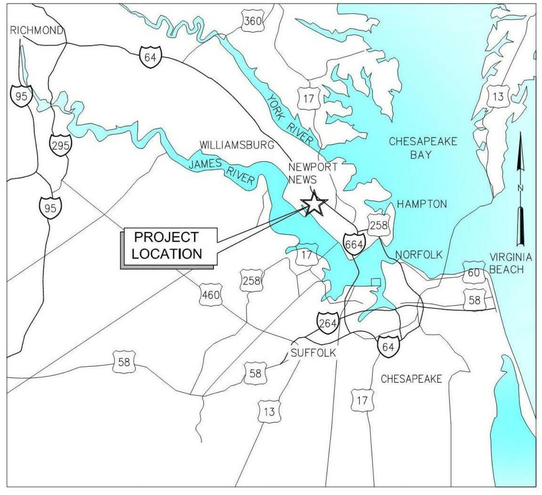
HAMPTON ROADS SANITATION DISTRICT

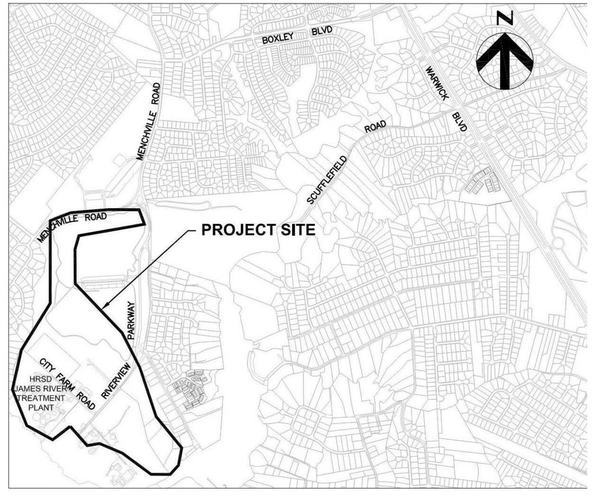
JAMES RIVER SWIFT FACILITY (CIP NO. GN016360) AND JAMES RIVER TREATMENT PLANT ADVANCED NUTRIENT REDUCTION IMPROVEMENTS (CIP NO. JR013400) VCWRLF NO. C-515663G WORK PACKAGE 2

NEWPORT NEWS, VIRGINIA
30% DESIGN SUBMITTAL
OCTOBER 2021



LOCATION MAP

10 5 0 5 10 20 30
SCALE: 1"=10 MILES



VICINITY MAP

1000 0 1000 2000
SCALE: 1"=1000'

GENERAL NOTES:

1. THE MERIDIAN SOURCE OF THE TOPOGRAPHIC SURVEY SHOWN ON THE DRAWINGS IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983/2011 (U.S. SURVEY FEET).
2. ELEVATIONS REFER TO NAVD88 AND WERE ESTABLISHED FROM CITY OF NEWPORT NEWS CONTROL STATION 434 ELEVATION = 28.975.

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Virginia Beach, VA, 23455

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Ulliman Schutte – Alberici Joint Venture

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Virginia Beach, VA 23462
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BLACK & VEATCH
5029 Corporate Woods Dr., Ste 170
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BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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GENERAL

SHEET #	DESCRIPTION
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G0011	INSTRUMENTATION LEGEND AND SYMBOLS 1
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G0013	OVERALL EXISTING SITE PLAN
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CIVIL

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C1005	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 5
C1006	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 6
C1007	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 7
C1008	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 8
C1009	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 9
C1010	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 10
C1011	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 11
C1012	EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 12
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CIVIL

SHEET #	DESCRIPTION COMBINED
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C3003	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 3
C3004	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 4
C3005	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 5
C3006	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 6
C3007	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 7
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C3009	RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 9
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CIVIL

SHEET #	DESCRIPTION COMBINED
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DEMOLITION

SHEET #	DESCRIPTION COMBINED
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X1220	SECONDARY CLARIFIER NO. 5 DEMOLITION PLAN
X1221	SECONDARY CLARIFIER NO. 5 DEMOLITION SETIONS
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X1600	SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY DEMOLITION PLAN AT EL 15.80
X1601	SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY PARTIAL DEMOLITION PLAN EL 15.80
X1602	SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY DEMOLITION SCHEMATICS
1620 - SODUIM BISULFITE STORAGE AND FEED FACILITY	
X1620	SODIUM BISULFITE STORAGE AND FEED FACILITY OVERALL DEMOLITION PLAN
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STRUCTURAL

SHEET #	DESCRIPTION COMBINED
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S1103	IFAS TANKS SECTIONS 3
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S1303	MBBR AND SWIFT INFLUENT EQ TANK COVER PLAN
S1304	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 1
S1305	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 2
S1306	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 3
S1307	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 4
S1308	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 5
S1309	MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 6
S1310	MBBR AND SWIFT INFLUENT EQ TANK DETAILS 1
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S1350	MBBR BLOWER BUILDING FOUNDATION PLAN
S1351	MBBR BLOWER BUILDING ROOF FRAMING PLAN
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S1402	WELL BACKFLUSH EQ TANK UPPER PLAN
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S1503	JUNCTION AND SPLITTER BOX SECTIONS 2
S1504	JUNCTION AND SPLITTER BOX SECTIONS 3
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S1702	ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA B
S1703	ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA C
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S1707	ADMINISTRATION AND MAINTENANCE BUILDING LOW ROOF FRAMING PLAN-AREA B
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STRUCTURAL

SHEET #	DESCRIPTION COMBINED
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S1712	ADMINISTRATION AND MAINTENANCE BUILDING SECTIONS AND DETAILS 1
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S2203	SWIFT PROCESS BUILDING NO. 1 OVERALL OPERATING LEVEL PLAN
S2212	SWIFT PROCESS BUILDING NO. 1 PARTIAL SECTIONAL PLAN 1 @ EL 40.00 - OZONE CONTACTORS AND PLATE SETTLERS
S2213	SWIFT PROCESS BUILDING NO. 1 PARTIAL SECTIONAL PLAN 2 @ EL 40.00 - PLATE SETTLERS
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S2304	SWIFT PROCESS BUILDING NO. 2 OVERALL ROOF FRAMING PLAN
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S2318	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 26.00 AREA B
S2319	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 26.00 AREA C
S2320	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 26.00 AREA D
S2321	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 26.00 AREA E
S2322	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 26.00 AREA F
S2323	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA A
S2324	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA B
S2325	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA C
S2326	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA D
S2327	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA E
S2328	SWIFT PROCESS BUILDING NO. 2 PARTIAL OPERATING FLOOR EL 44.00 AREA F
S2329	SWIFT PROCESS BUILDING NO. 2 PARTIAL ROOF EL 62.00 AREA A

STRUCTURAL

SHEET #	DESCRIPTION COMBINED
S2330	SWIFT PROCESS BUILDING NO. 2 PARTIAL ROOF EL 62.00 AREA B
S2331	SWIFT PROCESS BUILDING NO. 2 PARTIAL ROOF EL 62.00 AREA C
S2332	SWIFT PROCESS BUILDING NO. 2 PARTIAL ROOF EL 62.00 AREA D
S2333	SWIFT PROCESS BUILDING NO. 2 SECTIONS 1
S2334	SWIFT PROCESS BUILDING NO. 2 SECTIONS 2
S2335	SWIFT PROCESS BUILDING NO. 2 SECTIONS 3
S2336	SWIFT PROCESS BUILDING NO. 2 SECTIONS 4
S2337	SWIFT PROCESS BUILDING NO. 2 SECTIONS 5
S2338	SWIFT PROCESS BUILDING NO. 2 SECTIONS 6
S2339	SWIFT PROCESS BUILDING NO. 2 SECTIONS 7
S2340	SWIFT PROCESS BUILDING NO. 2 SECTIONS 8
S2341	SWIFT PROCESS BUILDING NO. 2 SECTIONS 9
S2342	SWIFT PROCESS BUILDING NO. 2 SECTIONS 10
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S2602	BACKWASH EQUALIZATION PUMP STATION TOP PLAN AND VAULT PLAN
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S3000	RECHARGE WELL NO. 1 FLOOR PLAN
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3040 - RECHARGE WELL NO. 5 - OFFSITE	
S3040	RECHARGE WELL NO. 5 FLOOR LEVEL PLAN
S3041	RECHARGE WELL NO. 5 ROOF LEVEL PLAN
3060 - RECHARGE WELL NO. 7 - OFFSITE	
S3060	RECHARGE WELL NO. 7 FLOOR LEVEL PLAN
S3061	RECHARGE WELL NO. 7 ROOF LEVEL PLAN

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

INDEX OF DRAWINGS 1

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE
DWG NO.	G0002

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
10/7/2021 4:53:30 PM

ARCHITECTURAL

SHEET #	DESCRIPTION
1250 - RAS PUMP STATION	
A1250	FLOOR PLAN LOWER LEVEL
A1251	FLOOR PLAN UPPER LEVEL
A1252	ROOF PLAN
A1253	ELEVATIONS
A1254	ELEVATIONS
A1255	BUILDING SECTIONS
A1256	BUILDING SECTIONS
1350 - MBBR BLOWER BUILDING	
A1350	FLOOR PLAN
A1351	ROOF PLAN
A1352	EXTERIOR ELEVATIONS
A1353	BUILDING SECTIONS
1700 - ADMINISTRATION AND MAINTENANCE BUILDING	
A1701	FLOOR PLAN AREA A
A1702	FLOOR PLAN AREA B
A1703	FLOOR PLAN AREA C
A1704	FLOOR PLAN AREA D
A1705	COMPOSITE CEILING PLAN
A1706	COMPOSITE ROOF PLAN
A1707	COMPOSITE EXTERIOR ELEVATIONS
A1708	EXTERIOR ELEVATIONS
A1709	EXTERIOR ELEVATIONS
A1710	EXTERIOR ELEVATIONS
A1711	EXTERIOR ELEVATIONS
A1712	AERIAL
A1713	AERIAL
A1714	BUILDING SECTIONS
A1715	BUILDING SECTIONS
A1716	BUILDING SECTIONS
A1717	FURNITURE AND EQUIPMENT PLAN AREA A
A1718	FURNITURE AND EQUIPMENT PLAN AREA B
A1719	FURNITURE AND EQUIPMENT PLAN AREA C
A1720	FURNITURE AND EQUIPMENT PLAN AREA D
Q1701	LAB FURNISHINGS GENERAL NOTES, ABBREVIATIONS, SYMBOLS
Q1702	ENLARGED LABORATORY FURNISHINGS PLANS
Q1703	LABORATORY FURNISHINGS ELEVATIONS
Q1704	LABORATORY 3D VIEWS
1750 - ADMINISTRATION BUILDING NO. 1	
A1750	OVERALL DEMOLITION PLAN
A1752	OVERALL FLOOR PLAN
A1754	GARAGE MODIFICATION ROOF PLAN
1800 - MAIN ELECTRICAL BUILDING	
A1800	FLOOR PLAN
A1801	ROOF PLAN
A1802	EXTERIOR ELEVATIONS
A1803	EXTERIOR ELEVATIONS
A1804	BUILDING SECTION
A1805	BUILDING SECTION
1840 - SOUTH ELECTRICAL BUILDING	
A1840	FLOOR AND ROOF PLANS
A1841	EXTERIOR ELEVATIONS
A1842	BUILDING SECTIONS
2200 - SWIFT PROCESS BUILDING NO. 1	
A2201	NORTHWEST PERSPECTIVE
A2202	SOUTHEAST PERSPETIVE
A2203	OVERALL BOTTOM PLAN
A2204	OVERALL TOP & ROOF PLAN
A2205	OVERALL CANOPY ROOF PLAN
A2206	BOTTOM PLAN AREA A
A2207	BOTTOM PLAN AREA B
A2208	BOTTOM PLAN AREA C
A2209	BOTTOM PLAN AREA D
A2210	BOTTOM PLAN AREA E
A2211	BOTTOM PLAN AREA F
A2212	TOP PLAN AREA A
A2213	TOP PLAN AREA B
A2214	TOP PLAN AREA C
A2215	TOP PLAN AREA D
A2216	TOP PLAN AREA E
A2217	TOP PLAN AREA F
A2218	ROOF PLAN - CHEMICAL CANOPY & OZONE DESTRUCT ROOM
A2219	ROOF PLAN - PLATE SETTLER CANOPY
A2220	NORTH AND EAST BUILDING ELEVATIONS
A2221	SOUTH AND WEST BUILDING ELEVATIONS

ARCHITECTURAL

SHEET #	DESCRIPTION
2300 - SWIFT PROCESS BUILDING NO. 2	
A2301	NORTHWEST PERSPECTIVE
A2302	SOUTHEAST PERSPETIVE
A2303	OVERALL BOTTOM PLAN
A2304	OVERALL INTERMEDIATE PLAN
A2305	OVERALL TOP & ROOF PLAN
A2306	OVERALL ROOF PLAN
A2307	INTERMEDIATE PLAN AREA A
A2308	INTERMEDIATE PLAN AREA B
A2309	INTERMEDIATE PLAN AREA C
A2310	INTERMEDIATE PLAN AREA D
A2311	INTERMEDIATE PLAN AREA E
A2312	INTERMEDIATE PLAN AREA F
A2313	TOP PLAN AREA A
A2314	TOP PLAN AREA B
A2315	TOP PLAN AREA C
A2316	TOP PLAN AREA D
A2321	SOUTH AND EAST BUILDING ELEVATIONS
A2322	NORTH AND WEST BUILDING ELEVATIONS
2700 - CHEMICAL BUILDING NO. 1	
A2701	NORTHWEST AND SOUTHEAST PERSPECTIVES
A2702	OVERALL PLAN
A2703	ROOF PLAN
A2704	BUILDING ELEVATIONS
3000 - RECHARGE WELL NO. 1 - ONSITE	
A3000	KEY PLANS
A3001	FLOOR PLAN
A3002	ROOF PLAN
A3003	ELEVATIONS
A3004	ELEVATIONS
A3005	BUILDING SECTION
3040 - RECHARGE WELL NO. 5 - OFFSITE	
A3040	FLOOR LEVEL PLAN
A3041	ROOF LEVEL PLAN
A3042	EXTERIOR ELEVATIONS
A3043	BUILDING SECTIONS
3050 - RECHARGE WELL NO. 6 - OFFSITE	
A3050	FLOOR LEVEL PLAN
A3051	ROOF LEVEL PLAN
A3052	EXTERIOR ELEVATIONS
A3053	BUILDING SECTIONS
G3050	CODE ANALYSIS
G3051	LIFE SAFETY PLAN
3060 - RECHARGE WELL NO. 7 - OFFSITE	
A3060	FLOOR LEVEL PLAN
A3061	ROOF LEVEL PLAN
A3062	EXTERIOR ELEVATIONS
A3063	BUILDING SECTIONS

MECHANICAL

SHEET #	DESCRIPTION
1100 - IFAS TANKS	
M1100	OVERALL LOWER PLAN
M1101	OVERALL UPPER PLAN
M1102	UPPER PLAN 1
M1103	UPPER PLAN 2
M1104	UPPER PLAN 3
M1105	SECTIONS 1
M1106	SECTIONS 2
M1107	SECTIONS 3
M1108	SECTIONS 4
M1109	DETAILS 1
M1110	FOAM DISTRIBUTION VAULT
1200 - SECONDARY CLARIFIERS	
M1200	OVERALL PLAN
M1201	LOWER PLAN
M1202	UPPER PLAN
M1203	SECTIONS
M1204	LOWER PLAN
M1205	UPPER PLAN
M1206	SECTIONS
M1220	LOWER PLAN
M1221	UPPER PLAN
M1222	SECTIONS 1
1250 - RAS PUMP STATION	
M1250	LOWER PLAN
M1251	INTERMEDIATE PLAN

