



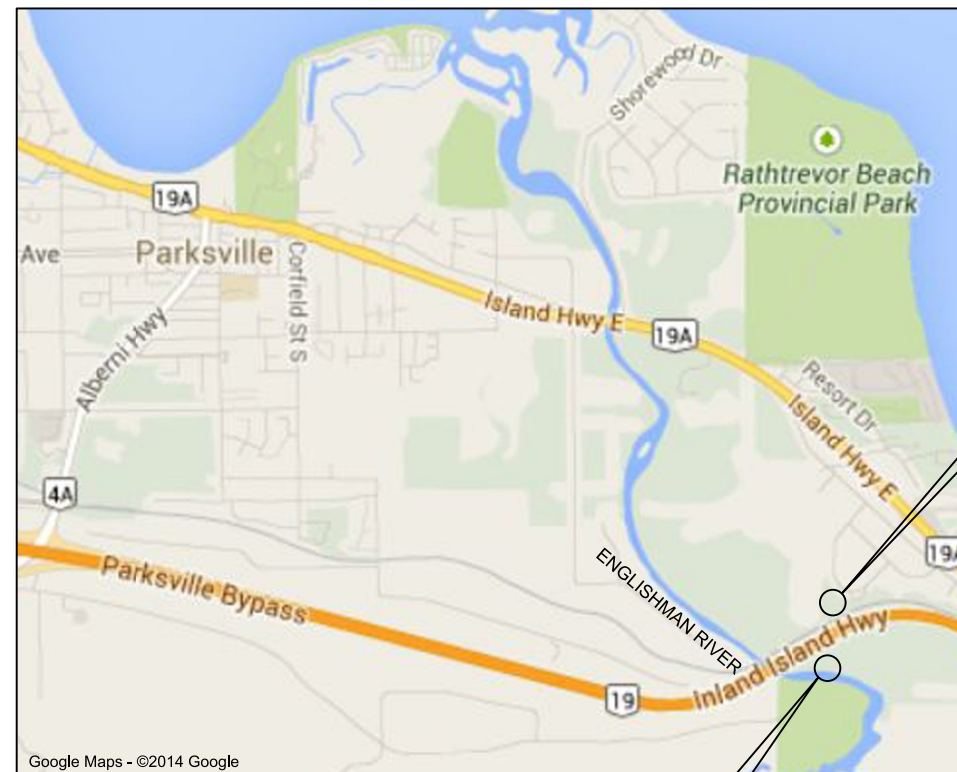
englishman river
WATER SERVICE

ENGLISHMAN RIVER WATER SERVICE INTAKE TREATMENT PLANT AND SUPPLY MAINS

PRE-DESIGN REVIEW DRAWINGS
DECEMBER 2015

DRAWING INDEX

DWG NO.	DRAWING TITLE
<u>GENERAL</u>	
G-001	COVER SHEET, DRAWING INDEX AND LOCATION MAP
G-003	OVERALL SITE PLAN
<u>CIVIL</u>	
C-130	DISTRIBUTION MAIN UPGRADES
<u>PROCESS</u>	
P-001	WATER TREATMENT PLANT - HYDRAULIC PROFILE
P-002	WATER TREATMENT PLANT - PROCESS FLOW DIAGRAM
<u>MECHANICAL</u>	
M-100	RAW WATER INTAKE AND WEIR - SITE PLAN
M-101	RAW WATER INTAKE AND WEIR - SECTIONS
M-102	RAW WATER INTAKE AND WEIR - DETAILS
M-110	RAW WATER PUMP STATION - SITE PLAN
M-121	WATER TREATMENT PLANT - FOUNDATION LEVEL PLAN
M-122	WATER TREATMENT PLANT - GRADE LEVEL PLAN
M-123	WATER TREATMENT PLANT - UPPER PLAN
M-124	WATER TREATMENT PLANT - ROOF PLAN
M-130	WATER TREATMENT PLANT - SECTIONS - SHEET 1
<u>ARCHITECTURAL</u>	
A-120	WATER TREATMENT PLANT - GRADE LEVEL PLAN
A-121	WATER TREATMENT PLANT - SECOND LEVEL PLAN
A-125	WATER TREATMENT PLANT - SECTIONS - SHEET 1
<u>ELECTRICAL</u>	
E-001	SINGLE LINE DIAGRAM - SHEET 1
E-002	SINGLE LINE DIAGRAM - SHEET 2
<u>CIVIL</u>	
C-G001	KWL - DRAWING KEY PLAN AND INDEX



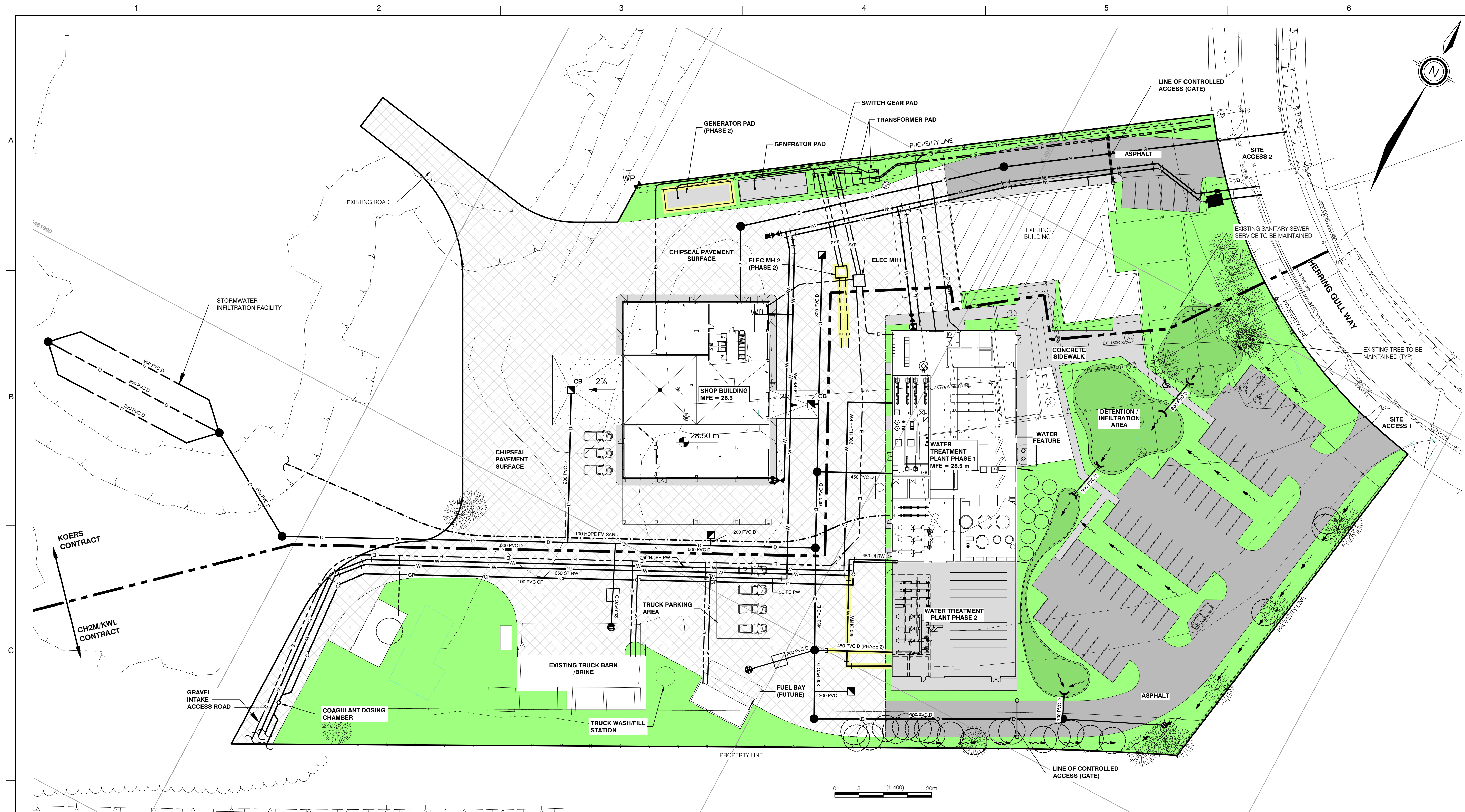
PROPOSED INTAKE
AND PUMP STATION

PROPOSED WTP

LOCATION MAP

NTS

CH2MHILL®



LEGEND

EXISTING	PROPOSED
UTILITIES	
— E —	— E —
— G —	— G —
STRUCTURES	
VEGETATION	

EXISTING	PROPOSED
STORM	
— D —	— D —
— D —	— D —
— d —	— d —
HYDROLOGY	

EXISTING	PROPOSED
PROCESS	
— — —	— — —
— — —	— — —
WATER	
— W —	— W —
— W —	— W —
— W —	— W —
— W —	— W —
— W —	— W —

EXISTING	PROPOSED
SURFACE TREATMENTS	
SANITARY	
— S —	— S —

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NO.	DATE	REVISION	CHK	AF	DR	JH	APVD	EM
B	2015/11/16	RE-ISSUED FOR PRE-DESIGN REVIEW	RS/AF	EM				
A	2014/05/08	ISSUED FOR PRE-DESIGN REVIEW	EM	BY	APVD			

