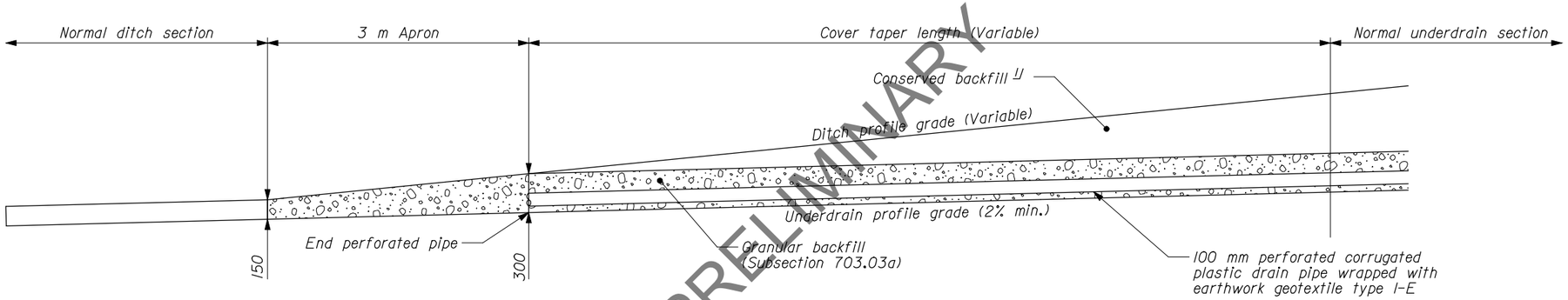
UNDERDRAIN DETAILS

F:\Idaho\Idfh22ll_Cascade\3R\Plans\H_Drainage\Id22lleo.dgn [Default] 26-DEC-2007 1:27PM
Designed by: Curtis Jorgenson 07/2007 Checked by: --/----

STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	H.4

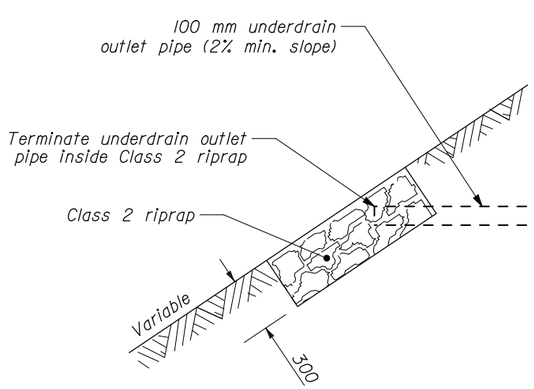


OUTLET IN DITCH - GEOCOMPOSITE UNDERDRAIN SYSTEMS TYPE 1 AND TYPE 2

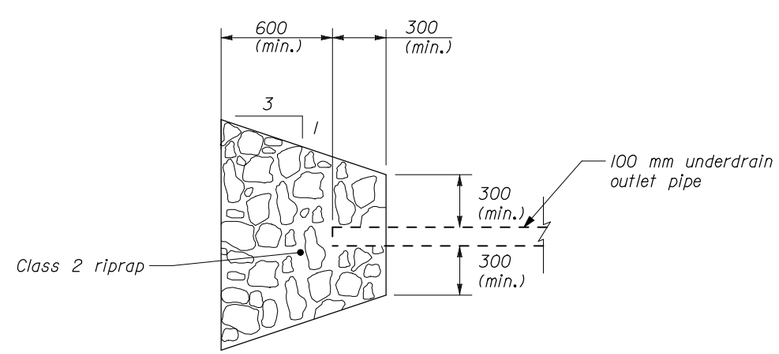


PRELIMINARY

OUTLET IN DITCH - STANDARD UNDERDRAIN SYSTEM



ELEVATION



PLAN

100 mm OUTLET PIPE ENERGY DISSIPATOR

NOTE:

1. Underdrain outlet options (subject to approvalby the CO: outlet to ditch or install 100mm outlet pipes.
2. See sheet H.3 for underdrain details.
3. See sheet H.2 for underdrain locations.
4. Dimensions not labeled are in millimeters

FOOTNOTE:

1/ Conserve material from trench excavation.

UNDERDRAIN OUTLET DETAILS

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Designed by: Curtis Jorgenson
07/2007 Checked by:
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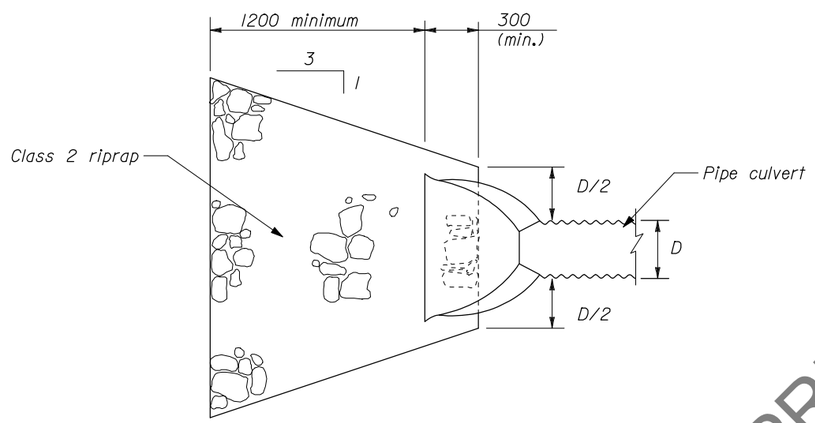
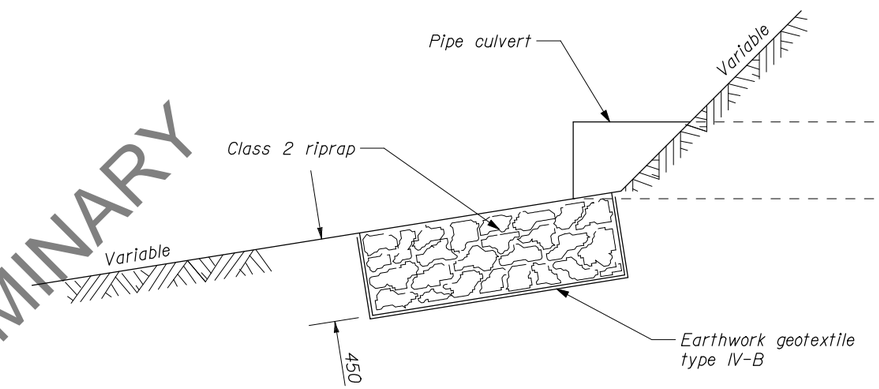
STATE	PROJECT	SHEET NUMBER
ID	PFH 22-1(11)	H.5



PLAN



ELEVATION

PRELIMINARY

PIPE CULVERT ENERGY DISSIPATOR DETAIL

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Checked by: --/----
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