MECHANICAL

SHEET #	DESCRIPTION
M1252	UPPER PLAN
M1253	SECTIONS
1300 - MBBR AND SWIFT INFLUENT EQ TANK	
M1300	UPPER LEVEL PLAN
M1301	LOWER LEVEL PLAN
M1302	SECTIONS AND DETAILS 1
1350 - MBBR BLOWER BUILDING	
M1350	OVERALL PLAN
1400 - WELL BACKFLUSH EQ TANK	
M1400	PLAN VIEW
M1401	SECTIONS
1500 - MOVING BED BIOFILM REACTOR INFLUENT PS / JUNCTION SPLITTER BOX	
M1500	& MBBR INFLUENT PUMP STATION LOWER PLAN
M1501	& MBBR INFLUENT PUMP STATION UPPER PLAN
M1502	& MBBR INFLUENT PUMP STATION SECTIONS 1
M1503	& MBBR INFLUENT PUMP STATION SECTIONS 2
M1504	& MBBR INFLUENT PUMP STATION SECTIONS 3
1520 - CHRLORINE CONTACT TANKS	
M1520	OVERALL PLAN AT EL. 17.00
M1521	OVERALL PLAN AT EL. 2.92
M1522	TANK NO. 1 & 2 PLAN AT EL. 2.92
M1523	TANK NO. 3 PLAN AT EL. 2.92 & 17.00
M1524	SECTIONS 1
M1525	SECTIONS 2
M1526	TANK NO. 1 & 2 PLAN AT EL. 17.00
1600 - SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY	
M1600	PLAN AND SECTION
M1601	PARTIAL PLAN
M1602	SCHEMATICS
1620 - SODUIM BISULFITE STORAGE AND FEED FACILITY	
M1620	OVERALL PLAN
M1621	PARTIAL PLAN
M1623	NEW SCHEMATICS
2200 - SWIFT PROCESS BUILDING NO. 1	
M2200	ISOMETRIC VIEW
M2201	OVERALL BOTTOM PLAN
M2202	OVERALL TOP PLAN
M2204	BOTTOM PLAN AREA A
M2205	BOTTOM PLAN AREA B
M2206	BOTTOM PLAN AREA C
M2207	BOTTOM PLAN AREA D
M2208	BOTTOM PLAN AREA E
M2209	BOTTOM PLAN AREA F
M2210	TOP PLAN AREA A
M2211	TOP PLAN AREA B
M2212	TOP PLAN AREA C
M2213	TOP PLAN AREA D
M2214	TOP PLAN AREA E
M2215	TOP PLAN AREA F
M2216	SECTIONS 1
M2217	SECTIONS 2
M2218	SECTIONS 3
M2219	SECTIONS 4
M2220	SECTIONS 5
2300 - SWIFT PROCESS BUILDING NO. 2	
M2300	ISOMETRIC VIEWS
M2301	OVERALL BOTTOM PLAN
M2302	OVERALL INTERMEDIATE PLAN
M2303	OVERALL TOP PLAN
M2306	BOTTOM PLAN AREA A
M2307	BOTTOM PLAN AREA B
M2308	BOTTOM PLAN AREA C
M2309	BOTTOM PLAN AREA D
M2310	BOTTOM PLAN AREA E
M2311	BOTTOM PLAN AREA F
M2312	INTERMEDIATE PLAN AREA A
M2313	INTERMEDIATE PLAN AREA B
M2314	INTERMEDIATE PLAN AREA C
M2315	INTERMEDIATE PLAN AREA D
M2316	INTERMEDIATE PLAN AREA E
M2317	INTERMEDIATE PLAN AREA F
M2318	TOP PLAN AREA A
M2319	TOP PLAN AREA B
M2320	TOP PLAN AREA C

MECHANICAL

SHEET #	DESCRIPTION
M2321	TOP PLAN AREA D
M2325	BLOWER ROOM AND NPW PUMP STATION ENLARGED PLANS
M2326	SECTIONS 1
M2327	SECTIONS 2
M2328	SECTIONS 3
M2329	SECTIONS 4
M2330	SECTIONS 5
M2331	SECTIONS 6
M2332	SECTIONS 7
M2333	SECTIONS AND DETAILS
2600 - BACKWASH EQUALIZATION PUMP STATION	
M2600	ISOMETRIC VIEWS
M2601	TOP AND BOTTOM PLANS
M2603	SECTION
2700 - CHEMICAL BUILDING NO. 1	
M2700	ISOMETRIC VIEWS
M2701	OVERALL PLAN
M2702	SECTIONS 1
M2703	SECTIONS 2
M2704	SECTIONS AND DETAILS
3000 - RECHARGE WELL NO. 1 - ONSITE	
M3000	TOP PLAN
M3001	SECTIONS 1
3040 - RECHARGE WELL NO. 5 - OFFSITE	
M3040	PUMP STATION AND METER VAULT PLANS
M3041	SECTIONS
3060 - RECHARGE WELL NO. 7 - OFFSITE	
M3060	PUMP STATION AND METER VAULT PLANS
M3061	SECTIONS

HVAC

SHEET #	DESCRIPTION
0001 - MECHANICAL SCHEDULES	
H0001	HVAC SCHEDULES
H0002	HVAC SCHEDULES
H0003	HVAC SCHEDULES
H0004	HVAC SCHEDULES
H0005	HVAC SCHEDULES
1250 - RAS PUMP STATION	
H1250	PLANS
H1251	HVAC SECTIONS
1700 - ADMINISTRATION AND MAINTENANCE BUILDING	
H1700	OVERALL HVAC PLAN
H1701	HVAC PLAN - AREA A
H1702	HVAC PLAN - AREA B
H1703	HVAC PLAN - AREA C
H1704	HVAC PLAN - AREA D
H1705	HVAC ROOF PLAN - AREA A
H1706	HVAC ROOF PLAN - AREA B
H1707	HVAC ROOF PLAN AREA C
H1708	HVAC ROOF PLAN AREA D
1800 - MAIN ELECTRICAL BUILDING	
H1800	HVAC PLAN
H1801	ROOF HVAC PLAN
H1802	HVAC SECTIONS
1840 - SOUTH ELECTRICAL BUILDING	
H1840	HVAC PLAN
2300 - SWIFT PROCESS BUILDING NO. 2	
H2302	OVERALL INTERMEDIATE PLAN
H2303	OVERALL TOP PLAN
2700 - CHEMICAL BUILDING NO. 1	
H2701	OVERALL PLAN
3000 - RECHARGE WELL NO. 1 - ONSITE	
H3000	HVAC PLAN
3040 - RECHARGE WELL NO. 5 - OFFSITE	
H3040	HVAC PLAN
3060 - RECHARGE WELL NO. 7 - OFFSITE	
H3060	HVAC PLAN

PLUMBING

SHEET #	DESCRIPTION
0001 - PLUMBING SCHEDULES	
P0001	PLUMBING SCHEDULES
1700 - ADMINISTRATION AND MAINTENANCE BUILDING	
P1700	OVERALL PLUMBING PLAN
P1701	PLUMBING SANITARY PLAN - AREA A
P1702	PLUMBING SANITARY PLAN - AREA B
P1703	PLUMBING SANITARY PLAN - AREA C
P1704	PLUMBING SANITARY PLAN - AREA D
P1705	PLUMBING DOMESTIC PLAN - AREA A
P1706	PLUMBING DOMESTIC PLAN - AREA B
P1707	PLUMBING DOMESTIC PLAN - AREA C
P1708	PLUMBING DOMESTIC PLAN - AREA D
1800 - MAIN ELECTRICAL BUILDING	
P1800	PLUMBING SANITARY PLAN
P1801	PLUMBING DOMESTIC PLAN
P1802	PLUMBING ROOF SANITARY PLAN
3000 - RECHARGE WELL NO. 1 - ONSITE	
P3000	PLUMBING SANITARY PLAN
P3001	PLUMBING DOMESTIC PLAN
3040 - RECHARGE WELL NO. 5 - OFFSITE	
P3040	PLUMBING DOMESTIC PLAN
3060 - RECHARGE WELL NO. 7 - OFFSITE	
P3060	PLUMBING PLAN

FIRE PROTECTION

SHEET #	DESCRIPTION
1700 - ADMINISTRATION AND MAINTENANCE BUILDING	
F1700	FIRE PROTECTION FLOOR PLAN

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

INDEX OF DRAWINGS 2

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE
DWG NO.	G0003

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10/7/2021 4:53:49 PM

ELECTRICAL

SHEET #	DESCRIPTION
1000 - ELECTRICAL SITE	
E1000	UNDERGROUND ELECTRICAL OVERALL KEY PLAN
E1001	UNDERGROUND ELECTRICAL PLAN 1
E1002	UNDERGROUND ELECTRICAL PLAN 2
E1003	UNDERGROUND ELECTRICAL PLAN 3
E1004	UNDERGROUND ELECTRICAL PLAN 4
E1005	UNDERGROUND ELECTRICAL PLAN 5
E1006	UNDERGROUND ELECTRICAL PLAN 6
E1007	UNDERGROUND ELECTRICAL PLAN 7
E1008	UNDERGROUND ELECTRICAL PLAN 8
E1009	UNDERGROUND ELECTRICAL PLAN 9
E1010	UNDERGROUND ELECTRICAL PLAN 10
E1011	UNDERGROUND ELECTRICAL PLAN 11
E1012	UNDERGROUND ELECTRICAL PLAN 12
E1013	UNDERGROUND ELECTRICAL PLAN 13
E1014	UNDERGROUND ELECTRICAL PLAN 14
E1015	UNDERGROUND ELECTRICAL PLAN 15
1200 - SECONDARY CLARIFIERS	
E1208	UPPER LEVEL LIGHTING & RECEPTACLE PLAN
1250 - RAS PUMP STATION	
E1250	LOWER LEVEL POWER PLAN
E1251	UPPER LEVEL POWER PLAN
E1252	LOWER LEVEL LIGHTING & RECEPTACLE PLAN
E1253	UPPER LEVEL LIGHTING & RECEPTACLE PLAN
E1254	MCC-7C & 7D ONE-LINE DIAGRAM
E1255	DP-7C ONE-LINE DIAGRAM
E1256	DP-7C ONE-LINE DIAGRAM & MCC-7C/7D ELEVATION
1350 - MBBR BLOWER BUILDING	
E1350	POWER PLAN
E1351	LIGHTING & RECEPTACLE PLAN
E1352	MCC-4A ONE-LINE DIAGRAM
E1353	MCC-4B ONE-LINE DIAGRAM
E1354	MCC-4A/4B ELEVATION
1700 - ADMINISTRATION AND MAINTENANCE BUILDING	
E1700	POWER FLOOR PLAN - AREA A
E1701	POWER FLOOR PLAN - AREA B
E1702	POWER FLOOR PLAN - AREA C
E1703	POWER FLOOR PLAN - AREA D
E1704	POWER FLOOR PLAN - MEZZANINE
E1705	POWER ROOF PLAN
E1706	LIGHTING & RECEPTACLE PLAN - AREA A
E1707	LIGHTING & RECEPTACLE PLAN - AREA B
E1708	LIGHTING & RECEPTACLE PLAN - AREA C
E1709	LIGHTING & RECEPTACLE PLAN - AREA D
E1710	LIGHTING & RECEPTACLE PLAN - MEZZANINE
E1713	MCC-7E / 7F ONE-LINE DIAGRAM AND FRONT ELEVATION
E1714	DP-7E ONE-LINE DIAGRAM
1750 - ADMINISTRATION BUILDING NO. 1	
E1750	POWER LOWER PLAN
E1752	MCC-1A / 1B ONE-LINE DIAGRAM
E1753	DP-1A ONE-LINE DIAGRAM & MCC-1A, 1B ELEVATIONS
EX1750	ELECTRICAL DEMOLITION LOWER PLAN
EX1751	ELECTRICAL DEMOLITION UPPER PLAN
1800 - MAIN ELECTRICAL BUILDING	
E1800	POWER PLAN
E1801	LIGHTING & RECEPTACLE PLAN
E1802	MCC-4C & 4D ONE-LINE DIAGRAM
E1803	DP-4C ONE-LINE DIAGRAM AND MCC-4C & 4D ELEVATIONS
1840 - SOUTH ELECTRICAL BUILDING	
E1840	POWER PLAN
E1841	LIGHTING & RECEPTACLE PLAN
E1844	SWGR-7A & 7B ONE-LINE DIAGRAM
E1845	DP-7A ONE-LINE DIAGRAM
E1846	DP-7A ONE-LINE DIAGRAM & SWGR-7A/7B ELEVATION
1900 - HEADWORKS - SWIFT SOLIDS TIE-IN	
E1900	LOWER AND UPPER FLOOR POWER PLANS
E1902	MCC-1C/1D ONE-LINE DIAGRAM & ELEVATION
EX1902	DEMOLITION MCC-5B ONE-LINE DIAGRAM & ELEVATION

ELECTRICAL

SHEET #	DESCRIPTION
2200 - SWIFT PROCESS BUILDING NO. 1	
E2228	SWGR-5A & 5B ONE-LINE DIAGRAM
E2230	MCC-5A & 5B ONE-LINE DIAGRAM 1
E2231	MCC-5A & 5B ONE-LINE DIAGRAM 2
E2232	MCC-5C & 5D ONE-LINE DIAGRAM 1
E2233	MCC-5C & 5D ONE-LINE DIAGRAM 2
E2234	MCC-5C & 5D ONE-LINE DIAGRAM 3
3000 - RECHARGE WELL NO. 1 - ONSITE	
E3000	POWER PLAN
E3001	LIGHTING & RECEPTACLE PLAN
E3002	DP-RW1 ONE-LINE DIAGRAM
3040 - RECHARGE WELL NO. 5 - OFFSITE	
E3040	POWER PLAN
E3041	LIGHTING & RECEPTACLE PLAN
3060 - RECHARGE WELL NO. 7 - OFFSITE	
E3060	POWER PLAN
E3061	LIGHTING & RECEPTACLE PLAN
9000 - STANDARD DETAILS / MISCELLANEOUS	
E9010	LUMINAIRE SCHEDULES SHEET 1 OF 2
E9011	LUMINAIRE SCHEDULES SHEET 2 OF 2
E9028	EXISTING PLANT OVERALL ONE-LINE DIAGRAM
E9029	EXISTING PLANT OVERALL ONE-LINE DIAGRAM DEMOLITION
E9030	PROPOSED PLANT OVERALL ONE-LINE DIAGRAM SHEET 1 OF 2
E9031	PROPOSED PLANT OVERALL ONE-LINE DIAGRAM SHEET 2 OF 2
E9032	MAIN 4160V SWITCHGEAR BUS A ONE-LINE DIAGRAM 1
E9033	MAIN 4160V SWITCHGEAR BUS A ONE-LINE DIAGRAM 2 AND ELEVATION
E9034	MAIN 4160V SWITCHGEAR BUS B ONE-LINE DIAGRAM 1
E9035	MAIN 4160V SWITCHGEAR BUS B ONE-LINE DIAGRAM 2 AND ELEVATION
E9036	GENERATOR 4160V SWITCHGEAR ONE-LINE DIAGRAM 1
E9037	GENERATOR 4160V SWITCHGEAR ONE-LINE DIAGRAM 2 AND ELEVATION

INSTRUMENTATION

SHEET #	DESCRIPTION
1150 - IFAS EFFLUENT CHANNEL	
I1150	IFAS EFFLUENT CHANNEL - PROCESS AND INSTRUMENTATION DIAGRAM
1200 - SECONDARY CLARIFIERS	
I1200	SECONDARY CLARIFIER NO. 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I1201	SECONDARY CLARIFIER NO. 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I1202	SECONDARY CLARIFIER NO. 3 - PROCESS AND INSTRUMENTATION DIAGRAM
1250 - RAS PUMP STATION	
I1250	RAS INFLUENT PUMP STATION - PROCESS AND INSTRUMENTATION DIAGRAM
1300 - NITRATE POLISHING REACTOR	
I1300	MBBR - PROCESS AND INSTRUMENTATION DIAGRAM
I1301	MBBR - AERATION AND MIXING SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM
I1302	MBBR AERATION SYSTEM - AERATION SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM 2
1400 - WELL BACKFLUSH EQ TANK	
I1400	WELL BACKFLUSH EQ - PROCESS AND INSTRUMENTATION DIAGRAM
1410 - SWIFT EQ	
I1410	SWIFT INFLUENT EQUALIZATION TANK - PROCESS AND INSTRUMENTATION DIAGRAM
I1411	SWIFT INFLUENT EQUALIZATION RETURN PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
1500 - NITRATE POLISHING REACTOR PS /JUNCTION SPLITTER BOX	
I1500	JUNCTION SPLITTER BOX - PROCESS AND INSTRUMENTATION DIAGRAM 1
I1501	MBBR INFLUENT PS - PROCESS AND INSTRUMENTATION DIAGRAM
1510 - CHLORINE CONTACT TANKS	
I1510	NPW FLOW, EFFLUENT SAMPLE PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
1600 - SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY	
I1600	SODIUM HYPOCHLORITE STORAGETANKS - PROCESS AND INSTRUMENTATION DIAGRAM
I1601	SODIUM HYPOCHLORITE FEED SYSTEM EFFLUENT DISINFECTION - PROCESS AND INSTRUMENTATION DIAGRAM 1
I1602	SODIUM HYPOCHLORITE FEED SYSTEM ODOR CONTROL & RAS CHLORINATION - PROCESS AND INSTRUMENTATION DIAGRAM 2
I1603	SODIUM HYPOCHLORITE FEED SYSTEM SECONDARY FOAM CONTROL - PROCESS AND INSTRUMENTATION DIAGRAM 3
1620 - SODIUM BISULFITE STORAGE AND FEED FACILITY	
I1620	SODIUM BISULFITE STORAGE TANKS - PROCESS AND INSTRUMENTATION DIAGRAM
I1621	SODIUM BISULFITE FEED PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
2200 - SWIFT PROCESS BUILDING NO. 1	
I2200	RAPID MIX AND FLOW SPLIT - PROCESS AND INSTRUMENTATION DIAGRAM
I2201	FLOCCULATION AND SEDIMENT TRAINS 1 AND 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2202	FLOCCULATION AND SEDIMENT TRAINS 3 AND 4 - PROCESS AND INSTRUMENTATION DIAGRAM
I2203	SETTLED SOLIDS PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
I2204	OZONE CONTACTOR 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I2205	OZONE CONTACTOR 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2206	OZONE SYSTEM - LIQUID OXYGEN SYSTEM - PROCESS AND INSTRUMENTATION DIAGRAM
I2207	OZONE SYSTEM - GOX CONDITIONING SYSTEM - PROCESS AND INSTRUMENTATION DIAGRAM