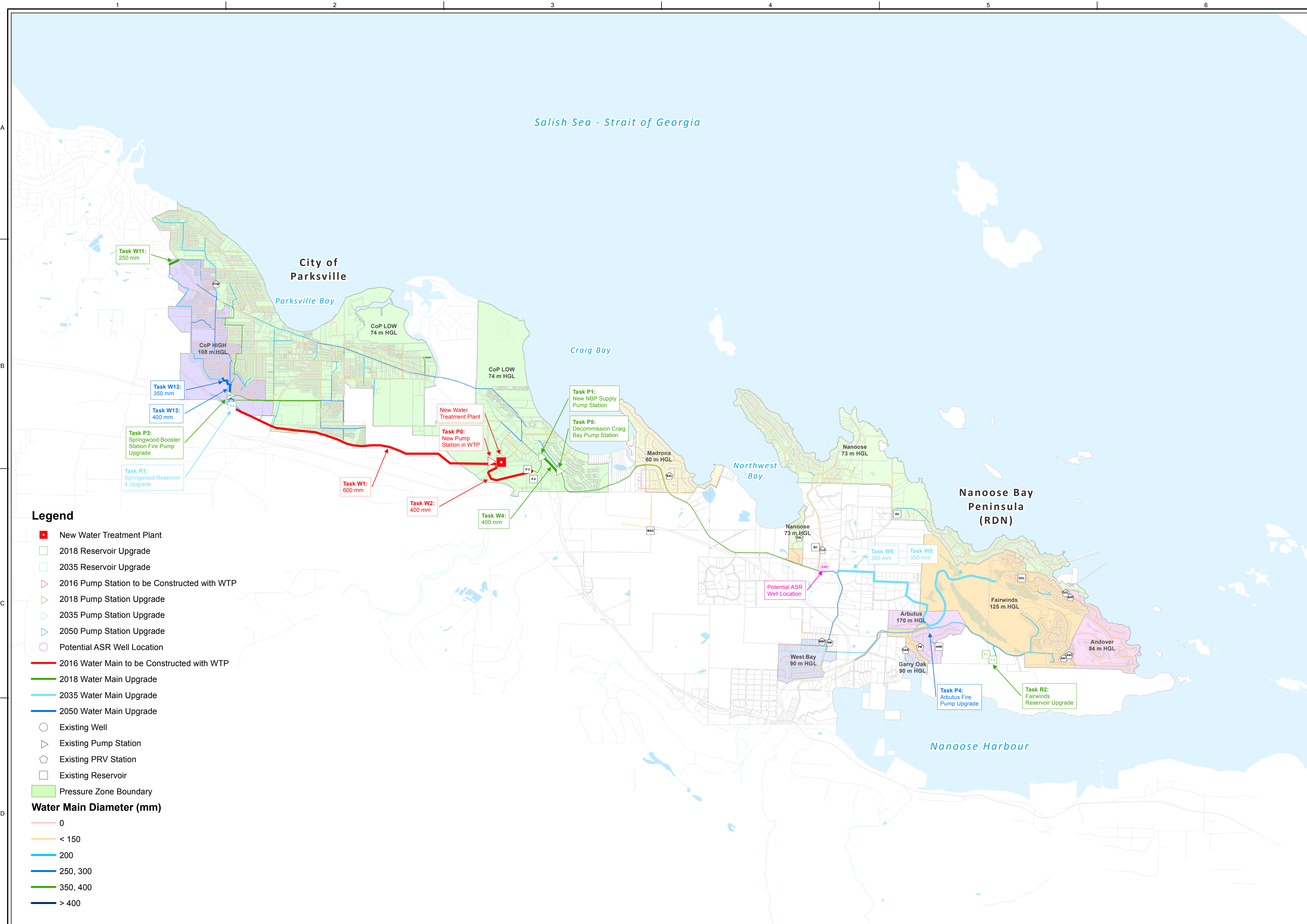
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WATER SERVICE
 ENGLISHMAN RIVER
 WATER SERVICE INTAKE,
 TREATMENT PLANT AND SUPPLY MAINS

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 consulting engineers

CIVIL
FIGURE C-115
WATER TREATMENT PLANT
SITE SERVICING PLAN

1:400
 VERIFY SCALE
 BAR IS ONE 25mm ON ORIGINAL DRAWING
 0 25mm

DATE 2014/05/08
 PROJ 476148
 DWG C-115
 SHEET 5 of 27



- Legend**
- New Water Treatment Plant
 - 2018 Reservoir Upgrade
 - 2035 Reservoir Upgrade
 - ▷ 2016 Pump Station to be Constructed with WTP
 - ▷ 2018 Pump Station Upgrade
 - ▷ 2035 Pump Station Upgrade
 - ▷ 2050 Pump Station Upgrade
 - Potential ASR Well Location
 - 2016 Water Main to be Constructed with WTP
 - 2018 Water Main Upgrade
 - 2035 Water Main Upgrade
 - 2050 Water Main Upgrade
 - Existing Well
 - Existing Pump Station
 - Existing PRV Station
 - Existing Reservoir
 - Pressure Zone Boundary
- Water Main Diameter (mm)**
- 0
 - < 150
 - 200
 - 250, 300
 - 350, 400
 - > 400

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NO.	DATE	REVISION	BY	APVD
C	10/22/2015	ISSUED FOR REVISED PRE-DESIGN REPORT	RS	EM
B	06/02/2014	ISSUED FOR FINAL PRE-DESIGN REPORT	RS	EM
A	05/12/2014	ISSUED FOR PRE-DESIGN REVIEW	RS	EM
DR		REVISION	CHK	APVD
			R. SINNOTT	E. MORRIS

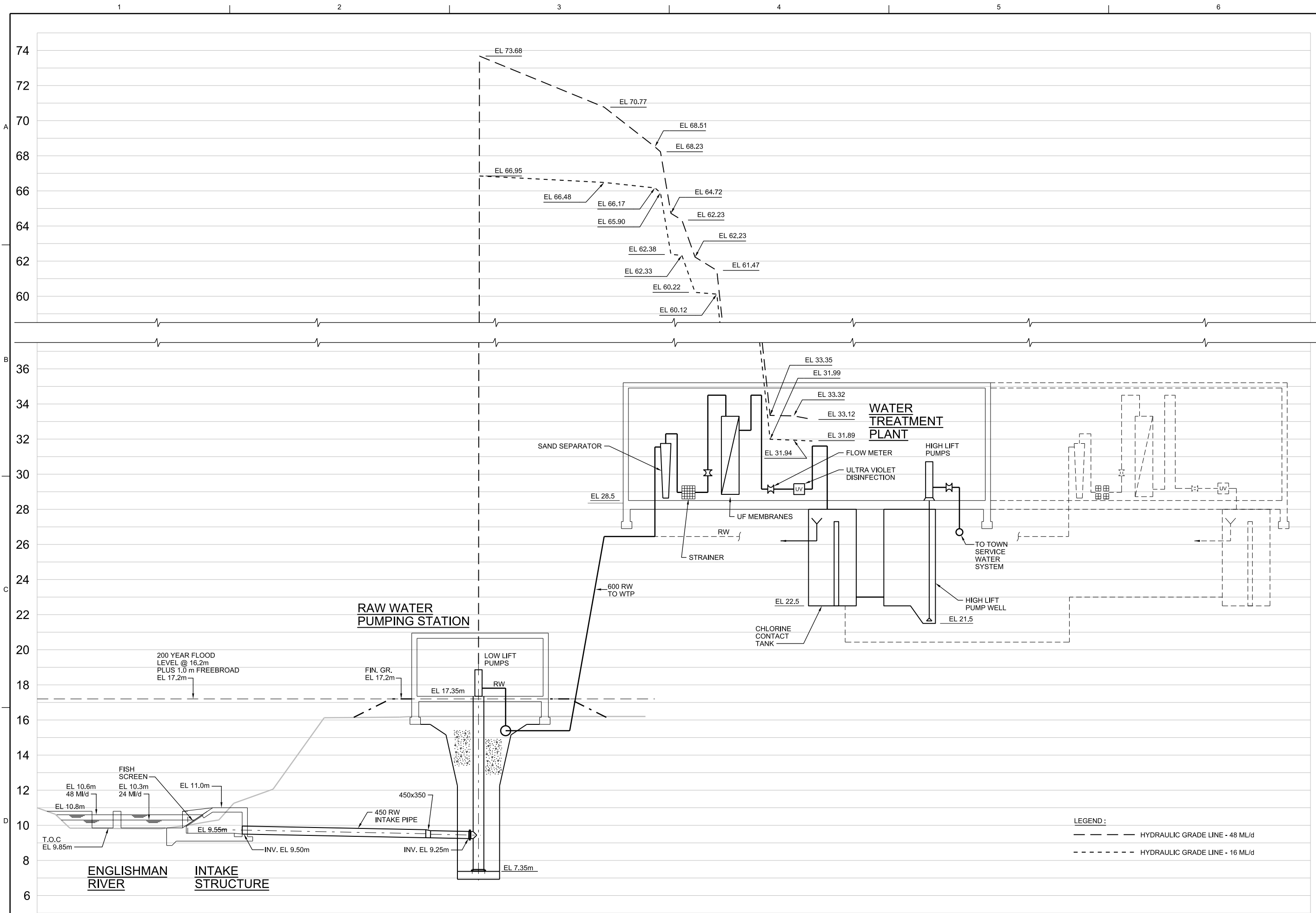
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WATER SERVICE
ENGLISHMAN RIVER WATER SERVICE INTAKE, TREATMENT PLANT AND SUPPLY MAINS