INSTRUMENTATION

SHEET #	DESCRIPTION
I2208	OZONE SYSTEM - SUPPLEMENTAL NITROGEN SYSTEM - PROCESS AND INSTRUMENTATION DIAGRAM
I2209	OZONE SYSTEM - OZONE GENERATOR 1 AND PSU 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I2210	OZONE SYSTEM - OZONE GENERATOR 2 AND PSU 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2211	OZONE SYSTEM - CLOSED LOOP COOLING WATER SKID - PROCESS AND INSTRUMENTATION DIAGRAM
I2212	OZONE SYSTEM - CLOSED LOOP COOLING WATER SKID 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2214	OZONE SYSTEM - OZONE DESTRUCT UNIT 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I2215	OZONE SYSTEM - OZONE DESTRUCT UNIT 2 - PROCESS AND INSTRUMENTATION DIAGRAM
2300 - SWIFT PROCESS BUILDING NO. 2	
I2300	BIOLOGICALLY ACTIVE FILTER NO. 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I2301	BIOLOGICALLY ACTIVE FILTER NO. 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2302	BIOLOGICALLY ACTIVE FILTER NO. 3 - PROCESS AND INSTRUMENTATION DIAGRAM
I2303	BIOLOGICALLY ACTIVE FILTER NO. 4 - PROCESS AND INSTRUMENTATION DIAGRAM
I2304	BIOLOGICALLY ACTIVE FILTER NO. 5 - PROCESS AND INSTRUMENTATION DIAGRAM
I2305	BIOLOGICALLY ACTIVE FILTER NO. 6 - PROCESS AND INSTRUMENTATION DIAGRAM
I2306	BIOLOGICALLY ACTIVE FILTER NO. 7 - PROCESS AND INSTRUMENTATION DIAGRAM
I2307	INTERMEDIATE PUMP STATION - PROCESS AND INSTRUMENTATION DIAGRAM
I2308	BACKWASH PUMP STATION - PROCESS AND INSTRUMENTATION DIAGRAM
I2309	GRANULAR ACTIVATED CARBON CONTACTOR 7 - PROCESS AND INSTRUMENTATION DIAGRAM
I2310	GRANULAR ACTIVATED CARBON CONTACTOR 6 - PROCESS AND INSTRUMENTATION DIAGRAM
I2311	GRANULAR ACTIVATED CARBON CONTACTOR 5 - PROCESS AND INSTRUMENTATION DIAGRAM
I2312	GRANULAR ACTIVATED CARBON CONTACTOR 4 - PROCESS AND INSTRUMENTATION DIAGRAM
I2313	GRANULAR ACTIVATED CARBON CONTACTOR 3 - PROCESS AND INSTRUMENTATION DIAGRAM
I2314	GRANULAR ACTIVATED CARBON CONTACTOR 2 - PROCESS AND INSTRUMENTATION DIAGRAM
I2315	GRANULAR ACTIVATED CARBON CONTACTOR 1 - PROCESS AND INSTRUMENTATION DIAGRAM
I2316	AIR SCOUR BLOWER SYSTEM - PROCESS AND INSTRUMENTATION DIAGRAM
I2317	UV REACTORS - PROCESS AND INSTRUMENTATION DIAGRAM
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INSTRUMENTATION

SHEET #	DESCRIPTION
I2703	SODIUM HYPOCHLORITE FEED PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
I2704	FLOCCULATION POLYMER TOTE, FEEDER BLENDERS, AND STORAGE TANK - PROCESS AND INSTRUMENTATION DIAGRAM
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I2706	PHOSPHORIC ACID TOTE AND FEED PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
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I2709	HYDROGEN PEROXIDE BULK STORAGE TANKS AND TRANSFER PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
I2710	HYDROGEN PEROXIDE FEED PUMPS - PROCESS AND INSTRUMENTATION DIAGRAM
3000 - RECHARGE WELL NO. 1 - ONSITE	
I3000	RECHARGE WELL NO. 1 - PROCESS AND INSTRUMENTATION DIAGRAM
3010 - RECHARGE WELL NO. 2 - ONSITE	
I3010	RECHARGE WELL NO. 2 - PROCESS AND INSTRUMENTATION DIAGRAM
3020 - RECHARGE WELL NO. 3 - ONSITE	
I3020	RECHARGE WELL NO. 3 - PROCESS AND INSTRUMENTATION DIAGRAM
3030 - RECHARGE WELL NO. 4 - ONSITE	
I3030	RECHARGE WELL NO. 4 - PROCESS AND INSTRUMENTATION DIAGRAM
3040 - RECHARGE WELL NO. 5 - OFFSITE	
I3040	RECHARGE WELL NO. 5 - PROCESS AND INSTRUMENTATION DIAGRAM
3050 - RECHARGE WELL NO. 6 - OFFSITE	
I3050	RECHARGE WELL NO. 6 - PROCESS AND INSTRUMENTATION DIAGRAM
3060 - RECHARGE WELL NO. 7 - OFFSITE	
I3060	RECHARGE WELL NO. 7 - PROCESS AND INSTRUMENTATION DIAGRAM
3070 - RECHARGE WELL NO. 8 - OFFSITE	
I3070	RECHARGE WELL NO. 8 - PROCESS AND INSTRUMENTATION DIAGRAM
3080 - RECHARGE WELL NO. 9 - OFFSITE	
I3080	RECHARGE WELL NO. 9 - PROCESS AND INSTRUMENTATION DIAGRAM
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9000 - STANDARD DETAILS / MISCELLANEOUS	
I9001	DISTRIBUTED CONTROL SYSTEM SITE PLAN
I9002	DISTRIBUTED CONTROL SYSTEM BLOCK DIAGRAM 1
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I9004	FIBER OPTIC POINT TO POINT DIAGRAM 1
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I9011	MISCELLANEOUS UPS EQUIPMENT 2
I9016	PLANT POWER MONITORING SYSTEM 1
I9017	PLANT POWER MONITORING SYSTEM 2
I9018	PLANT POWER MONITORING SYSTEM 3
I9022	ANALYZER BANK 1-1

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
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DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

INDEX OF DRAWINGS 3

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE
DWG NO.	G0004

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	AMPERE
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABT	ABOUT
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET, ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	ACOUSTICAL TILE, AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B TO B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER, BOLLARD
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT-UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
CTOC	CENTER TO CENTER
C&G	CURB AND GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG, CATALOGIORY
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED-DENSITY FILL
CE	CONCRETE EDGE
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHBD	CHALKBOARD
CHD	CHORD
CHFR	CHAMFER
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CRL	CORROSION-RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTJ	CONTRACTION JOINT
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER, DRAIN
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON, DIGITAL INPUT
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXP	EXPANSION, EXPOSED
EXST	EXISTING
EXT	EXTERIOR, EXTERNAL, EXTENSION
F TO F	FACE TO FACE
F&B	FACE AND BYPASS
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDR	FEEDER
FDTN	FOUNDATION
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FN	FENCE
FO	FINISHED OPENING
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK, GLULAM BEAM
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GW	GUY WIRE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE
HD	HEAD, HOT DIP
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH-INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH-PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION, FOR EXAMPLE
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS, IRON ROD
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
KW	KILOWATT
L	ANGLE, LENGTH, LAVATORY, LINTEL
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW-PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MASONRY LINTEL
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL, NATIONAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT TO OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PD	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE, PRECAST LINTEL
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY, PROPOSED
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE
PVMT	PAVEMENT
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK
SA	SUPPLY AIR
SAMU	SOUND-ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT, SILT FENCE
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SJ	SLAB JOINT
SL	SLOPE, STEEL LINTEL
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE
TOW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING, THROUGH PLATE GIRDER
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VERTS	VERTICAL REINFORCING
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VS	VERSUS, VAPOR SEAL
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WTHP	WATERPROOF, WORKING POINT
WWF	WELDED WIRE FABRIC
XP	EXPLOSION-PROOF
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION, "INC" MAY MEAN INCLUDED OR INCLUDING, AND "REINF" MAY MEAN REINFORCE OR REINFORCING.
4. SEE INSTRUMENTATION AND GENERAL LEGEND SHEETS FOR PROJECT-SPECIFIC EQUIPMENT AND PIPING SYSTEM ABBREVIATIONS.

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DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ABBREVIATIONS 1

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE
DWG NO.	G0005

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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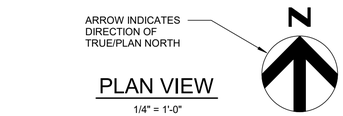
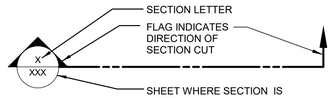
GENERAL SYMBOLOGY

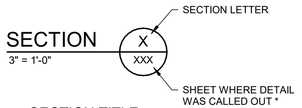


PLAN VIEW
1/4" = 1'-0"

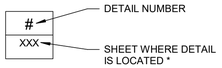
PLAN TITLE



SECTION CUT MARKER



SECTION TITLE



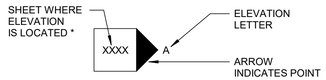
DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

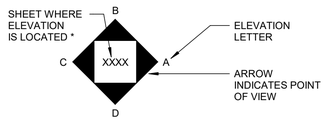
DETAIL MARKER

FOR REFERENCING DETAILS BOUND IN SPECIFICATIONS OR SEPARATE VOLUME.

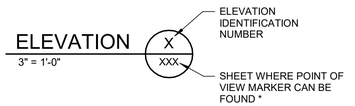
DETAIL TITLE



SINGLE ELEVATION OR PHOTO MARKER



MULTIPLE ELEVATION OR PHOTO MARKER



ELEVATION TITLE

* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-).
1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.

GENERAL LEGEND AND SYMBOLS NOTES:

1. THIS SHEET IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT.
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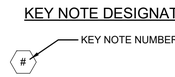
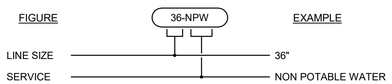
ARCHITECTURAL

ROOM NAME / XX-XX	ROOM NUMBER
XXX	DOOR NUMBER
A	COLUMN GRID LINE
X	WALL TYPE



IDENTIFICATION SYMBOLOGY

PIPING



SHEET NAMING CONVENTION

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER

G	GENERAL
C	CIVIL
X	DEMOLITION
M	MECHANICAL
S	STRUCTURAL
A	ARCHITECTURAL
H	HVAC
P	PLUMBING
E	ELECTRICAL
I	INSTRUMENTATION

CIVIL SYMBOLOGY

CO	CLEAN OUT
	MANHOLE
7	BUILDING CONTROL POINT
	UTILITY VAULT
	FIRE HYDRANT
YH	YARD HYDRANT
	BENCHMARK
	TEST PITS
BR-1	BORING
	VALVE (GENERIC)
	LIGHT POLE
	POWER POLE
10	CONTOUR
	VEGETATION
10.3	SPOT ELEVATION
T	TRANSFORMER
CB	CATCH BASIN
PD	PROCESS DRAIN MANHOLE
SD	STORM DRAIN MANHOLE
SS	SANITARY SEWER MANHOLE
	WETLANDS

EROSION AND SEDIMENT CONTROL

TP	TREE PROTECTION
IP	INLET PROTECTION
CIP	CULVERT INLET PROTECTION
	CONCRETE WASHOUT
CE	CONSTRUCTION ENTRANCE
CRS	CONSTRUCTION ROAD STABILIZATION
SF	SILT FENCE
SFW	SILT FENCE WITH WIRE SUPPORT
TS	TEMPORARY SEEDING
PS	PERMANENT SEEDING
S/M	SOIL STABILIZATION

EXISTING CIVIL CONDITIONS

	EXISTING VALVE
	EXISTING PIPELINE
	EXISTING LARGE PIPELINE
	EXISTING LIGHT POLE
	EXISTING POWER POLE
10	EXISTING CONTOUR
	EXISTING VEGETATION
10.3	EXISTING SPOT ELEVATION
X X	EXISTING CHAIN LINK FENCE
	EXISTING WOOD FENCE

LINE SYMBOLOGY

T	TELEPHONE LINE
E	ELECTRIC LINE
F	FIBER OPTIC
C	COMMUNICATION
	HANDRAIL AND GUARDRAIL
	PIPELINE
	LARGE PIPELINE
	DRAINAGE FLOW
	NATURAL WATERWAY
X X	BARBED WIRE CHAIN LINK FENCE
O O	CHAIN LINK FENCE
XX XX	TEMPORARY BARRIER
	PROPERTY LINE
	CENTERLINE
	SWALE
	EASEMENT
LOD	LIMITS OF DISTURBANCE
	ROW
WET	LIMITS OF WETLANDS
	VEGETATED SWALE
	MATCH LINE
	DRAINAGE DITCH
	4-HOUR FIRE RATED WALL
	3-HOUR FIRE RATED WALL
	2-HOUR FIRE RATED WALL
	1-HOUR FIRE RATED WALL
	COLUMN GRID LINE/CENTERLINE

EQUIPMENT SYMBOLOGY

	CENTRIFUGAL PUMP
	CHEMICAL FEED PUMP
	COMPRESSOR
	ROTOMETER
	HEAT EXCHANGER
M	MIXER - PROPELLER TYPE
M OR M	MOTOR
	PROGRESSING CAVITY PUMP
	PROGRESSING CAVITY CAKE PUMP
	SUMP PUMP

PIPING AND VALVE SYMBOLOGY

	BALL VALVE
	BUTTERFLY VALVE
	DIAPHRAGM VALVE
	GATE VALVE
	GLOBE VALVE
	KNIFE GATE VALVE
	NEEDLE VALVE
	PINCH VALVE
	PLUG VALVE
	THREE WAY BALL VALVE
	THREE WAY PLUG VALVE
	BALL CHECK VALVE
	CHECK VALVE
	DOUBLE DISK CHECK VALVE
	CONE VALVE
OR	PRESSURE RELIEF VALVE
	PRESSURE REDUCING VALVE
X	AIR RELEASE VACUUM VALVE A = AIR RELEASE V = VACUUM
	AIR RELEASE VALVE
	PRESSURE REGULATING VALVE
	BACK PRESSURE VALVE
S	SOLENOID VALVE
36"-RWI	TYPICAL PIPE LINE CALLOUT
	OA DAMPER
	BACKFLOW PREVENTER
M	METER
NGM	NATURAL GAS METER
	UNION
	WYE-STRAINER
	FLEXIBLE HOSE OR TUBING
	FLEXIBLE PIPING CONNECTION
	LINE SIZE CHANGE
	LINE TURNING DOWN
	LINE TURNING UP
	BLIND FLANGE
	PIPE BREAK
	V-PORT BALL VALVE
	THREE-WAY CONTROL VALVE

	3-WAY VALVE
	4-WAY VALVE
	CALIBRATION POT
	DIAPHRAGM
	BASKET STRAINER
	QUICK CONNECT
	SUCTION DIFFUSER-STRAINER
	PUMP DISCHARGE (TRIPLE DUTY) VALVE
	THERMOSTATIC MIXING VALVE
	INJECTION RING
	PIPE JOINT (SEE SPECIFICATIONS FOR REQUIREMENTS)
	PIPE JOINT (SEE SPECIFICATIONS FOR REQUIREMENTS)
	PIPE JOINT (SEE SPECIFICATIONS FOR REQUIREMENTS)
	PIPE JOINT (SEE SPECIFICATIONS FOR REQUIREMENTS)
(OR SIMILAR VARIATION)	PIPE JOINT (SEE SPECIFICATIONS FOR REQUIREMENTS)
	COMPRESSION SLEEVE TYPE COUPLING
	FLANGED COUPLING ADAPTER (FCA)
	FLEXIBLE CONNECTION
	HARNESSED MECHANICAL COUPLING
	EXPANSION COUPLING/JOINT
	PRESSURE GAUGE (WITH COCK)
	TRAP
	QUICK DISCONNECT CAM & GROOVE COUPLING
	CAP OR PLUG
CO	INTERIOR CLEANOUT
	HOSE BIBB -1
	HOSE BIBB -2
HR	HOSE REEL
FD-X	FLOOR DRAIN
X = TYPE DESIGNATED IN SPECIFICATIONS	
	PIPE IN SECTION
BU	BELL UP (PLAN)
BU	BELL UP (SECTION OR SCHEMATIC)
D	DRAIN (SECTION OR SCHEMATIC)
X	HOT PIPE SUPPORT ANCHOR
/	GENERAL HOT PIPE SUPPORT
=	HOT PIPE SUPPORT GUIDE

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

LEGEND AND SYMBOLS 1

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE
DWG NO.	G0006

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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MATERIALS IN PLAN/SECTION

- ACOUSTICAL CEILING TILE (SECTION)
- ASPHALT (PLAN OR SMALL SCALE SECTION)
- ASPHALT (LARGE SCALE SECTION)
- BATT INSULATION (SECTION)
- BRICK MASONRY (PLAN/SECTION)
- CHECKERED PLATE (PLAN)
- CONCRETE (SECTION)

NOTE: WALLS SHOWN WITHOUT HATCH ON THE FLOOR PLANS ARE CAST-IN-PLACE CONCRETE WALLS.

- PRECAST CONCRETE (PLAN/SECTION)
- CONCRETE MASONRY (PLAN/SECTION)
- EARTH (SECTION)
- FINISHED WOOD (SECTION)
- STRUCTURAL, GRANULAR FILL AND CRUSHED STONE
- GRATING (SECTION)
- GRATING (PLAN)
- GROUT (SECTION)
- METAL (SECTION)
- PLYWOOD (LARGE SCALE SECTION)
- PLYWOOD (SMALL SCALE SECTION)
- RIGID INSULATION (SECTION)
- RIPRAP (PLAN/SECTION)
- SAND (SECTION)
- TOPSOIL
- CONTRACTOR LAYDOWN AND STORAGE AREA (PLAN)
- SOD (SECTION)
- WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)
- WOOD - CONTINUOUS (SECTION)
- WOOD BLOCKING (SECTION)

HVAC SYMBOLOGY

- 24x18 — SUPPLY AIR OR OUTSIDE AIR DUCT (SECTION CUT, FIRST DIMENSION DUCT WIDTH)
- EXHAUST AIR OR RETURN AIR DUCT (SECTION CUT)
- SUPPLY AIR OR OUTSIDE AIR DUCT (NO SECTION CUT)
- EXHAUST AIR OR RETURN AIR DUCT (NO SECTION CUT)
- TRANSITION-DOUBLE SIDED
- TRANSITION-ONE SIDED
- TRANSITION- RECTANGULAR TO ROUND DUCT
- STANDARD BRANCH- FOR SUPPLY AIR W/ EXTRACTOR AND RETURN AIR W/O EXTRACTOR
- ELBOW- W/TURNING VANES
- SD SD — SPLITTER DAMPER
- 18x24 — RECTANGULAR DUCT OR OPENING SIZE- FIRST NUMBER INDICATES SIZE OF SIDE SHOWN
- 18"Ø — ROUND DUCT SIZE
- R OR D — RECTANGULAR DUCT INCLINE- RISE OR DROP IN RESPECT TO THE AIR FLOW
- R OR D — ROUND DUCT INCLINE- RISE OR DROP IN RESPECT TO THE AIR FLOW
- PRESSURE/TEMPERATURE TEST PLUG (PETE PLUG OR EQUAL)
- VD, BDD — VD = VOLUME DAMPER; BDD = BACKDRAFT DAMPER
- VD, SID — VD = VOLUME DAMPER; SID = SHUT-OFF ISOLATION DAMPER
- FD FD — FD = FIRE DAMPER
- MOTOR OPERATED DAMPER
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT
- ACOUSTICAL LINING - DUCT DIMENSIONS FOR NET FREE AREA
- SIZE / CFM — SUPPLY AIR REGISTER OR GRILLE - W/ DUCT MOUNTED EXTRACTOR
- SIZE / CFM — EXHAUST AIR OR RETURN AIR REGISTER OR GRILLE
- SIZE / CFM — EXHAUST AIR OR RETURN AIR REGISTER OR GRILLE
- SIZE / CFM — SUPPLY AIR ASSEMBLY SQUARE DIFFUSER
- SIZE / CFM — SUPPLY AIR ASSEMBLY ROUND DIFFUSER
- WALL LOUVER
- AD PLAN / AD SECTION — ACCESS DOOR
- UC 3/4" — UNDERCUT DOOR 3/4"
- INTAKE OR RELIEF HOOD
- DOOR GRILLE

CONTROL

- T — THERMOSTAT
- Cl_2 — Cl_2 PROBE
- H_2S — H_2S PROBE
- ORP — ORP PROBE
- pH — pH PROBE
- CLS — CHLORINE SENSOR
- D — DENSITY
- DP — DIFFERENTIAL PRESSURE SWITCH
- FD — FLOW DETECTOR
- M — DAMPER ACTUATOR
- PS — PRESSURE SWITCH
- SD — SMOKE DETECTOR

PLUMBING SYMBOLOGY

- VT — VENT (VT)
- POTABLE WATER, COLD (PWC)
- POTABLE WATER, HOT (PWH)
- o — UTILITY SINK
- MOP SINK

DEMOLITION

- DEMOLITION
- ABANDON IN PLACE
- CLEAR AND GRUB
- EXISTING ABANDONED IN PLACE

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WORK PACKAGE 2

LEGEND AND SYMBOLS 2

0 1" 2"

FILENAME 10292462-0002-G.rvt
SCALE NONE

DWG NO. **G0007**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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PIPING SYSTEMS

COLD WATER, POTABLE (CW)	
HOT WATER, POTABLE (HW)	
HOT WATER RECIRCULATING, POTABLE (HWC)	
NPW	NON POTABLE COLD WATER
140	HOT WATER - TEMPERATURE, POTABLE
TW	TEPID WATER, POTABLE
TWR	TEPID WATER RETURN, POTABLE
SAN	SANITARY SEWER BELOW GRADE
SAN	SANITARY SEWER ABOVE GRADE
V	SANITARY VENT
AW	ACID WASTE
AV	ACID VENT
CWV	COMBINATION WASTE AND VENT
PD	PRESSURE DRAINAGE
SD	STORM DRAIN ABOVE GRADE
SD	STORM DRAIN BELOW GRADE
OD	STORM DRAIN OVERFLOW
NG	NATURAL GAS
LP	LIQUEFIED PROPANE
CA	COMPRESSED AIR
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
GHWS	GLYCOL HEATING HOT WATER SUPPLY
GHWR	GLYCOL HEATING HOT WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
GCWS	GLYCOL CHILLED WATER SUPPLY
GCWR	GLYCOL CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
CD	CONDENSATE DRAIN
CPD	CONDENSATE PUMP DISCHARGE
STM -15	STEAM SUPPLY - PSI
BBD	BOILER BLOW DOWN
BF	BOILER FEED
SV	STEAM VENT
MU	MAKE-UP WATER

PIPING SYMBOLOGY

- PIPE ANCHOR
- PIPE GUIDE
- EXPANSION JOINT
- PT — PRESSURE/ TEMPERATURE PORT
- THERMOMETER
- THERMOWELL
- PRESSURE GAUGE
- T — TEMPERATURE GAUGE
- FLEXIBLE PIPING CONNECTION
- WYE STRAINER
- MANUAL AIR VENT
- A — AUTOMATIC AIR VENT
- M — METER (WATER, GAS, OTHER)
- FCO — FLOOR CLEANOUT
- CO — CLEANOUT
- WCO — WALL CLEANOUT
- GCO — DOUBLE GRADE CLEANOUT
- WATER HAMMER ARRESTOR
- EARTHQUAKE VALVE
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER, FLAT ON BOTTOM
- ECCENTRIC REDUCER, FLAT ON TOP
- ELBOW, 90° TURN DOWN
- ELBOW, 90° TURN UP
- TEE, OUTLET UP
- TEE, OUTLET DOWN
- TEE, OUTLET UP W/ 90° TURN
- TEE, OUTLET DOWN W/ 90° TURN
- PIPE BREAK
- PIPE CAP
- BLIND FLANGE
- UNION
- FLOW ARROW
- SHUTOFF VALVE (NORMALLY OPEN)
- SHUTOFF VALVE (NORMALLY CLOSED)
- DRAIN VALVE
- CHECK VALVE
- VB — VACUUM BREAKER
- AUTOMATIC FLOW CONTROL VALVE
- CALIBRATED MANUAL BALANCING VALVE
- OR — PRESSURE-RELIEF VALVE
- PRESSURE-REDUCING VALVE (PRV)
- AUTOMATIC CONTROL VALVE, 2-WAY
- AUTOMATIC CONTROL VALVE, 3-WAY
- BFP — BACKFLOW PREVENTER
- XX-1 — PLUMBING FIXTURE

HVAC SYMBOLOGY

- 24x18 — SUPPLY AIR OR OUTSIDE AIR DUCT UP (SECTION CUT, FIRST DIMENSION DUCT WIDTH)
- SUPPLY AIR OR OUTSIDE AIR DUCT DOWN (NO SECTION CUT)
- RETURN AIR DUCT UP (SECTION CUT)
- RETURN AIR DUCT DOWN (NO SECTION CUT)
- EXHAUST AIR DUCT UP (NO SECTION CUT)
- EXHAUST AIR DUCT DOWN (NO SECTION CUT)
- ROUND ELBOW UP
- ROUND ELBOW DOWN
- TRANSITION - RECTANGULAR TO ROUND DUCT
- STANDARD BRANCH
- ELBOW - W/TURNING VANE (RECTANGULAR)
- ELBOW - (RECTANGULAR), SMOOTH RADIUS
- 18x24 — RECTANGULAR DUCT OR OPENING SIZE FIRST NUMBER INDICATES SIZE OF SIDE SHOWN
- 18ϕ — ROUND DUCT SIZE
- R OR D — RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- R OR D — ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- 18x24 — HIDDEN DUCT
- T 9'-10" B 9'-0" / 18x10 — DUCT/PIPE ELEVATION TAG ABOVE FINISH FLOOR
- VOLUME DAMPER
- M — MOTOR OPERATED DAMPER
- FIRE DAMPER
- S — SMOKE DAMPER
- SMOKE AND FIRE DAMPER
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT - TWO LINE
- FLEXIBLE DUCT - ONE LINE
- ACOUSTICAL LINING - DUCT DIMENSIONS FOR NET FREE AREA
- UC — UNDERCUT DOOR
- NEW TO EXISTING CONNECTION
- REMOVE EXISTING UP TO THIS POINT
- HVAC EMERGENCY SHUTDOWN SWITCH

- TAG-SIZE CFM — SUPPLY AIR REGISTER
- TAG-SIZE CFM — EXHAUST AIR OR RETURN AIR GRILLE
- TAG CFM — EXHAUST AIR OR RETURN AIR GRILLE
- TAG CFM — SUPPLY AIR ASSEMBLY SQUARE DIFFUSER
- TAG CFM — SUPPLY AIR ASSEMBLY ROUND DIFFUSER

TEMPERATURE CONTROL DIAGRAM SYMBOLOGY

MISCELLANEOUS DEVICE IDENTIFIER

CO	SPACE CARBON MONOXIDE SENSOR
CO2	SPACE CARBON DIOXIDE SENSOR
H	SPACE HUMIDITY SENSOR
NO2	SPACE NITROGEN DIOXIDE SENSOR
S	SPACE TEMPERATURE SENSOR
T	THERMOSTAT

CONTROL DEVICE IDENTIFIER

AFS	AIRFLOW MEASURING STATION
AM	AIRFLOW MEASURING SENSOR
CO	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
F	FLOW SWITCH
FRZ	FREEZE STAT
H	HUMIDITY SENSOR
HS	HIGH STATIC SWITCH
LS	LOW STATIC SWITCH
NO2	NITROGEN DIOXIDE SENSOR
P	PRESSURE SENSOR
S	SPACE TEMPERATURE SENSOR
SD	SMOKE DETECTOR
T	TEMPERATURE SENSOR
TS	TEMPERATURE SWITCH
ΔP	DIFFERENTIAL PRESSURE SENSOR

CONTROL INPUT/OUTPUT IDENTIFIER

AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT

COIL IDENTIFIERS

CC	CHILLED WATER COOLING COIL
DG	DIRECT FIRED GAS BURNER
DX	DIRECT EXPANSION COOLING COIL
EH	ELECTRIC HEATING COIL
ER	DIRECT EVAPORATIVE COIL
FC	FACE AND BYPASS COOLING COIL
FH	FACE AND BYPASS HEATING COIL
HC	HEATING HOT WATER HEATING COIL
IG	INDIRECT FIRED GAS BURNER
ST	STEAM HEATING COIL

CONTROL ABBREVIATIONS

BTU	BTU METER
COMM	COMMUNICATION
CT	CURRENT TRANSMITTER
EC	ELECTRONICALLY COMMUTATED
EF	EXHAUST FAN
FM	FLOW METER
M	MOTOR ACTUATOR
MA	MIXED AIR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTDOOR AIR
RA	RETURN AIR
RL	RELIEF FAN
RF	RETURN FAN
SA	SUPPLY AIR
SF	SUPPLY FAN
TCC	TEMPERATURE CONTROL CONTRACTOR
VFC	VARIABLE FREQUENCY CONTROLLER

- S — DUCT MOUNTED SMOKE DETECTOR
- T — TEMPERATURE AVERAGING SENSOR
- M — MOTOR OPERATED DAMPER
- M — MOTOR OPERATED SINGLE BLADE DAMPER
- BACKDRAFT DAMPER
- HUMIDIFIER
- AFS — AIRFLOW MEASURING STATION
- INTAKE/ EXHAUST LOUVER
- FILTER
- FRZ — FREEZE STAT
- SEE CONTROL ABBREVIATIONS (TYP)
- M XX — FAN
- EC XX — FAN WITH EC MOTOR
- PUMP
- EC — PUMP WITH EC MOTOR

ABBREVIATIONS

AD	ACCESS DOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ARF	ABOVE RAISED FLOOR
AV	ABOVE RAISED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSE POWER
BOE	BOTTOM OF EQUIPMENT
BTUH	BRITISH THERMAL UNITS PER HOUR
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DH	DEHUMIDIFIER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ESS	EMERGENCY SHUTOFF SWITCH
EWT	ENTERING WATER TEMPERATURE
F	FUTURE
FA	FREE AREA
FCP	FAN CONTROL PANEL
FCU	FAN COIL UNIT
FDBK	FEEDBACK
FLA	FULL LOAD AMPS
FLT	FILTER
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
GE	GRAVITY EXHAUST
GI	GRAVITY INTAKE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
IAQ	INDOOR AIR QUALITY
IPLV	INTEGRATED PART LOAD VALUE
LAT	LEAVING AIR TEMPERATURE
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MBH	THOUSAND BTUH
MCC	MOTOR CONTROL CENTER
NC	NOISE CRITERIA
NO	NUMBER
NRC	NOISE REDUCTION COEFFICIENT
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP
PPH	POUNDS PER HOUR
RH	RELATIVE HUMIDITY
RTU	ROOFTOP UNIT
S	SIGNAL PORT
SCFM	STANDARD CUBIC FEET PER MINUTE
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SP	STATIC PRESSURE
TC	TECHNOLOGY CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TD	TEMPERATURE DIFFERENTIAL
TES	THERMAL ENERGY STORAGE
TSP	TOTAL STATIC PRESSURE
UH	UNIT HEATER
V&C	VALVE AND CAP
VAV	VARIABLE AIR VOLUME
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

GENERAL NOTES

GENERAL MECHANICAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL PIPING, DUCTWORK, COILS, EQUIPMENT, TERMINAL UNITS, ASSOCIATED CONTROLS, WIRING, AND OTHER ITEMS SHOWN BOLD AND/OR BOLD DASHED LINES UNLESS SPECIFICALLY NOTED OTHERWISE. THE ITEMS INDICATED ON THE DRAWINGS TO BE REMOVED ARE ONLY TO INDICATE IN GENERAL THE AMOUNT OF DEMOLITION WORK INVOLVED. A SITE INVESTIGATION BY THE CONTRACTOR MUST BE PERFORMED TO AID IN DETERMINING THE COMPLETE EXTENT OF WORK INVOLVED.
2. PIPING AND DUCTWORK EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. REMAINING PIPING SHALL BE DRAINED AND CAPPED WITHOUT CREATING DEAD LEGS IN THE SYSTEM. REMAINING DUCTWORK SHALL BE CAPPED.
3. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, NOTIFY OWNER AND INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
4. EXISTING EQUIPMENT BEING REMOVED AND CONSIDERED SALVAGEABLE BY THE OWNER SHALL BE TURNED OVER TO THE OWNER.
5. CONTRACTORS SHALL COORDINATE AND SCHEDULE ALL NECESSARY UTILITY SHUT-OFFS WITH OWNER PRIOR TO PROCEEDING WITH SUCH WORK.
6. COORDINATE SAW-CUTTING OF THE FLOOR OR WALL WITH OTHER TRADES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, FLOORS, CEILINGS, OR OTHER BUILDING ELEMENTS THAT ARE DISTURBED AS PART OF THE DEMOLITION OR INSTALLATION OF MECHANICAL WORK. SUCH WORK SHALL MATCH THE EXISTING CONSTRUCTION, FINISH, AND RATING. FIRE SEAL WALL OPENINGS AS REQUIRED.
8. REPLACE/REPAIR DAMAGED PIPING AND/OR DUCTWORK INSULATION TO MATCH EXISTING.
9. CONTRACTOR SHALL PROVIDE WORK IN PHASES AS REQUIRED BY THE CONTRACT DOCUMENTS WHILE MINIMIZING POTENTIAL WORK DELAYS AND UTILITY SHUT-DOWNS. COORDINATE ALL WORK WITH PROJECT PHASING PLAN AND WORK SHOWN ON DEMOLITION AND NEW PLANS. ALL EXISTING AREAS OF THE BUILDING NOT A PART OF A CURRENT PHASE OF WORK SHALL REMAIN OPERATIONAL WHILE WORK IN EACH INDIVIDUAL PHASE IS COMPLETED.