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DISTRIBUTION MAIN UPGRADES

1:30,000
VERIFY SCALE
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DATE	2015/10/22
PROJ	476148
DWG	C-130
SHEET	6 of 27



LEGEND:
 - - - - - HYDRAULIC GRADE LINE - 48 ML/d
 - - - - - HYDRAULIC GRADE LINE - 16 ML/d

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NO.	DATE	REVISION	BY	APVD
C	12/11/15	ISSUED FOR PRE-DESIGN REVIEW	JGA	B ENGLESON
B	10/09/15	ISSUED FOR PRE-DESIGN REVIEW	RTT	JGA
A	05/12/14	ISSUED FOR PRE-DESIGN REVIEW	BY	APVD

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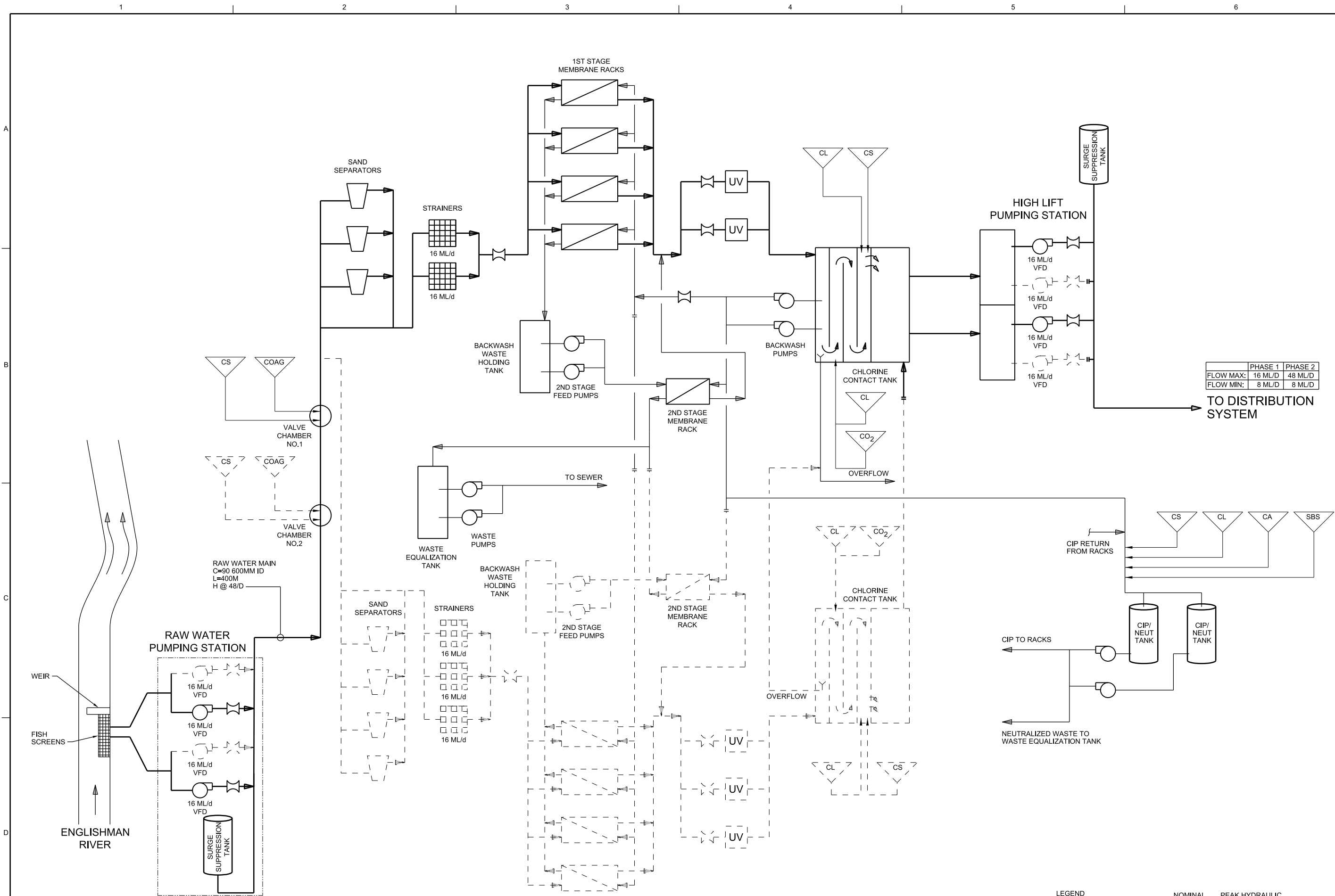
CH2MHILL
 PROCESS
 WATER TREATMENT PLANT HYDRAULIC PROFILE

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 PROJ: 476148
 DWG: P-001
 SHEET: 9 of 24

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PRE-DESIGN REVIEW



PROCESS FLOW DIAGRAM

LEGEND	NOMINAL CAPACITY (ML/d)	PEAK HYDRAULIC CAPACITY (ML/d)
PHASE 1 WORK	16	21.6
PHASE 2 WORK	24-48	24-48

	PHASE 1	PHASE 2
FLOW MAX:	16 ML/D	48 ML/D
FLOW MIN:	8 ML/D	8 ML/D

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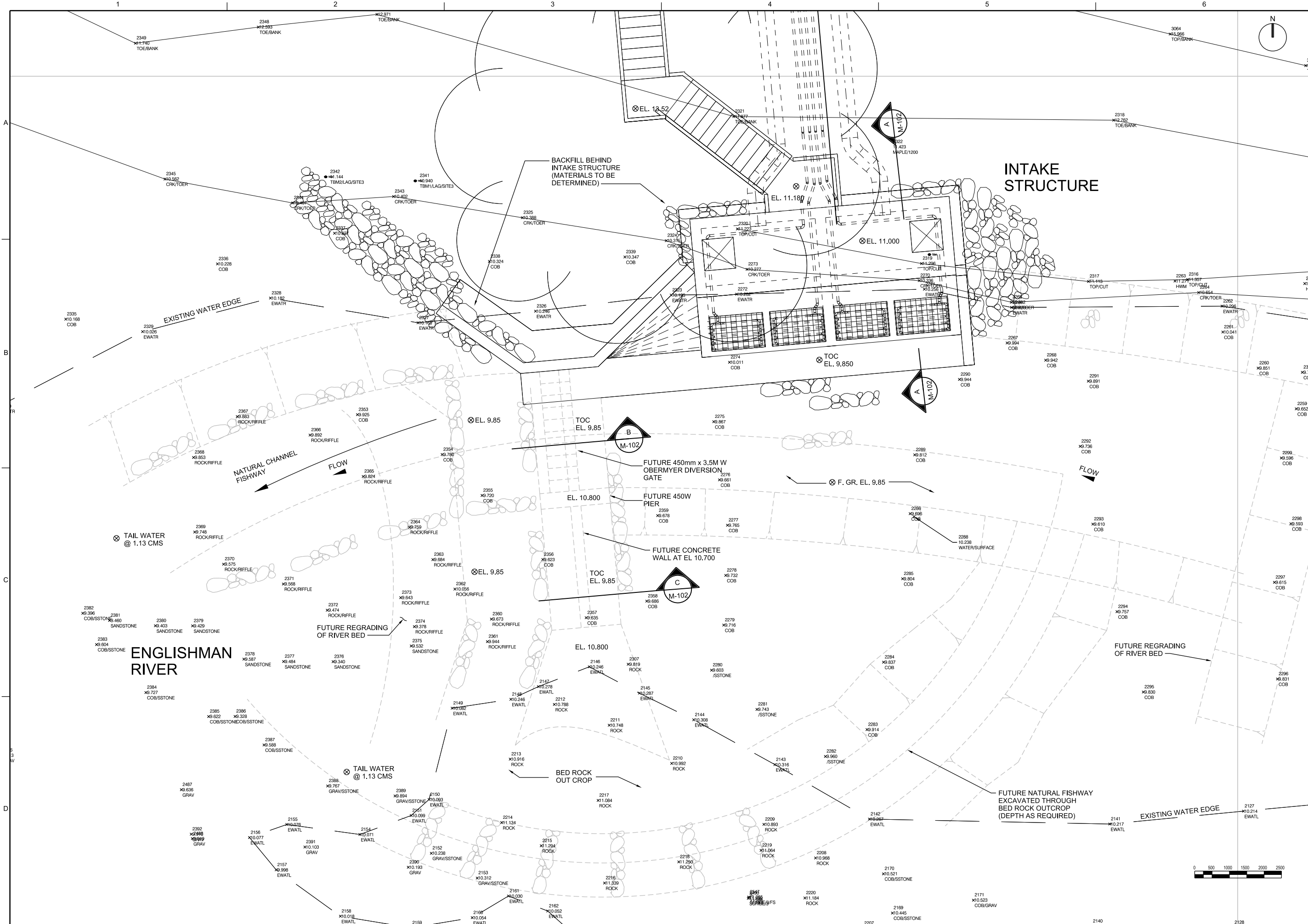
NO.	DATE	REVISION	CHK	APVD	DR	DSGN
B	12/11/15	ISSUED FOR PRE-DESIGN REVIEW	R.THORLEY	J.GARCIA	J.GARCIA	J.GARCIA
A	05/12/14	ISSUED FOR PRE-DESIGN REVIEW	R.THORLEY	J.GARCIA	J.GARCIA	J.GARCIA

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 ENGLISHMAN RIVER WATER SERVICE INTAKE.
 TREATMENT PLANT AND SUPPLY MAINS

CH2MHILL
 PROCESS WATER TREATMENT PLANT PROCESS FLOW DIAGRAM

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DWG	P-002
SHEET	of



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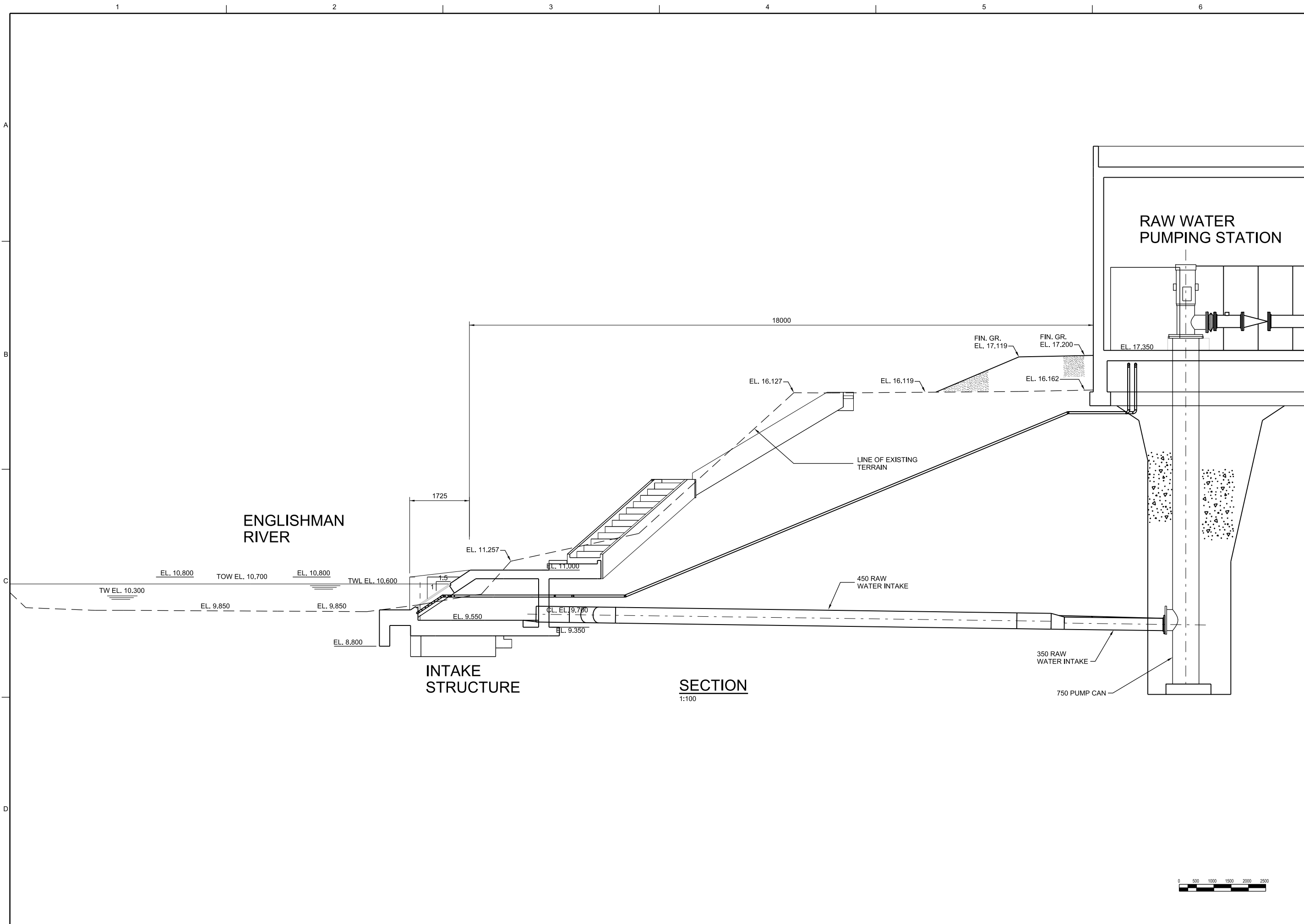
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CH2MHILL
 MECHANICAL
 RAW WATER INTAKE AND WEIR
 SITE PLAN

1:100
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 DWG M-100
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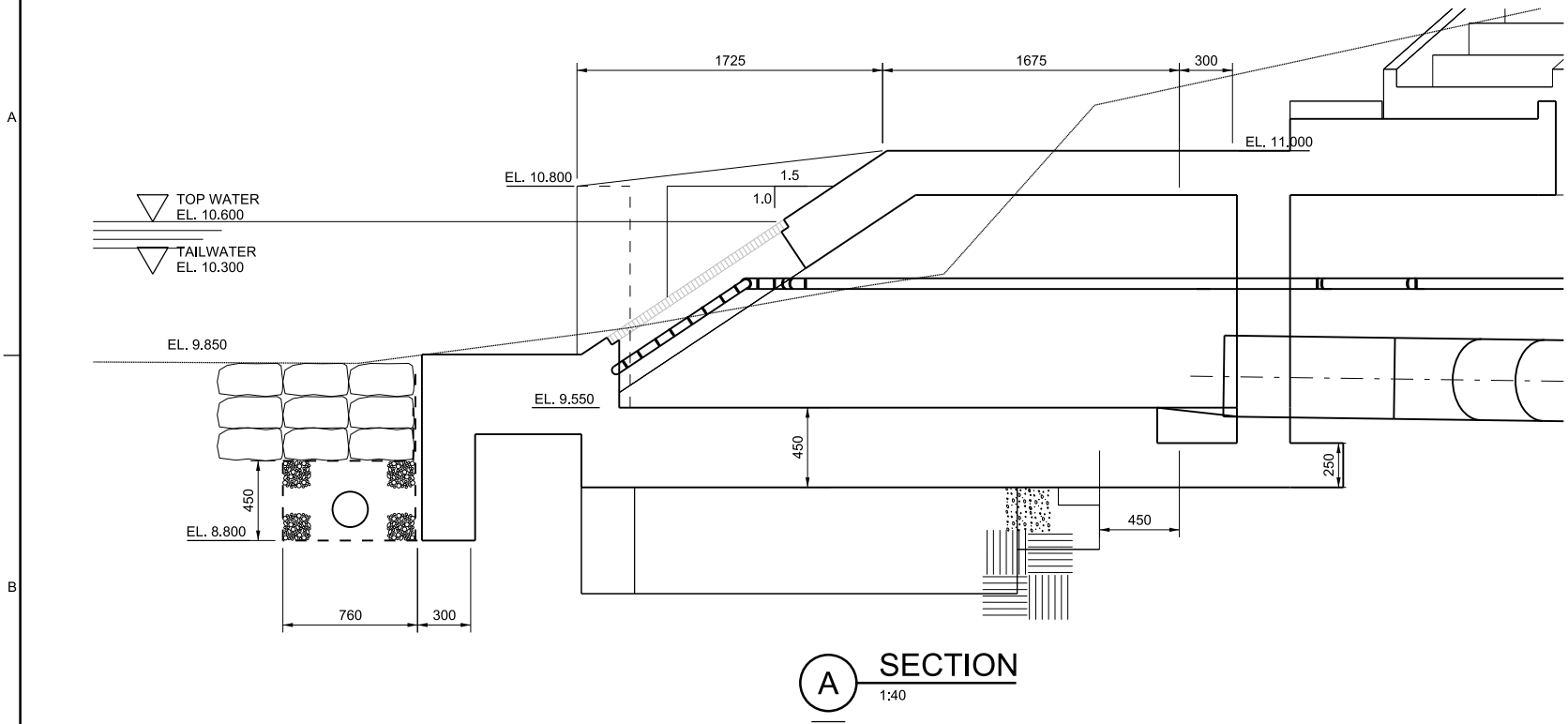
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 ENGLISHMAN RIVER
 WATER SERVICE INTAKE,
 TREATMENT PLANT AND SUPPLY MAINS