GENERAL MECHANICAL NOTES

1. THESE NOTES ARE NOT ALL INCLUSIVE. REFER TO DRAWINGS AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. THIS IS A STANDARD MECHANICAL (HVAC AND PLUMBING) SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
3. VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO MECHANICAL SHEETS.
4. PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS AS SPECIFIED, OR AS REQUIRED BY CODE.
5. MECHANICAL INSTALLATION SHALL COMPLY WITH THE ADA/ABA ACCESSIBILITY GUIDELINES.
6. DETAILS APPLY TO THE ENTIRE PROJECT AND ARE ONLY REFERENCED TO PROVIDE CLARITY IF THERE ARE MULTIPLE DETAILS THAT COULD APPLY TO A PARTICULAR PROJECT CONDITION.
7. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING WITH OTHER TRADES BEFORE PROCEEDING WITH WORK. DO NOT INSTALL MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING ABOVE ELECTRICAL EQUIPMENT WHERE PROHIBITED BY ELECTRICAL CODES (SWITCHBOARDS, PANELS, ETC.).
8. LIGHT LINE WEIGHT INDICATES EXISTING PIPING, DUCTWORK, AND/OR EQUIPMENT TO REMAIN. BOLD LINE WEIGHT INDICATES NEW WORK TO BE INSTALLED AS WORK OF THIS CONTRACT.
9. COORDINATE INSTALLATION OF OUTSIDE AIR INTAKE WITH INSTALLATION OF PLUMBING VENTS, FLUES AND EXHAUST/RELIEF OUTLETS TO MAINTAIN 10' SEPARATION.
10. ALL WORK IN FINISHED SPACES SHALL BE LOCATED ABOVE CEILINGS, IN CHASES OR OTHER CONCEALED ACCESSIBLE LOCATIONS UNLESS NOTED OTHERWISE. LOCATE AND ARRANGE VALVES, DRAIN FITTINGS, ETC. TO BE ACCESSIBLE THROUGH LAY-IN CEILINGS, ACCESS PANELS OR ACCESS DOORS. PROVIDE AN ACCESS PANEL OR DOOR FOR ALL NON-ACCESSIBLE INSTALLATIONS. COORDINATE LOCATION OF ACCESS PANELS OR DOORS WITH THE ARCHITECT/ENGINEER AND OTHER TRADES.
11. ALL MATERIALS LOCATED IN PLENUM SHALL BE RATED FOR PLENUM INSTALLATION.
12. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH ALL TRADES. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS OR AS SHOWN ON THE MECHANICAL OR STRUCTURAL DRAWINGS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED.
13. ALL MISCELLANEOUS METALS AND MATERIALS REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE PROVIDED BY THE INSTALLING CONTRACTOR.
14. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS OF DISSIMILAR METALS (SUCH AS COPPER TO GALVANIZED STEEL).
15. PROVIDE ISOLATION VALVES AT EACH PIECE OF EQUIPMENT. ALSO PROVIDE ISOLATION VALVES ON EACH BRANCH AND/OR RISER SERVING MULTIPLE PIECES OF EQUIPMENT OR FIXTURES AND ELSEWHERE AS INDICATED. INSTALL VALVES AS CLOSE TO MAIN AS POSSIBLE.

GENERAL HVAC NOTES

1. DUCTWORK DIMENSIONS: FIRST NUMBER INDICATES SIDE OF DUCTWORK SHOWN. ALL DIMENSIONS ARE IN INCHES AND ARE INSIDE CLEAR DIMENSIONS.
2. VOLUME DAMPERS ABOVE PLASTER OR GYPBOARD CEILINGS SHALL HAVE EXTENSION RODS AND CHROME-PLATED ESCUTCHEON PLATES.
3. COORDINATE ALL GRILLE, REGISTER AND DIFFUSER LOCATIONS WITH REFLECTED CEILING PLAN, LIGHTING, AND ALL OTHER CEILING MOUNTED DEVICES.
4. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO FANS, PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION.
5. PROVIDE ACCESSIBLE VOLUME DAMPERS OR OTHER MEANS OF AIRFLOW ADJUSTMENT AT ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES.
6. PROVIDE DUCT ACCESS DOORS AT OUTSIDE AIR INTAKE PLENUMS.
7. ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES SHALL BE THE SAME AS THE DIFFUSER OR GRILLE NECK SIZE UNLESS NOTED OTHERWISE.
8. ALL PIPING RUNOUTS SHALL BE 3/4" UNLESS NOTED OTHERWISE.

GENERAL PLUMBING NOTES

1. SANITARY SEWER PIPING SMALLER THAN 3" SHALL BE SLOPED AT 1/4" PER FOOT, 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT.
2. WALL HYDRANTS SHALL BE INSTALLED BETWEEN 18" MIN AND 24" MAX ABOVE FINISH GRADE. COORDINATE ELEVATIONS OF FINISH FLOOR OR FINISH EXTERIOR GRADE. PROVIDE ACCESSIBLE INSIDE SHUTOFF VALVE FOR EACH WALL HYDRANT.
3. INSTALL WALL CLEANOUTS (WCO) ON ALL SANITARY AND STORM RISERS AT 30" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. COORDINATE EXACT HEIGHT WITH OTHER TRADES TO ENSURE ACCESSIBILITY.
4. ROUTE ALL STORM PIPING AS HIGH AS POSSIBLE AND SLOPE AT 1/8" PER FOOT UNLESS NOTED OTHERWISE. OVERFLOW DOWN SPOUT NOZZLES SHALL BE INSTALLED AT 12" ABOVE FINISH EXTERIOR GRADE UNLESS NOTED OTHERWISE.
5. PROVIDE BACKFLOW PREVENTERS IN ACCORDANCE WITH THE LOCAL CODES. PROVIDE AIR GAP FITTINGS FOR ALL RPZ BACKFLOW PREVENTERS AND ROUTE DISCHARGE PIPING TO NEAREST FLOOR DRAIN OR FLOOR SINK OR AS SHOWN ON DRAWINGS.
6. PROVIDE GAS REGULATORS, REGULATOR VENT PIPING, SHUTOFF VALVES, DIRT LEGS, AND UNIONS ON ALL GAS FIRED EQUIPMENT. REGULATE GAS PRESSURE AS REQUIRED FOR EACH SPECIFIC PIECE OF GAS FIRED EQUIPMENT.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

MECHANICAL LEGEND

0 1" 2"

FILENAME 10292462-0002-G.rvt
SCALE 12" = 1'-0"

DWG NO. **G0008**

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10/7/2021 4:54:06 PM

ONE-LINE, POWER, AND LIGHTING SYMBOLOGY

X 20A 3P OR X 100AF 80AT 3P — LOW VOLTAGE CIRCUIT BREAKER (CB). RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIC TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE.

TYPES:
- MCCB - MOLDED CASE
- ICCB - INSULATED CASE
- LVP - LOW VOLTAGE POWER
- MCP - MOTOR CIRCUIT PROTECTOR (RATING PER CONNECTED LOAD)

TRIP UNIT:
- L - LONG TIME PICKUP
- S - SHORT TIME PICKUP
- I - INSTANTANEOUS PICKUP
- G - GROUND FAULT PICKUP
- A - ARC FLASH MAINTENANCE

X — INTERLOCK: X - INDICATES TYPE

TYPES:
- E - ELECTRICAL
- M - MECHANICAL
- K - KEY

GFP — GROUND FAULT PROTECTION

52 — MEDIUM VOLTAGE CIRCUIT BREAKER

FUSE, RATING, AND NUMBER OF FUSES AS NOTED

FUSED CUTOUT, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED

FUSIBLE SWITCH, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED (3 POLE UON)

NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED (3 POLE UON)

DISCONNECT OR DRAWOUT CONNECTION

A B & A B — MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER

D & D — MOTOR/LOAD CONTROLLER AND SEPARATELY MOUNTED MOTOR/LOAD CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT

MOTOR STARTER AND CONTROLLER SUBSCRIPTS:

A - MAGNETIC STARTER NEMA SIZE

B - STARTER TYPE
- NONE - FULL VOLTAGE NON-REVERSING (FVNR)
- FVR - FULL VOLTAGE REVERSING
- 2S - TWO SPEED
- RVAT - REDUCED VOLTAGE AUTO TRANSFORMER

C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED)

D - CONTROLLER TYPE
- VFD - VARIABLE FREQUENCY DRIVE
- SS - SOLID STATE
- CONT - CONTACTOR

SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION

SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION.

X — NON-FUSED SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A

X Y — FUSED SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE

CB — SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION

CS AFRS — ARC FLASH REDUCTION SWITCH

7 1/2 OR HP — MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED)

G — GENERATOR

ATS — TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED

ATS - AUTOMATIC
MTS - MANUAL

TRANSFORMER
- 3-PHASE, 3-WIRE DELTA CONNECTION
- 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION

LP100 208/120V 3Ø, 4W — SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED

100 KVA — NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP

VOLTAGE TRANSFORMER (VT, PT, OR CPT)

CURRENT TRANSFORMER (CT)

WH — UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS

DMP — DIGITAL METERING PACKAGE

GROUND

LIGHTNING ARRESTER

SPD — LOW VOLTAGE SURGE PROTECTIVE DEVICE

SS — SELECTOR SWITCH

PB — PUSHBUTTON

IC — INSTRUMENTATION/CONTROL DEVICE

CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

J — JUNCTION OR PULL BOX

PANELBOARD (250V TO 600V)

PANELBOARD (LESS THAN 250V)

X — ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.

EQUIPMENT TYPES:
- ATS - AUTOMATIC TRANSFER SWITCH
- CP - CONTROL PANEL
- MTS - MANUAL TRANSFER SWITCH
- MCC - MOTOR CONTROL CENTER
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- VFD - VARIABLE FREQUENCY DRIVE
- SB - SWITCHBOARD
- SG - SWITCHGEAR
- T - TRANSFORMER

Z X Y — CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)

Z X Y — WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

Z X Y — POLE/STANCHION MOUNTED FLOOR LUMINAIRE, LAMP TYPE AS SPECIFIED

Z Z X Y — CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

X Y — EMERGENCY LIGHT, NUMBER OF ATTACHED HEADS AS SHOWN

X Y — EMERGENCY LIGHT, REMOTE MOUNTED HEAD

X Y X Y — DOUBLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS

X Y X Y — SINGLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS

LIGHTING FIXTURE SUBSCRIPTS:
- X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE
- Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD
- Z - INDICATES CONTROLLING SWITCH (IF REQUIRED)
- NL - NIGHT LIGHT UNSWITCHED

$ Y X — WALL SWITCH

SUBSCRIPTS:
X - INDICATES TYPE
- NONE - SINGLE POLE
- 2 - DOUBLE POLE
- 3 - THREE-WAY
- 4 - FOUR-WAY
- K - KEY SWITCH
- P - PILOT LIGHT
- L - LIGHTED HANDLE
- DM - DIMMING
- MC - MOMENTARY CONTACT
- T - TIMER

Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)

$ Y X — MANUAL MOTOR STARTER

SUBSCRIPTS:
X - INDICATES TYPE
- HP - HORSEPOWER RATED
- TE - HORSEPOWER RATED WITH THERMAL ELEMENT
- FT - HORSEPOWER RATED WITH FUSETRON FUSE

Y - INDICATES SWITCH TYPE
- NONE - TOGGLE SWITCH TYPE
- R - ROTARY SWITCH TYPE

PC — PHOTOCELL

TC — TIME CLOCK

$ OSX OR OSX — LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED

OSX — LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED

X — ROOM/AREA LIGHTING CONTROL TYPE, SEE LIGHTING CONTROL SCHEDULE FOR REQUIREMENTS

PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED

X Y — SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS

X Y OR X Y — TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE

X Y — DUPLEX RECEPTACLE

X Y — SIMPLEX RECEPTACLE

X Y — RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED

SUBSCRIPTS:

X - INDICATES TYPE
- GFCI - GROUND FAULT CIRCUIT INTERRUPTER
- IG - ISOLATED GROUND
- WP - WEATHERPROOF
- WPI - WEATHERPROOF IN USE
- TR - TAMPER RESISTANT
- PLH - PLUG LOAD HALF CONTROLLED
- PLD - PLUG LOAD DUAL CONTROLLED
- USB - USB CHARGING STATION
- SPD - SURGE PROTECTIVE DEVICE

Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD

CONDUIT TURNING UP

CONDUIT TURNING DOWN

HOMERUN TO PANEL
SINGLE PHASE: 2 #12, 1 #12G IN 3/4"C
THREE PHASE: 3 #12, 1 #12G IN 3/4"C
UNLESS OTHERWISE NOTED, CONDUCTOR SIZE IS FOR ENTIRE CIRCUIT.

CONDUIT CONNECTION TO EQUIPMENT

CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT PHASE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. #12 IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED.