CH2MHILL
 MECHANICAL
 RAW WATER INTAKE AND WEIR
 SECTIONS

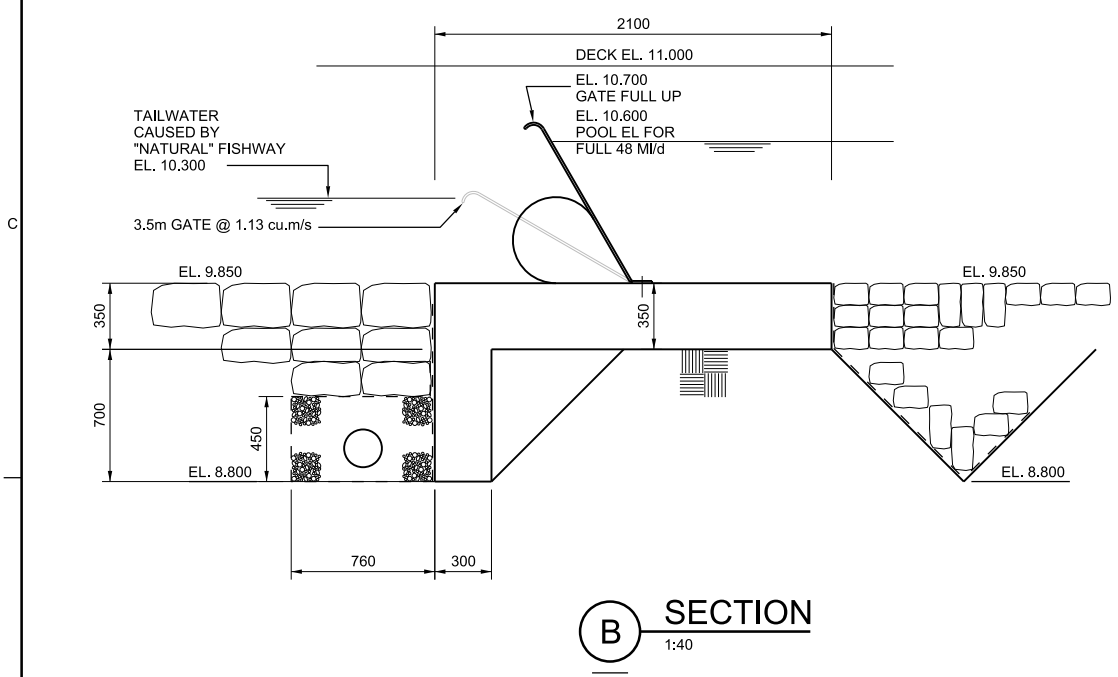
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 PROJ 476148
 DWG M-101
 SHEET of

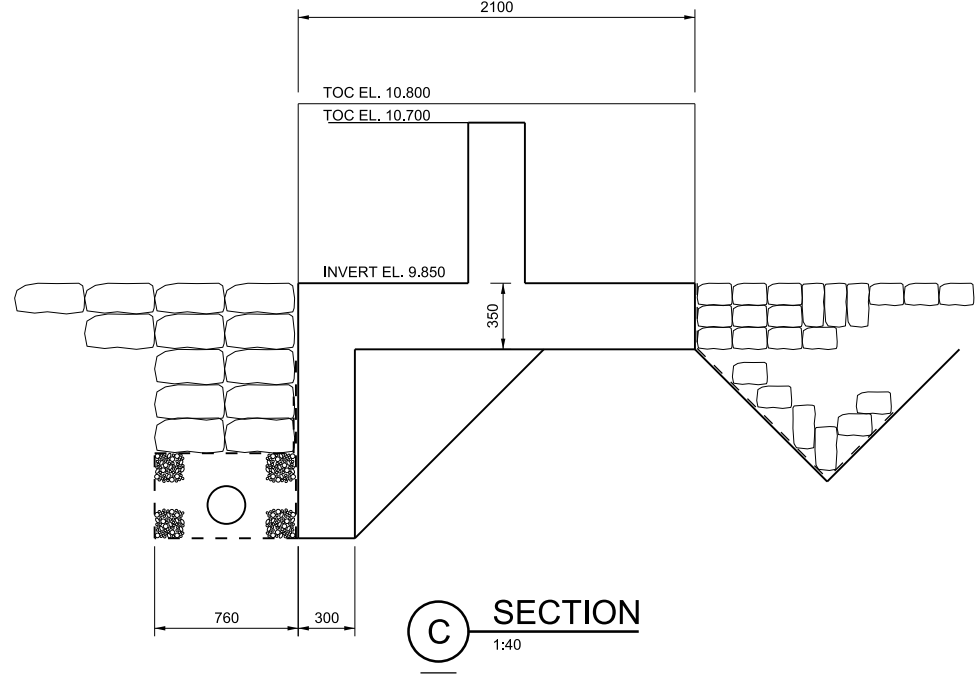
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A SECTION
1:40



B SECTION
1:40



C SECTION
1:40

FUTURE IN RIVER WORKS DETAILS
1:40

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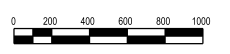
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B	12/11/15	ISSUED FOR PRE-DESIGN REVIEW	JGA	J GARCIA
A	05/12/14	ISSUED FOR PRE-DESIGN REVIEW	JG/KM	B COOPER
NO.			DATE	REVISION
DSGN			J KANYUCHIK MAINS	DR
NO.			DATE	REVISION
BY			APVD	B ENGLESON



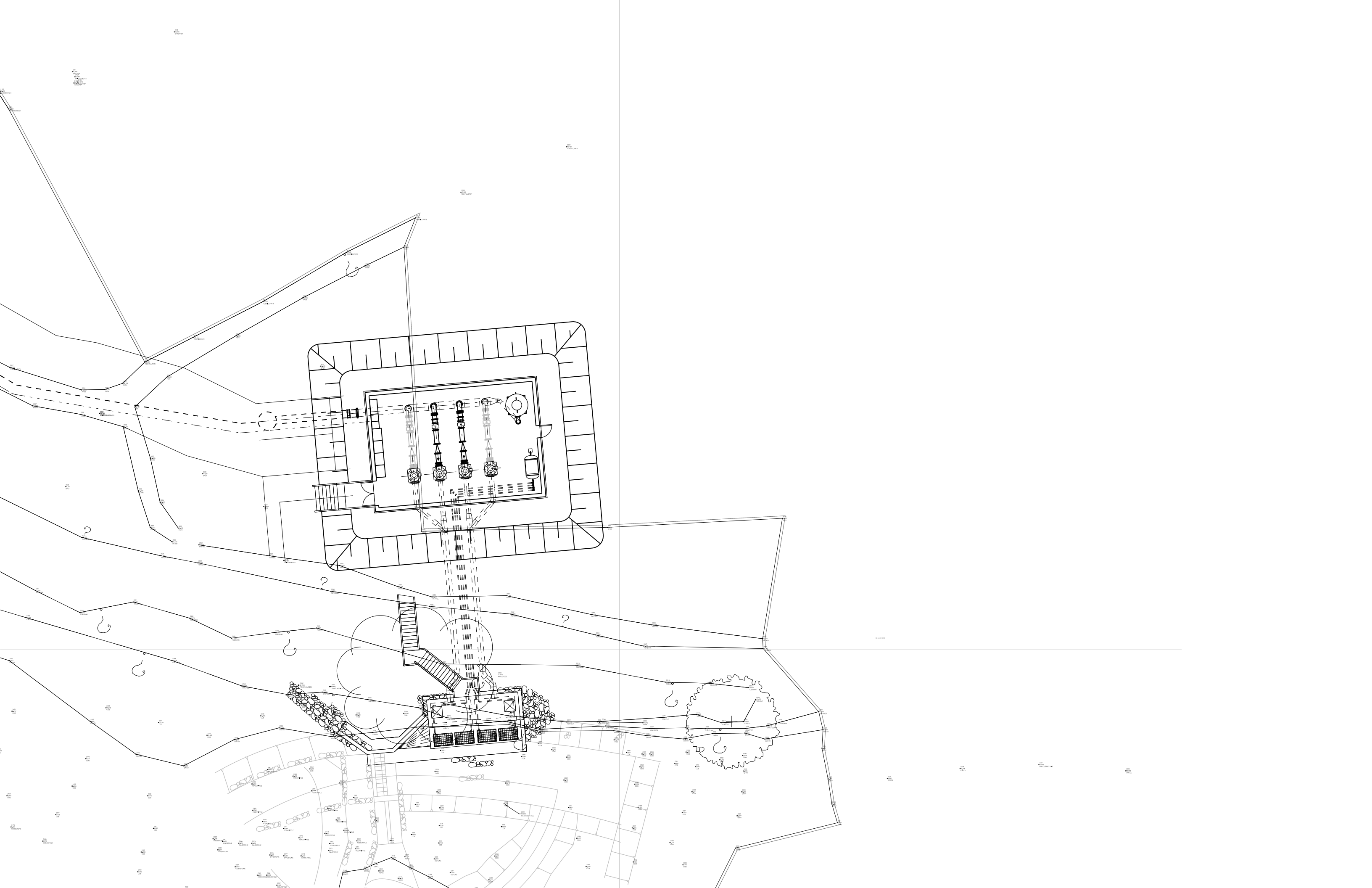
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RAW WATER INTAKE AND WEIR DETAILS