CIRCUIT CONTINUATION

CONDUIT STUBBED OUT AND CAPPED

CORD AND PLUG CONNECTION

XXX OR XXX — CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS

GROUND CABLE

GROUND ROD

GENERAL NOTES:

1. THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
3. SEE P&ID LEGEND SHEET FOR PROJECT SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ELECTRICAL LEGEND 1

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE

DWG NO. **G0009**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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COMMUNICATION SYMBOLOGY

- WALL MOUNTED TELEPHONE OUTLET
- WALL MOUNTED DATA OUTLET
- WALL MOUNTED COMBINATION TELEPHONE AND DATA OUTLET
- RECESSED FLOOR MOUNTED TELEPHONE OUTLET
- RECESSED FLOOR MOUNTED DATA OUTLET
- RECESSED FLOOR MOUNTED COMBINATION TELEPHONE AND DATA OUTLET

AUDIO/VISUAL SYMBOLOGY

- TV — TELEVISION OUTLET
- S — CEILING MOUNT SPEAKER
- S X — WALL MOUNT SPEAKER
  SPEAKER SUBSCRIPTS:
  X - INDICATES HEIGHT
- H — HORN TYPE TRANSDUCER
- VC — VOLUME CONTROL
- PAHE — HEAD END EQUIPMENT
- M — FLOOR MOUNTED MICROPHONE JACK
- M — WALL MOUNTED MICROPHONE JACK

SECURITY SYMBOLOGY

- DOOR POSITION SWITCH
- COMBINATION ELECTRIC DOOR STRIKE AND POSITION SWITCH
- R P — PROXIMITY CARD READER
- R K — PROXIMITY CARD READER WITH KEYPAD
- M — DUAL TECHNOLOGY MOTION DETECTOR
- REQUEST TO EXIT MOTION DETECTOR
- REQUEST TO EXIT PUSH BUTTON
- G — GLASS BREAK DETECTOR
- PTZ — CCTV CAMERA
  PAN/TILT/ZOOM WHEN INDICATED
- SEC — SECURITY EQUIPMENT CABINET
- R — REMOTE KEYPAD/CONTROL STATION

EMERGENCY ALARM SYMBOLOGY

- E — ALARM BELL
- E — ALARM HORN
- E — ALARM FLASHING LIGHT
- E — ALARM BELL AND FLASHING LIGHT COMBINATION UNIT
- E — ALARM HORN AND FLASHING LIGHT COMBINATION UNIT
- E — PUSHBUTTON OR PULLSTATION

SITE SYMBOLOGY

- EXTERIOR PAD MOUNTED TRANSFORMER
- POLE - MOUNTED TRANSFORMER
- X / Y — ELECTRICAL HANDHOLE OR MANHOLE
  Y- MHX OR HHX
  X - INDICATES SEQUENCE NUMBER
- X / Y — POLE/STANCHION MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED
- X / Y — POLE MOUNTED AREA OR ROADWAY LUMINAIRE, LAMP TYPE AS SPECIFIED
- X / Y — HIGH MAST LIGHTING, NUMBER OF LUMINAIRES AS SPECIFIED
  LIGHTING FIXTURE SUBSCRIPTS:
  X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE
  Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD
- POWER POLE
- DOWNGUY
- E — UNDERGROUND (UNO) ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY
- OHE — OVERHEAD ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY

CONTROL SYMBOLOGY

- ELECTRICAL CONNECTION
- OR OR — NO ELECTRICAL CONNECTION
- SV OR — SOLENOID VALVE
- X / Y — CONTROL/RELAY COIL:
  X-INDICATES TYPE
  Y-INDICATES LOOP NUMBER, WHEN USED
  TYPES:
  CR-CONTROL RELAY
  PC-PHOTOCELL
  DP-DEFINITE PURPOSE
  M-MOTOR STARTER
  TC-TIME CLOCK
  LC-LIGHTING CONTACTOR
  TR-TIMING RELAY
- NORMALLY OPEN CONTACT (N.O.)
- NORMALLY CLOSED CONTACT (N.C.)
- NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS ENERGIZED
- NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS ENERGIZED
- NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS DE-ENERGIZED
- NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS DE-ENERGIZED
- NORMALLY OPEN TEMPERATURE SWITCH; CLOSE ON RISING TEMPERATURE
- NORMALLY CLOSED TEMPERATURE SWITCH; OPEN ON RISING TEMPERATURE
- NORMALLY OPEN FLOW SWITCH; CLOSE ON INCREASING FLOW
- NORMALLY CLOSED FLOW SWITCH; OPEN ON INCREASING FLOW
- NORMALLY OPEN LEVEL SWITCH, CLOSE ON RISING LEVEL
- NORMALLY CLOSED LEVEL SWITCH, OPEN ON RISING LEVEL
- NORMALLY OPEN PRESSURE SWITCH, CLOSE ON INCREASING PRESSURE
- NORMALLY CLOSED PRESSURE SWITCH, OPEN ON INCREASING PRESSURE
- NORMALLY OPEN LIMIT SWITCH, CLOSE ON REACHING LIMIT
- NORMALLY CLOSED LIMIT SWITCH, OPEN ON REACHING LIMIT
- MICROPROCESSOR (PLC, RTU, ETC.) OUTPUT
- MICROPROCESSOR (PLC, RTU, ETC.) INPUT
- FIELD WIRING EXTERNAL TO CONTROL PANEL
- OFF / HAND / AUTO — XOO / OOX — 3 POSITION SELECTOR SWITCH, MAINTAINED CONTACTS; UNLESS OTHERWISE NOTED, 2-POSITION SIMILAR
- NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED
- NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED

CONTROL SYMBOLOGY

- X — INDICATING LIGHT: X INDICATES LENS COLOR
- X — PUSH TO TEST INDICATING LIGHT: X INDICATES LENS COLOR

  LENS COLORS:

R - RED	Y - YELLOW
G - GREEN	W - WHITE
B - BLUE	A - AMBER

- THERMAL OVERLOAD ELEMENT
- OL / (X) — THERMAL OVERLOAD RELAY CONTACT. WHEN SHOWN X INDICATES QUANTITY.
- CPT — CONTROL POWER TRANSFORMER (CPT)
- RTM — RUN TIME METER

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ELECTRICAL LEGEND 2

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NONE

DWG NO. **G0010**

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10/7/2021 4:54:08 PM

PRIMARY ELEMENT SYMBOLOGY

- ORIFICE PLATE
- PITOT TUBE OR ANNUBAR
- FI — ROTOMETER
- SONIC OR ULTRASONIC FLOWMETER
- M — MAGNETIC FLOWMETER
- FLUME
- WEIR
- TD — THERMAL DISPERSION FLOWMETER
- VENTURI TUBE
- VENTURI FLUME
- FLOAT SWITCH
- TE — TEMPERATURE ELEMENT WITH THERMOWELL
- FG — SIGHT FLOW GLASS

LINE TYPES

- MAIN PROCESS LINE
- SECONDARY PROCESS LINE
- AUXILIARY PROCESS LINE
- DIRECTION OF FLOW
- PNEUMATIC SIGNAL
- ELECTRICAL SIGNAL
- HYDRAULIC SIGNAL
- SOFTWARE OR DATA LINK
- SIGNAL CONNECTION
- CROSSOVER - NO CONNECTION
- X — X — CAPILLARY

I/O POINT TAG DESIGNATION

I/O POINT TAG DESIGNATION EXAMPLE:

HYPO STORAGE TANK NO. 1 LEVEL I/O POINT TAG DESIGNATION:

JRP 15 LITX 02 1 1

- DEVICE NUMBER (1 OF X SIMILAR DEVICES ASSOCIATED WITH THE PROCESS TRAIN NUMBER).
- PROCESS TRAIN NUMBER (1 OF X REDUNDANT TRAINS/EQUIPMENT).
- SUBUNIT PROCESS NUMBER LISTED AS "ID NO." AS PART OF EACH UNIT PROCESS.
- ISA FOUR LETTER ABBREVIATION. 'X' IS USED TO COMPLETE THE FOUR LETTERS IF THE ISA ABBREVIATION HAS FEWER THAN FOUR LETTERS.
- HRSD TWO DIGIT UNIT PROCESS NUMBER (UNIT PROCESS 28 IS THE CENTRATE TREATMENT SYSTEM).
- HRSD THREE LETTER TREATMENT PLANT ABBREVIATION.

THE TREATMENT PLANT ABBREVIATION IS NOT SHOWN FOR THE INDIVIDUAL INSTRUMENTATION DEVICES ON THE DRAWINGS, BUT ARE INCLUDED IN THE I/O LIST PROVIDED IN THE SPECIFICATIONS.

INSTRUMENT SYMBOLOGY

- LOCALLY MOUNTED FIELD INSTRUMENTATION
- MOUNTED ON PANEL FRONT
- MOUNTED INSIDE PANEL
- XXX — FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL)
- MOUNTED INSIDE AUXILIARY PANEL
- PILOT LIGHT
- INSTRUMENT FUNCTIONS SHARING COMMON HOUSING
- COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS
- SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED
- SHARED DISPLAY, SHARED CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR
- PROGRAMMABLE LOGIC CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR
- PROGRAMMABLE LOGIC CONTROL, FIELD MOUNTED

ACTUATOR SYMBOLOGY

- S — SOLENOID
- X — OPERATOR ABBREVIATIONS: M = MOTOR, P = PNEUMATIC
- FLOAT OPERATOR
- SPRING-OPPOSED SINGLE-ACTING PNEUMATIC CYLINDER
- DOUBLE-ACTING PNEUMATIC CYLINDER
- PNEUMATIC DIAPHRAGM
- PNEUMATIC DIAPHRAGM WITH POSITIONER

TYPES OF POWER SUPPLY

A	PLANT COMPRESSED AIR
IA	INSTRUMENTATION AIR
ES	ELECTRIC SUPPLY
NG	NATURAL GAS
HYD	HYDRAULIC

CROSS REFERENCE SYMBOLOGY

zzz | XXX | YYY — OFF PAGE CONNECTOR

SUBSCRIPTS
XXX - CONNECTOR NUMBER
YYY - SHEET CONTINUATION
ZZZ - SERVICE ABBREVIATION

OFF PAGE CONNECTOR - DEADEND

INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	VARIABLE MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USERS CHOICE			CONTROL	CLOSED
D	USERS CHOICE	DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, GAUGE VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN	SCAN		
K	TIME, TIME SCHEDULE	TIME; RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE				MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL PROBE		
X	UNCLASSIFIED	X AXIS	ACCESSORY DEVICES UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		AUXILLIARY DEVICES	
Z	POSITION, DIMENSION	Z AXIS SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

MISCELLANEOUS INSTRUMENTATION ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CL2	CHLORINE (ANALYZER MODIFIER)
CO	CARBON MONOXIDE (ANALYZER MODIFIER)
CO2	CARBON DIOXIDE (ANALYZER MODIFIER)
COMB	COMBUSTIBLES (ANALYZER MODIFIER)
COND	CONDUCTIVITY (ANALYZER MODIFIER)
DEN	DENSITY (ANALYZER MODIFIER)
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DO	DISSOLVED OXYGEN (ANALYZER MODIFIER)
E/P	VOLTAGE TO PNEUMATIC
H2S	HYDROGEN SULFIDE (ANALYZER MODIFIER)
HCL	HYDROGEN CHLORIDE (ANALYZER MODIFIER)
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
NOX	NITROGEN OXIDE (ANALYZER MODIFIER)
OI	OPERATOR INTERFACE
O2	OXYGEN (ANALYZER MODIFIER)
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PHOS	PHOSPHATE
SS	SUSPENDED SOLIDS (ANALYZER MODIFIER)
TURB	TURBIDITY (ANALYZER MODIFIER)
WAN	WIDE AREA NETWORK

CONTROL SWITCH NOTATION ABBREVIATIONS

xxx

ACK	ACKNOWLEDGE
ES	EMERGENCY STOP
FAIL	FAILURE
FOR	FORWARD-OFF-REVERSE
FR	FORWARD-REVERSE
FS	FAST-SLOW
HA	HAND-AUTO
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
LL	LEAD-LAG
LLS	LEAD-LAG-STANDBY
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
LS	LEAD-STANDBY
MA	MANUAL-AUTO
OAC	OPEN-AUTO-CLOSE
OC	OPEN-CLOSE
OO	ON-OFF
OSC	OPEN-STOP-CLOSE
RJ	RUN-JOG
RJR	RUN-JOG-REVERSE
SIL	SILENCE
SS	START-STOP
STR	START
STP	STOP

VALVES

- BALL VALVE
- BUTTERFLY VALVE
- CONE VALVE
- CHECK VALVE
- DOUBLE-DISK CHECK VALVE
- BALL CHECK VALVE
- DIAPHRAGM VALVE
- GATE OR GENERAL VALVE
- GLOBE VALVE
- KNIFE GATE VALVE
- NEEDLE VALVE
- PINCH VALVE
- PLUG VALVE
- THREE-WAY BALL VALVE
- THREE-WAY PLUG VALVE
- PRESSURE-REDUCING VALVE
- PRESSURE-REGULATING VALVE
- THREE-WAY CONTROL VALVE
- OR — PRESSURE-RELIEF VALVE
- X — AIR-RELEASE VACUUM VALVE, A = AIR RELEASE, VAC = VACUUM
- FOOT VALVE

MISCELLANEOUS SYMBOLOGY

- EDUCTOR
- EMERGENCY SHOWER & EYEWASH STATION
- MOISTURE TRAP
- SLIDE GATE
- STOP LOG
- STOP LOG SLOTS
- WYE STRAINER
- BASKET STRAINER
- DRAIN SCREEN
- CYLINDRICAL SCREEN
- MANUAL DRIP TRAP
- WEIR
- DIAPHRAGM SEAL
- ANNULAR SEAL
- FLOW CONDITIONER
- CHEMICAL SENSING PROBE

MISCELLANEOUS SYMBOLOGY

- CENTRIFUGAL PUMP
- PERISTALIC PUMP
- PROGRESSING CAVITY PUMP
- M — SUBMERSIBLE PUMP
- VERTICAL TURBINE PUMP
- AIR FILTER
- CENTRIFUGAL BLOWER / FAN
- POSITIVE DISPLACEMENT PUMP
- PISTON DRIVEN COMPRESSOR
- SUMP PUMP
- MIXER
- INLINE MIXER
- PROPELLER
- AIR SEPARATOR

GENERAL NOTES:

1. THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
2. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR MISCELLANEOUS PIPING SYMBOLS.
3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
4. VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO INSTRUMENTATION DIAGRAMS. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR VALVE SYMBOLS USED ELSEWHERE ON THE SHEETS.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. ALCORN
CHECKED BY	B. PODESZWA
DRAWN BY	S. NAVARATNA
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

INSTRUMENTATION LEGEND AND SYMBOLS

0 1" 2"

FILENAME	G0011.DWG
SCALE	NO SCALE
DWG NO.	G0011

SURVEY CONTROL POINTS				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	3560988.10	12056198.52	27.27	PIN CAP #105
2	3560781.36	12056108.90	20.80	PK NAIL #106
3	3560630.21	12055963.32	13.83	PK NAIL #107
4	3560487.95	12056085.65	19.05	PIN CAP #108
5	3560313.14	12056266.66	19.87	PIN CAP #109
6	3560121.75	12056463.71	16.54	PK NAIL #110
7	3560463.45	12056526.92	21.14	PK NAIL #111
8	3560703.20	12056711.60	25.44	PK NAIL #103
9	3560936.40	12056487.01	23.91	PK NAIL #104
10	3560261.73	12057274.42	24.99	PIN CAP #100
11	3560566.71	12057419.92	26.77	PIN CAP #708
12	3560720.42	12057633.45	25.18	PIN CAP #601
13	3561176.02	12057981.62	28.03	PIN CAP #707
14	3564056.89	12058085.02	29.64	PIN CAP #30

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10/5/2021 8:25 AM

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 1

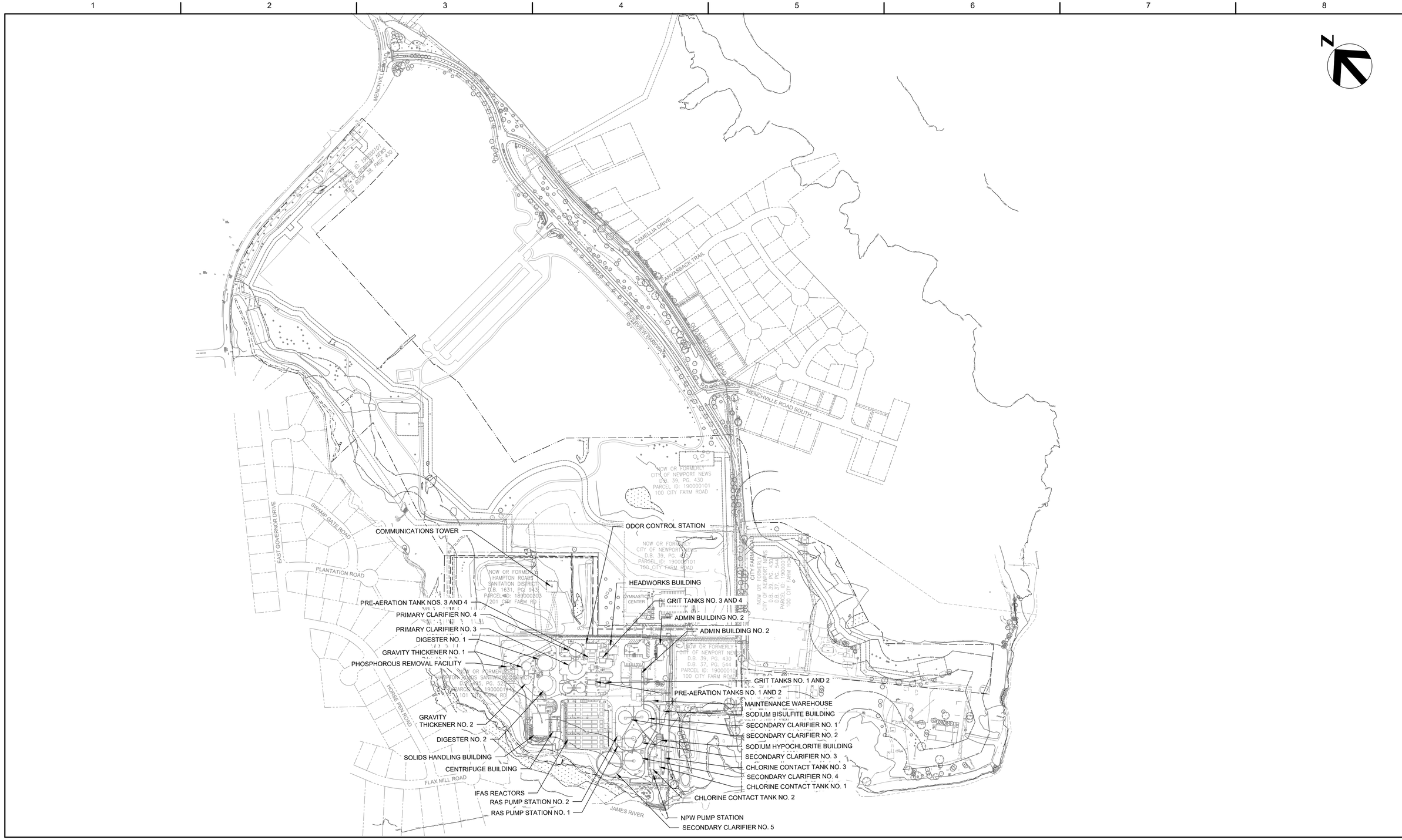
OVERALL SURVEY PLAN

0 1" 2"

FILENAME

SCALE 1" = 250'

DWG NO.
G0012
of XXX



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10/5/2021 8:25 AM

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WORK PACKAGE 2

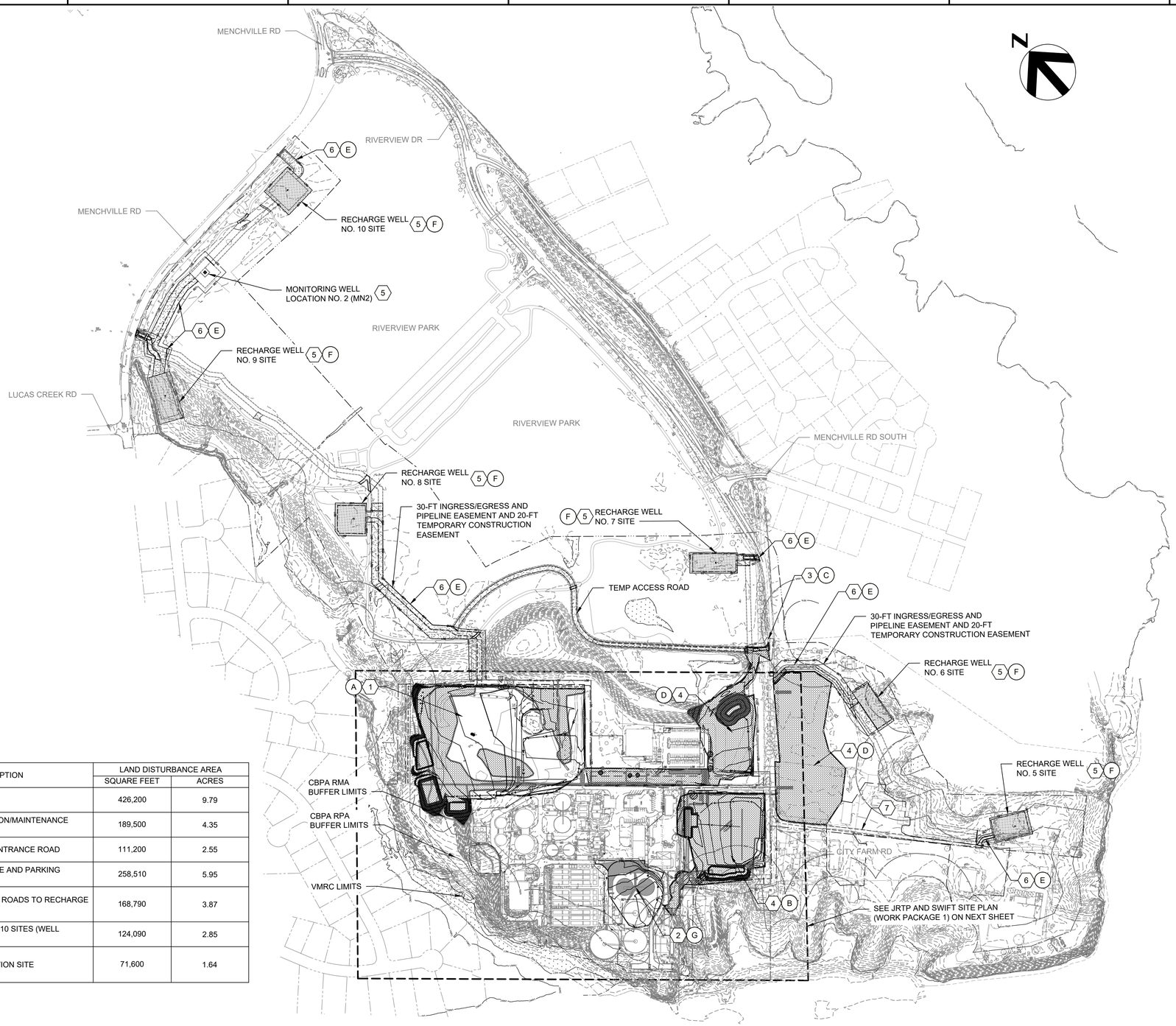
OVERALL EXISTING SITE PLAN

0 1" 2"

FILENAME

SCALE 1" = 250'

DWG NO.
G0013
of XXX



AREA DESCRIPTION		LAND DISTURBANCE AREA	
		SQUARE FEET	ACRES
A	SWIFT SITE	426,200	9.79
B	JRTP AND ADMINISTRATION/MAINTENANCE BUILDING SITE	189,500	4.35
C	GYMNASTICS CENTER/ ENTRANCE ROAD	111,200	2.55
D	DESIGN-BUILDERS OFFICE AND PARKING COMPLEX	258,510	5.95
E	CONSTRUCTION ACCESS ROADS TO RECHARGE WELL NOS. 5-10	168,790	3.87
F	RECHARGE WELL NOS. 5-10 SITES (WELL INSTALLATION PROJECT)	124,090	2.85
G	CLARIFIER 1 CONSTRUCTION SITE	71,600	1.64

GENERAL NOTES

1. MULTIPLE PROJECTS ARE BRING COMPLETED CONCURRENTLY, TRAILS AND THE INSTALLATION OF THE MAR WELL CASINGS ARE BEING COMPLETED BY OTHERS.
2. THE PROJECT IS DIVIDED INTO TWO WORK PACKAGES. GENERALLY, WORK PACKAGE NO. 1 INCLUDES SITE CLEARING, FOUNDATION PILING, SITE PREPARATION, CONSTRUCTION LAYDOWN, STORAGE AND ACCESS, AND TEMPORARY ACCESS ROADS FOR THE MAR WELL DRILLER THAT WILL BE INSTALLING THE WELL CASING. WORK PACKAGE NO. 2 WILL BE IMPLEMENTED IMMEDIATELY FOLLOWING WORK PACKAGE NO. 1.
3. THIS DRAWING DEPICTS GENERAL AREAS FOR CONSTRUCTION ACTIVITIES THAT ARE PART OF WORK PACKAGE 1.
4. DESIGN-BUILDER SHALL PROVIDE TEMPORARY ACCESS TO RECHARGE WELL NOS. 1-10. THE WELL CASING INSTALLATION CONTRACTOR SHALL HAVE ACCESS THROUGH THE TEMPORARY ACCESS AS REQUIRED.
5. RECHARGE WELL NOS. 1, 3, AND 4 ARE LOCATED WITHIN THE EXISTING JRTP/SWIFT SITE AND HAVE BEEN SUBMITTED FOR SITE PLAN APPROVAL SEPARATELY (BY OTHERS).
6. WETLANDS SHALL NOT BE DISTURBED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.

KEYNOTES ⬡

1. CLEARING, GRUBBING, TREE REMOVAL AND SITE PREPARATION FOR FOUNDATION PILING INSTALLATION FOR THE FOLLOWING STRUCTURES: MBBR, SWIFT INFLUENT EQ TANK, SWIFT PROCESS BUILDING NOS. 1 AND 2, AND WELL BACKFLUSH EQ TANK.
2. DEMOLITION OF EXISTING STRUCTURES, ROADWAY, UTILITIES, CLEARING, GRUBBING, TREE REMOVAL AND SITE PREPARATION FOR FOUNDATION PILING FOR THE NEW SECONDARY CLARIFIER NO. 1.
3. GYMNASTIC CENTER MODIFICATIONS, INCLUDING PARKING AREA MODIFICATIONS, DOG PARK MODIFICATION, GRINDER PUMP STATION RELOCATION AND RELOCATION OF ENTRANCE.
4. MODIFICATIONS IN WORK PACKAGE 1 INCLUDE REMOVAL OF EXISTING BERM AND CONSTRUCTION OF THE DESIGN-BUILDER'S OFFICE AND PARKING COMPLEX, LAYDOWN AND STORAGE.
5. RECHARGE WELL SITE PREPARATION IS BY OTHERS (WELL INSTALLATION CONTRACT). SITE MODIFICATIONS REQUIRED FOR WELL INSTALLATION ARE INCLUDED IN WORK PACKAGE 1 FOR THE SITE PLAN APPROVAL.
6. WELL DRILLER TO INSTALL ACCESS ROADS TO 5, 7, 9, 10 AND MW-2.
7. ACCESS TO RECHARGE WELL NO. 5 SITE WILL BE FROM CITY FARM ROAD (FOR USE BY THE DESIGN-BUILDER AND WELL INSTALLATION CONTRACTOR).
8. WORK PACKAGE 1 INCLUDES SITE PREPARATION, FOUNDATION PILING INSTALLATION AND STRUCTURAL CONCRETE CONSTRUCTION FOR VARIOUS STRUCTURES.

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

OVERALL SITE PLAN WORK PACKAGE 1 MAJOR WORK AND TEMP ACCESS PLAN

0 1" 2"

FILENAME

SCALE 1"=250'

DWG NO. G0014

of XXX

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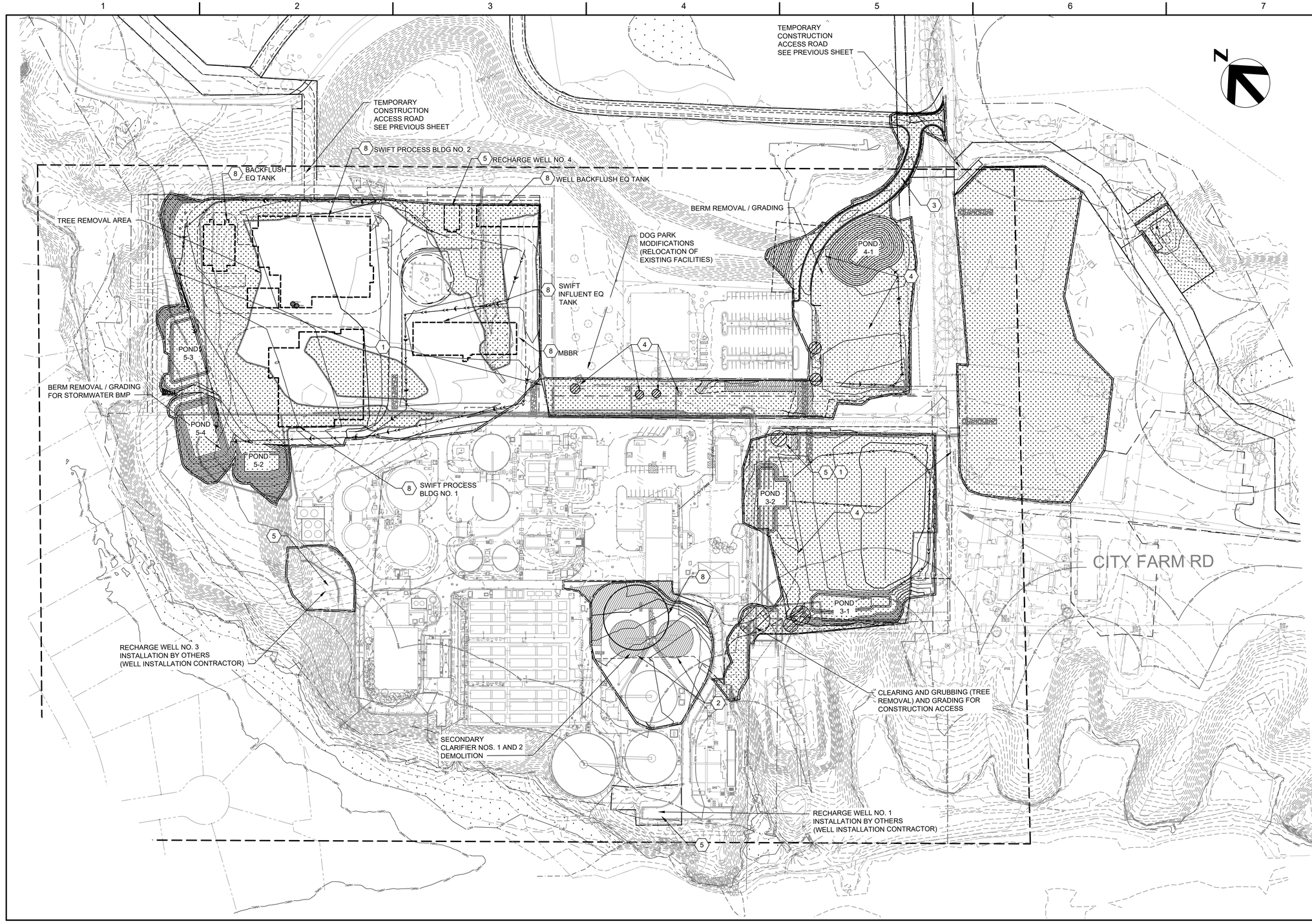
10/5/2021 8:25 AM



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1. MULTIPLE PROJECTS ARE BRING COMPLETED CONCURRENTLY, TRAILS AND THE INSTALLATION OF THE MAR WELL CASINGS ARE BEING COMPLETED BY OTHERS.
2. THE PROJECT IS DIVIDED INTO TWO WORK PACKAGES. GENERALLY, WORK PACKAGE NO. 1 INCLUDES SITE CLEARING, FOUNDATION PILING, SITE PREPARATION, CONSTRUCTION LAYDOWN, STORAGE AND ACCESS, AND TEMPORARY ACCESS ROADS FOR THE MAR WELL DRILLER THAT WILL BE INSTALLING THE WELL CASING. WORK PACKAGE NO. 2 WILL BE IMPLEMENTED IMMEDIATELY FOLLOWING WORK PACKAGE NO. 1.
3. THIS DRAWING DEPICTS GENERAL AREAS FOR CONSTRUCTION ACTIVITIES THAT ARE PART OF WORK PACKAGE 1.
4. DESIGN-BUILDER SHALL PROVIDE TEMPORARY ACCESS TO RECHARGE WELL NOS. 1-10. THE WELL CASING INSTALLATION CONTRACTOR SHALL HAVE ACCESS THROUGH THE TEMPORARY ACCESS AS REQUIRED.
5. RECHARGE WELL NOS. 1, 3, AND 4 ARE LOCATED WITHIN THE EXISTING JRTP/SWIFT SITE AND HAVE BEEN SUBMITTED FOR SITE PLAN APPROVAL SEPARATELY (BY OTHERS).
6. WETLANDS SHALL NOT BE DISTURBED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.