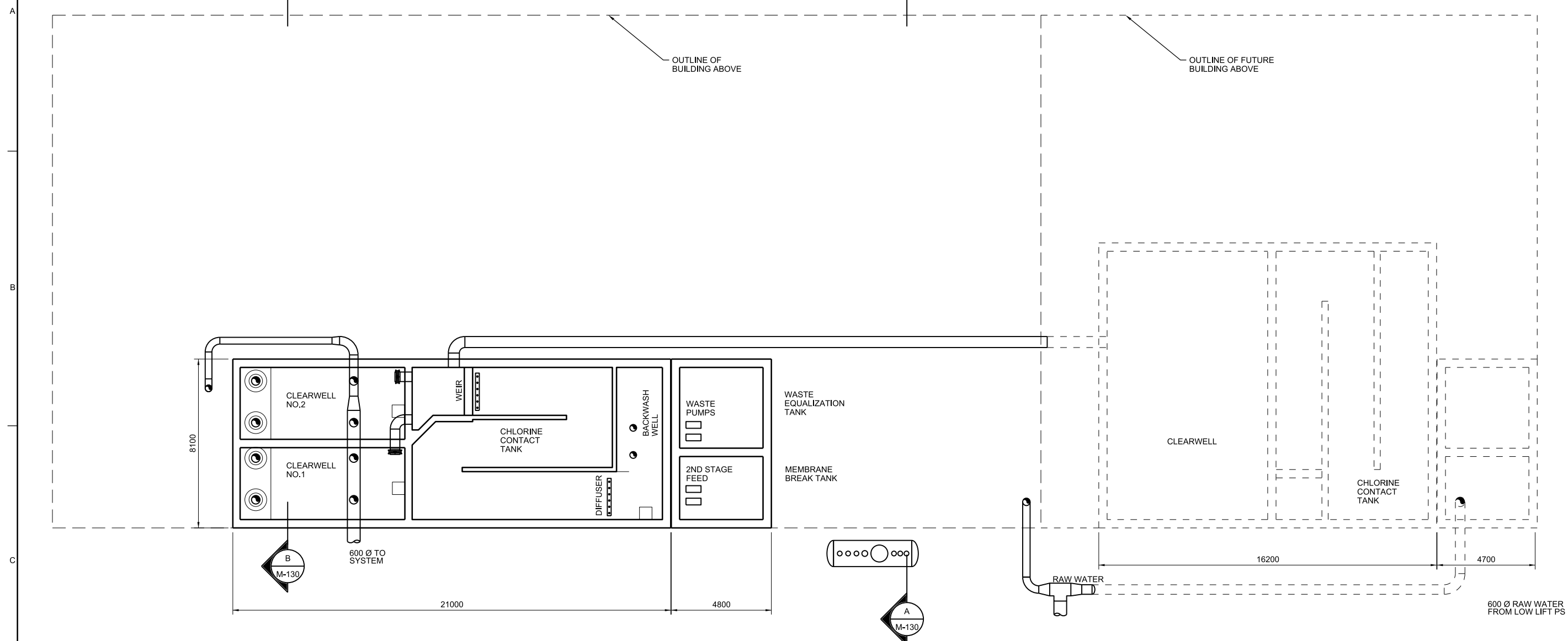
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PRE-DESIGN REVIEW



1 2 3 4 5 6



FOUNDATION PLAN
1:200

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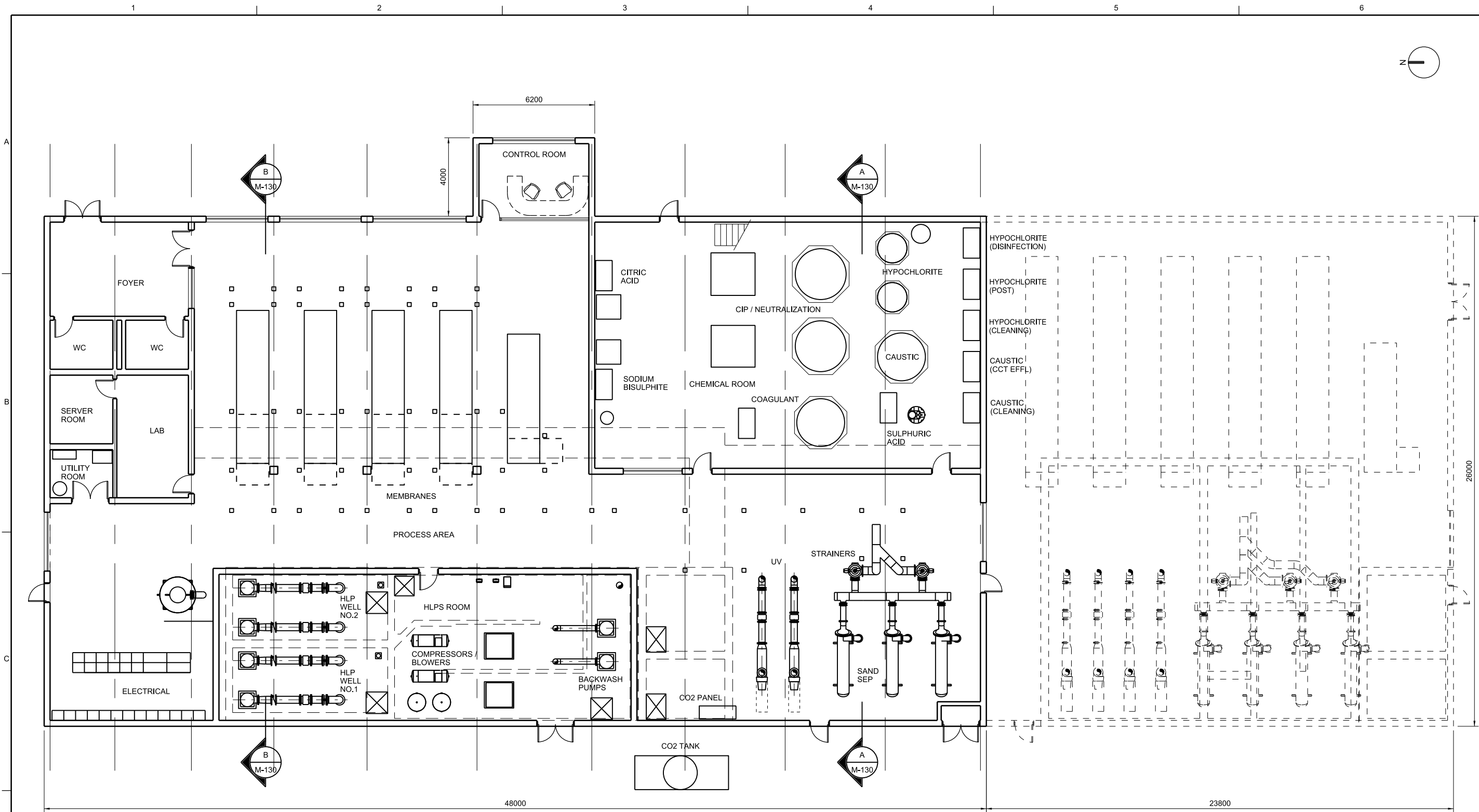
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MECHANICAL
WATER TREATMENT PLANT
FOUNDATION LEVEL PLAN

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PRE-DESIGN REVIEW



GRADE LEVEL PLAN
1:200



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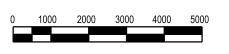
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ENGLISHMAN RIVER WATER SERVICE INTAKE, TREATMENT PLANT AND SUPPLY MAINS

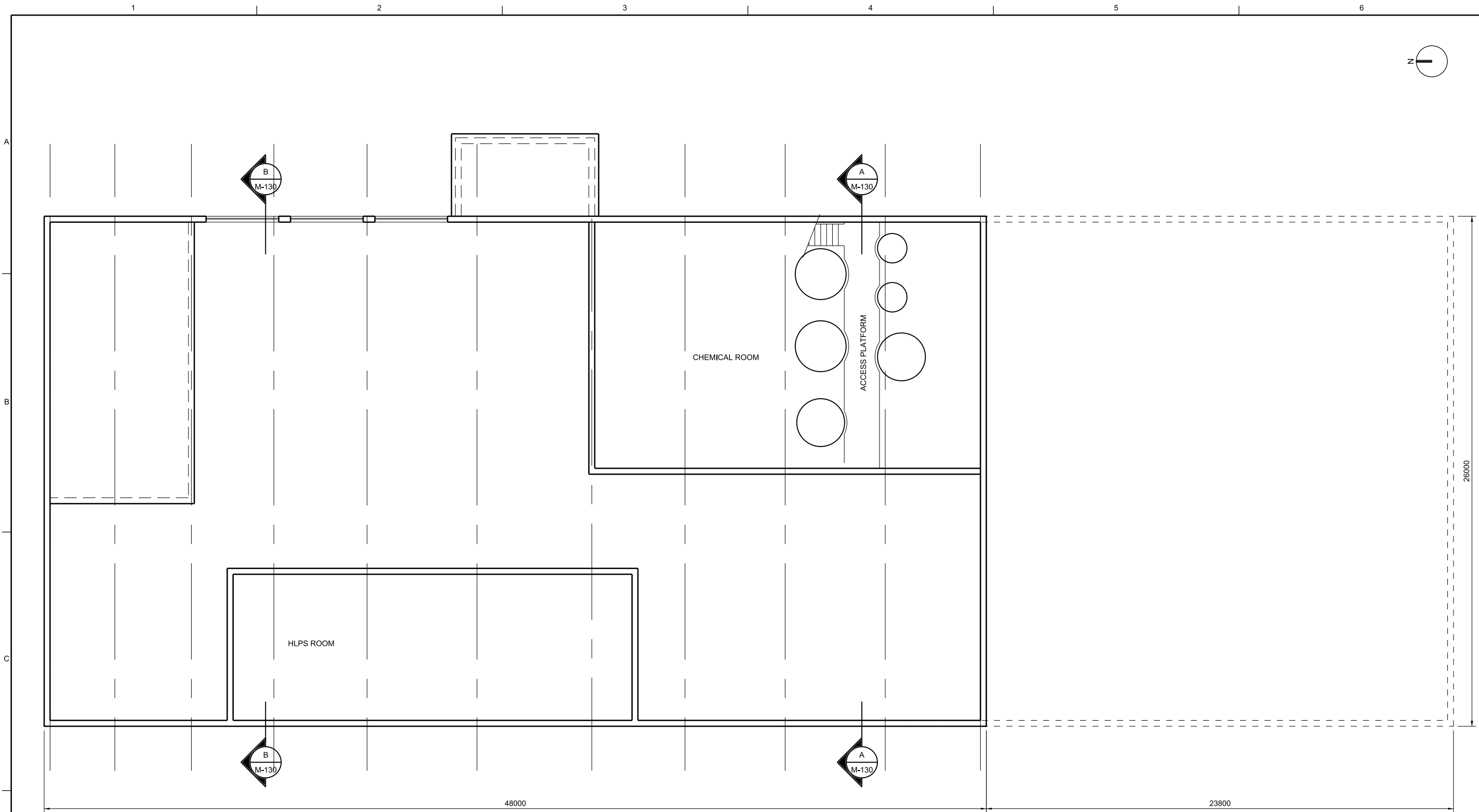
DR: R. THORLEY
CHK: J. GARCIA
APVD: B. ENGLESON

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MECHANICAL
WATER TREATMENT PLANT
GRADE LEVEL PLAN

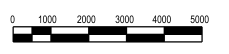
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DWG: M-122
SHEET: of





UPPER PLAN
1:200



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RTT	JGA
JG/KM	BE
BY	APVD
NO.	DATE
DSGN	DR
J. GARCIAK MAINS	R. THORLEY
J. GARCIAK MAINS	J. GARCIAK
APVD	APVD
B. ENGLESON	B. ENGLESON

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TREATMENT PLANT AND SUPPLY MAINS

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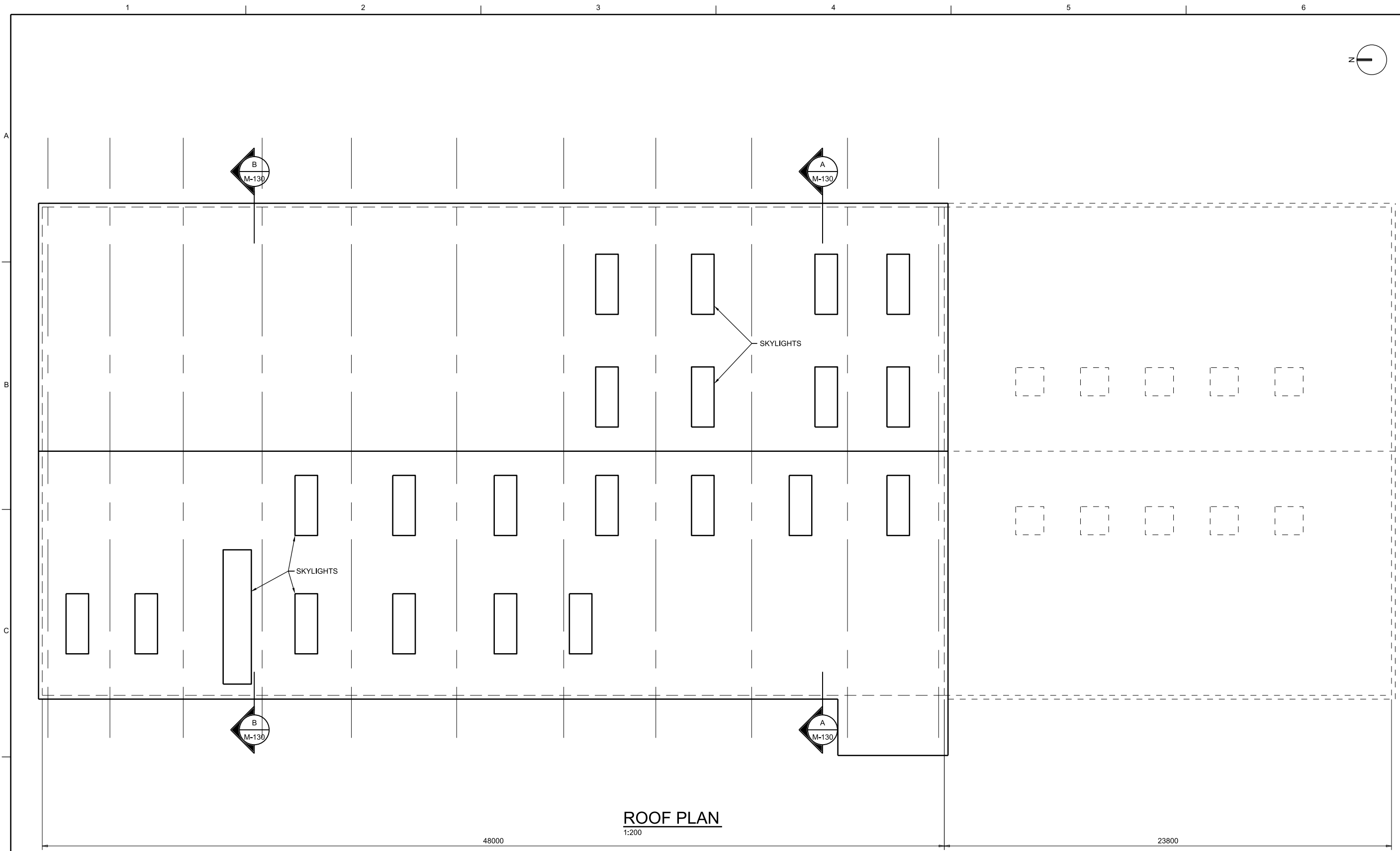
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PRE-DESIGN REVIEW



ROOF PLAN
1:200

48000

23800



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JG/KM	BE
BY	APVD
NO.	DATE
DGN	DR
J. GARCIAK MAINS	R. THORLEY
J. GARCIAK MAINS	J. GARCIAK
CHK	APVD
REVISION	
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ENGLISHMAN RIVER
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TREATMENT PLANT AND SUPPLY MAINS

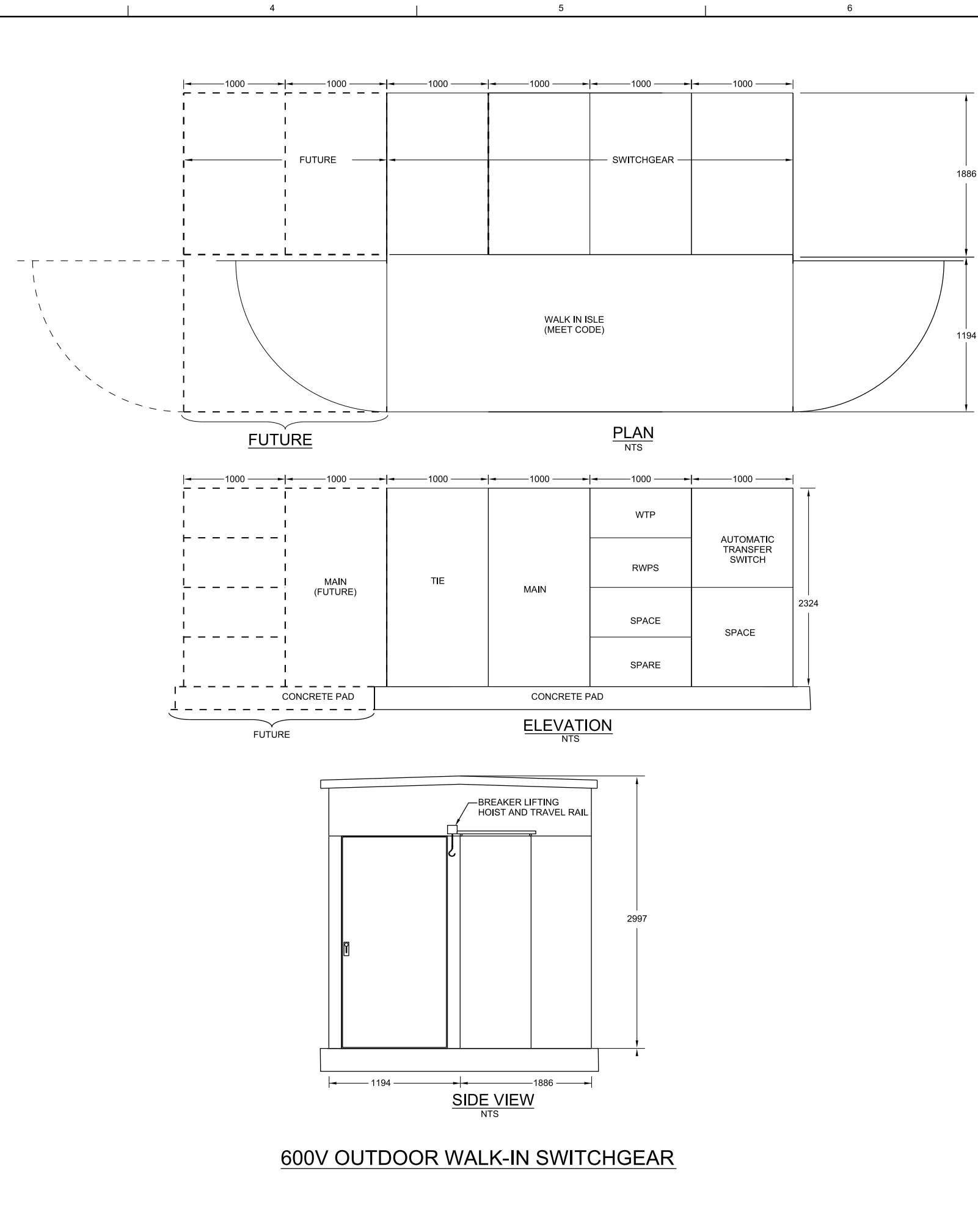
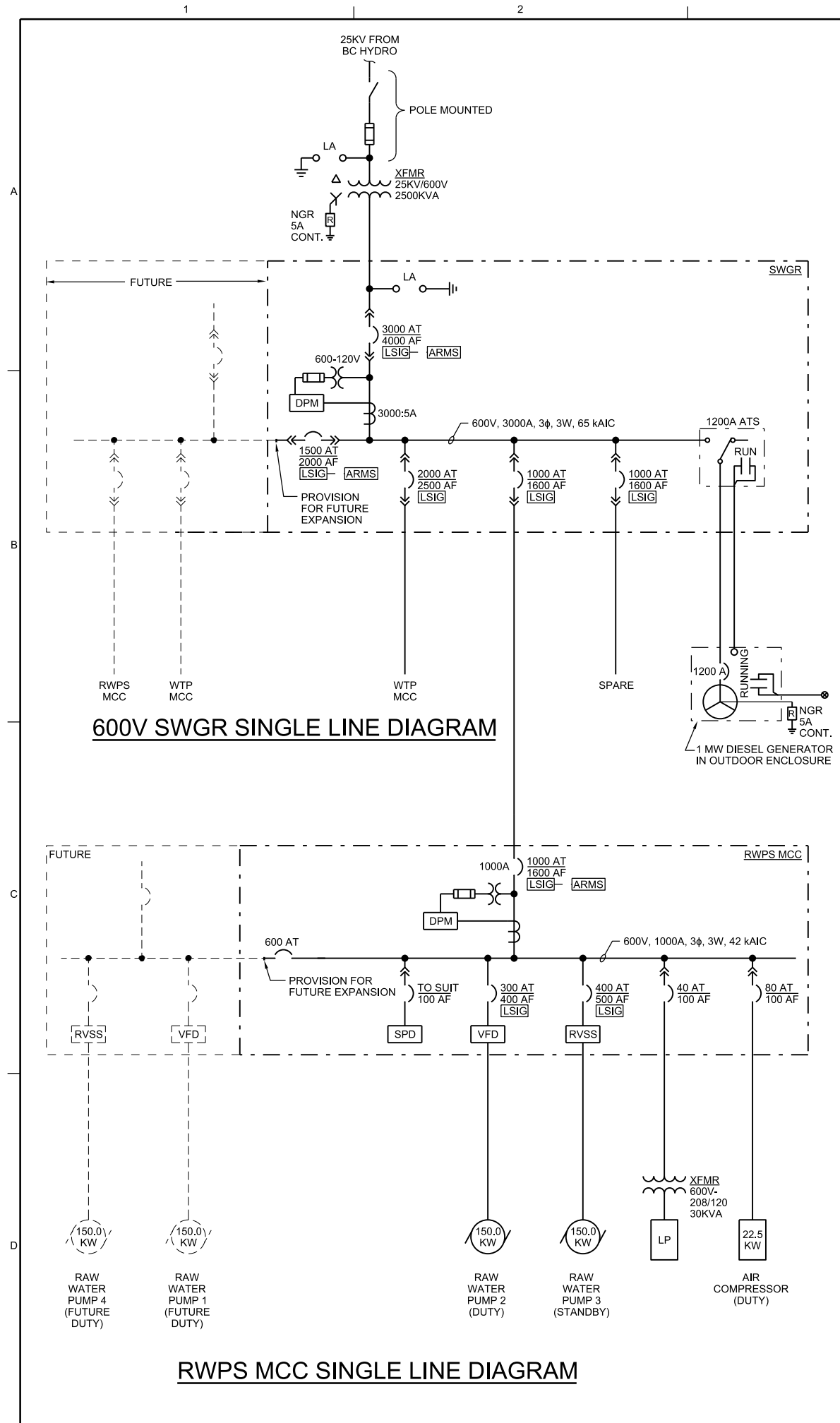
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MECHANICAL
**WATER TREATMENT PLANT
ROOF PLAN**

DATE	05/12/14
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DWG	M-124
SHEET	of

PRE-DESIGN REVIEW





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ELECTRICAL
SINGLE LINE DIAGRAM
SHEET 1

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DR: W. THIESSEN
CHK: J. HJELMBERG
R. HARBERT
APVD: B. ENGLESON

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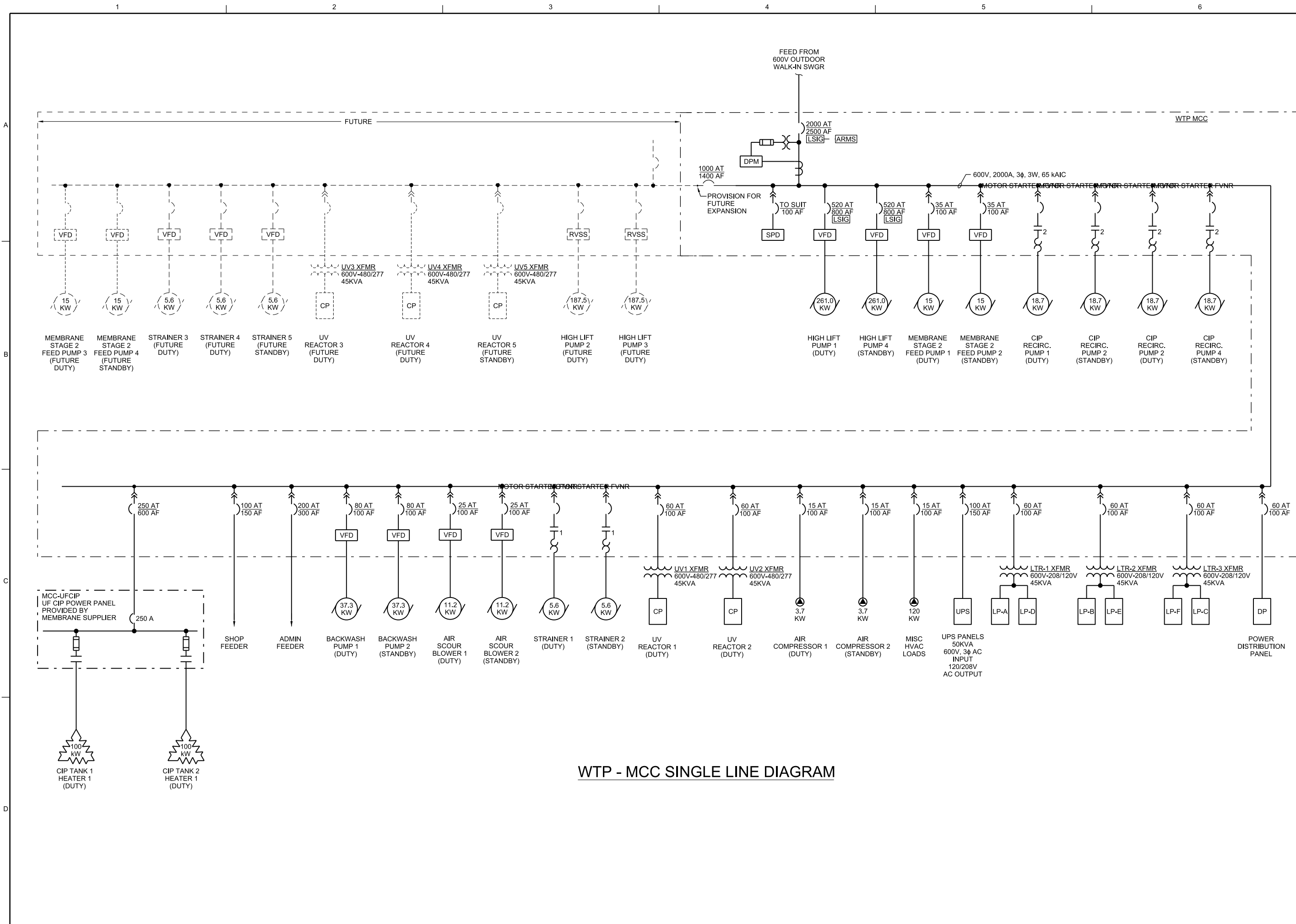
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PRE-DESIGN REVIEW



WTP - MCC SINGLE LINE DIAGRAM

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WT	BY	APVD
RTT	WT	BE
REVISION		
NO.	DATE	CHK
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A	05/12/14	R. HARBERT
DR		
W. THIESSEN		

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CH2MHILL
 ELECTRICAL
 SINGLE LINE DIAGRAM
 SHEET 2

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DATE: 05/12/14
 PROJ: 476148
 DWG: E-002
 SHEET: of