KEYNOTES

1. CLEARING, GRUBBING, TREE REMOVAL AND SITE PREPARATION FOR FOUNDATION PILING INSTALLATION FOR THE FOLLOWING STRUCTURES: MBBR, SWIFT INFLUENT EQ TANK, SWIFT PROCESS BUILDING NOS. 1 AND 2, AND WELL BACKFLUSH EQ TANK.
2. DEMOLITION OF EXISTING STRUCTURES, ROADWAY, UTILITIES, CLEARING, GRUBBING, TREE REMOVAL AND SITE PREPARATION FOR FOUNDATION PILING FOR THE NEW SECONDARY CLARIFIER NO. 1.
3. GYMNASTIC CENTER MODIFICATIONS, INCLUDING PARKING AREA MODIFICATIONS, DOG PARK MODIFICATION, GRINDER PUMP STATION RELOCATION AND RELOCATION OF ENTRANCE.
4. MODIFICATIONS IN WORK PACKAGE 1 INCLUDE REMOVAL OF EXISTING BERM AND CONSTRUCTION OF THE DESIGN-BUILDER'S OFFICE AND PARKING COMPLEX, LAYDOWN AND STORAGE.
5. RECHARGE WELL SITE PREPARATION IS BY OTHERS (WELL INSTALLATION CONTRACT). SITE MODIFICATIONS REQUIRED FOR WELL INSTALLATION ARE INCLUDED IN WORK PACKAGE 1 FOR THE SITE PLAN APPROVAL.
6. WELL DRILLER TO INSTALL ACCESS ROADS TO 5, 7, 9, 10 AND MW-2.
7. ACCESS TO RECHARGE WELL NO. 5 SITE WILL BE FROM CITY FARM ROAD (FOR USE BY THE DESIGN-BUILDER AND WELL INSTALLATION CONTRACTOR).
8. WORK PACKAGE 1 INCLUDES SITE PREPARATION, FOUNDATION PILING INSTALLATION AND STRUCTURAL CONCRETE CONSTRUCTION FOR VARIOUS STRUCTURES.

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

JRTP AND SWIFT SITE PLAN WORK PACKAGE 1 MAJOR WORK AREAS

0 1" 2"

FILENAME

SCALE 1" = 100'

DWG NO. G0015

of XXX

10/5/2021 8:25 AM

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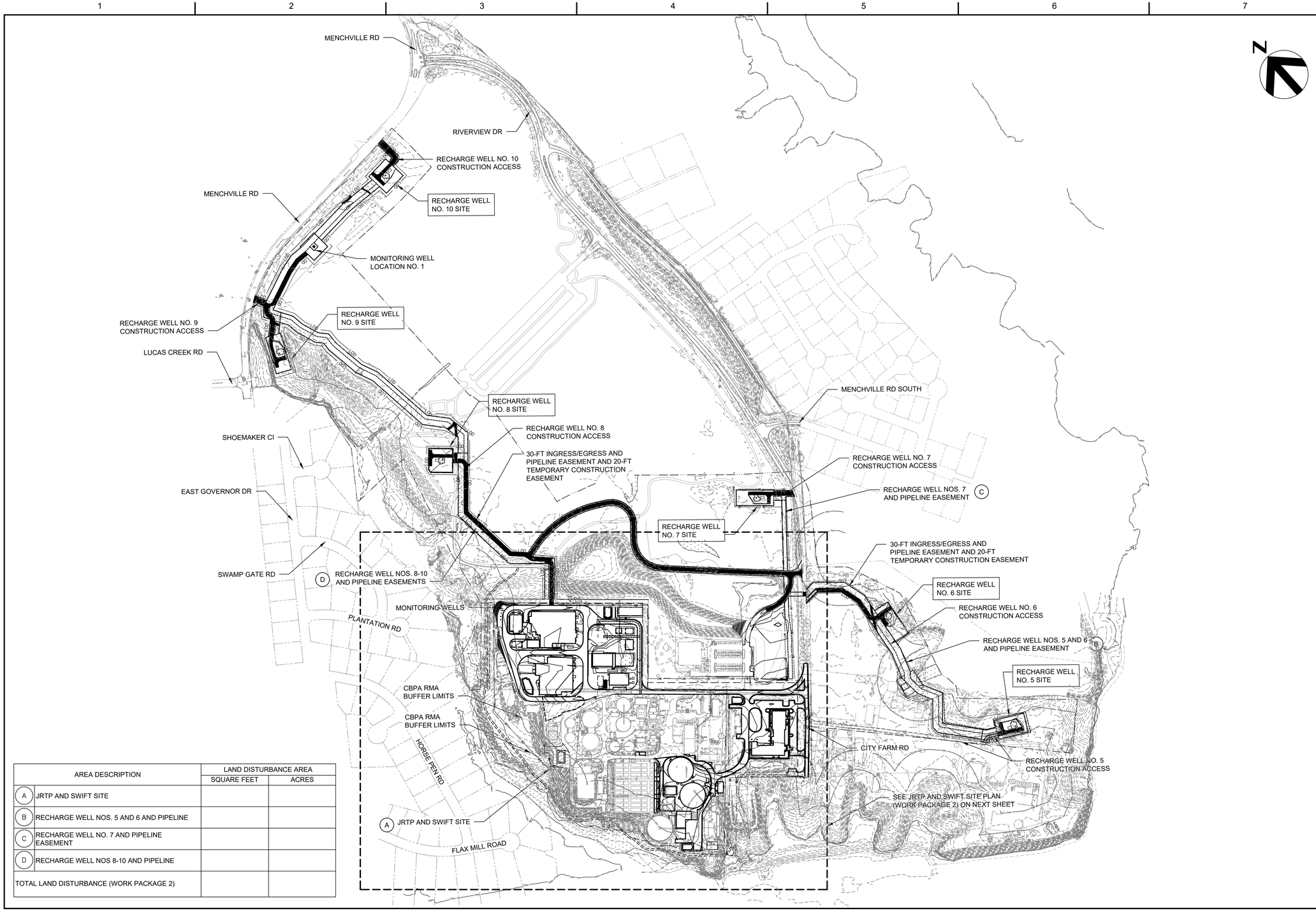

AREA DESCRIPTION		LAND DISTURBANCE AREA	
		SQUARE FEET	ACRES
A	JRTP AND SWIFT SITE		
B	RECHARGE WELL NOS. 5 AND 6 AND PIPELINE		
C	RECHARGE WELL NO. 7 AND PIPELINE EASEMENT		
D	RECHARGE WELL NOS 8-10 AND PIPELINE		
TOTAL LAND DISTURBANCE (WORK PACKAGE 2)			

GENERAL NOTES

1. THIS DRAWING DEPICTS GENERAL AREAS FOR CONSTRUCTION ACTIVITIES THAT ARE PART OF WORK PACKAGE 2.
2. DESIGN-BUILDER SHALL PROVIDE TEMPORARY ACCESS TO RECHARGE WELL NOS. 1-10. THE WELL INSTALLATION CONTRACTOR SHALL HAVE ACCESS THROUGH THE TEMPORARY ACCESS AS REQUIRED.
3. RECHARGE WELL NOS. 1, 3, AND 4 ARE LOCATED WITHIN THE EXISTING JRTP/SWIFT SITE AND HAVE BEEN SUBMITTED FOR SITE PLAN APPROVAL SEPARATELY (BY OTHERS).
4. WETLANDS SHALL NOT BE DISTURBED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
5. CONSTRUCTION ACCESS TO RECHARGE WELL NOS. 5-10 SHALL BE AS INDICTED ON THE WORK PACKAGE OVERALL SITE PLAN.

KEYNOTES

* NOT ALL KEYNOTES USED ON ALL SHEETS

1. -

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

OVERALL SITE PLAN WORK PACKAGE 2 MAJOR WORK AND TEMP ACCESS PLAN

0 1" 2"

FILENAME

SCALE 1" = 250'

DWG NO. G0016

of XXX

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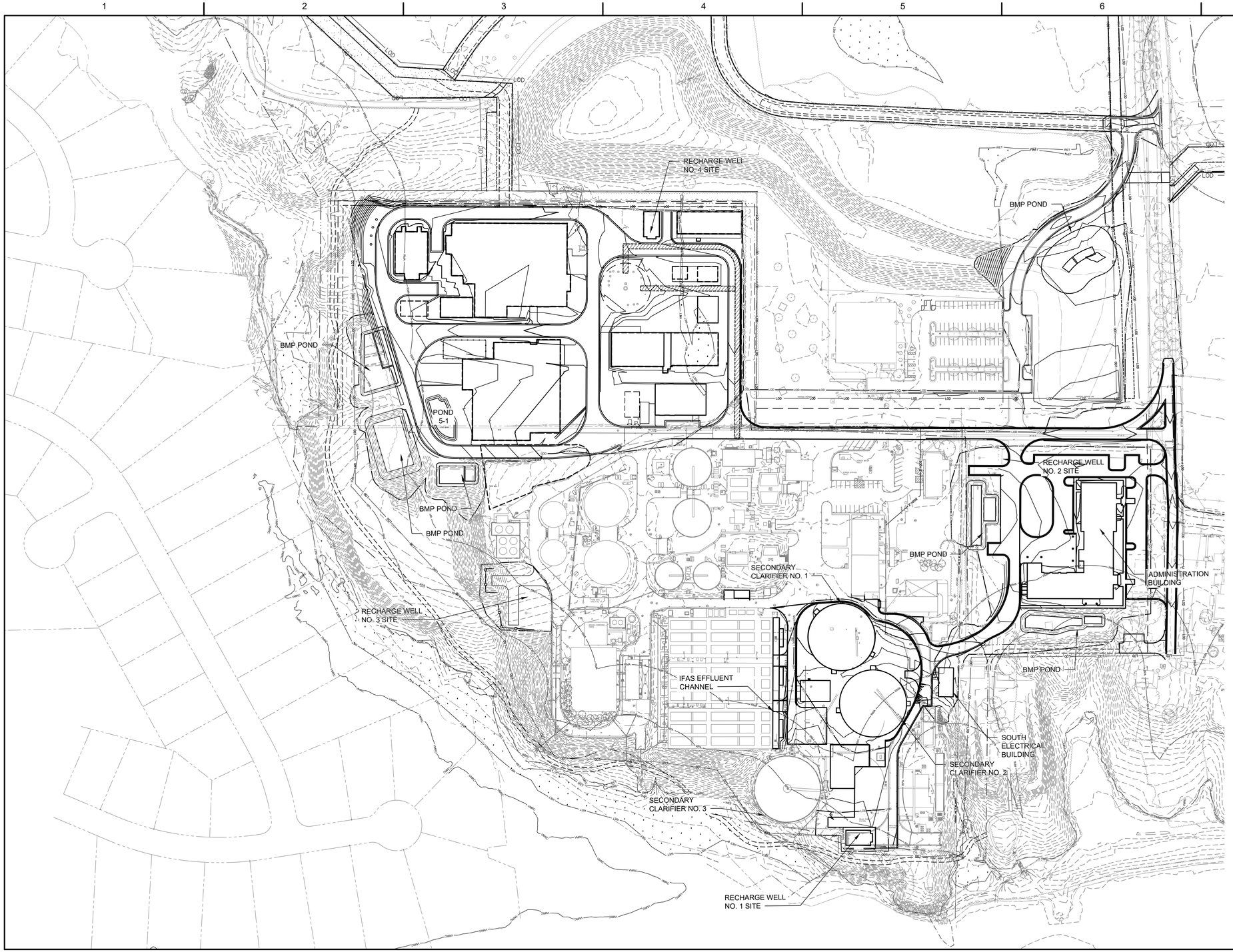

GENERAL NOTES

1. WORK SHOWN ON THIS DRAWING IS THE GENERAL WORK REQUIRED IN WORK PACKAGE 2. REFER TO THE CIVIL AND OTHER DRAWINGS FOR FURTHER REQUIREMENTS.

KEYNOTES

1. -

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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

JRTP AND SWIFT SITE PLAN WORK PACKAGE 2 MAJOR WORK AREAS

0 1" 2"

FILENAME

SCALE 1" = 100'

DWG NO. G0017

of XXX

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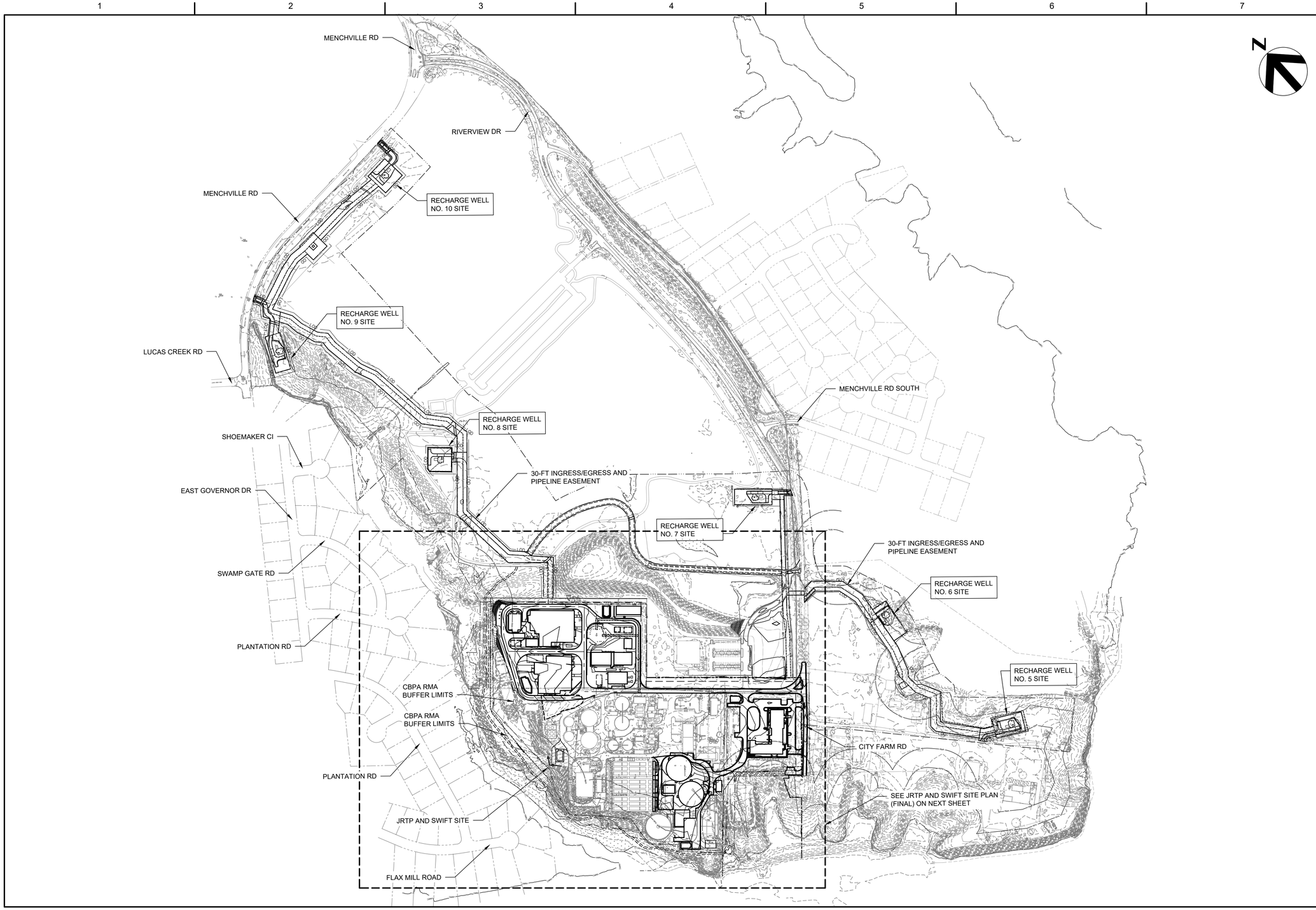

GENERAL NOTES

1. THIS DRAWING DEPICTS GENERAL AREAS FOR CONSTRUCTION ACTIVITIES THAT ARE PART OF WORK PACKAGE 2.
2. DESIGN-BUILDER SHALL PROVIDE TEMPORARY ACCESS TO RECHARGE WELL NOS. 1-10. THE WELL INSTALLATION CONTRACTOR SHALL HAVE ACCESS THROUGH THE TEMPORARY ACCESS AS REQUIRED.
3. RECHARGE WELL NOS. 1, 3, AND 4 ARE LOCATED WITHIN THE EXISTING JRTP/SWIFT SITE AND HAVE BEEN SUBMITTED FOR SITE PLAN APPROVAL SEPARATELY (BY OTHERS).
4. WETLANDS SHALL NOT BE DISTURBED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
5. CONSTRUCTION ACCESS TO RECHARGE WELL NOS. 5-10 SHALL BE AS INDICTED ON THE WORK PACKAGE OVERALL SITE PLAN.

KEYNOTES

* NOT ALL KEYNOTES USED ON ALL SHEETS

1. -

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	D. SISSON
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

OVERALL SITE PLAN
FINAL
MAJOR WORK AND TEMP ACCESS PLAN

0 1" 2"

FILENAME

SCALE 1" = 250'

DWG NO. G0018

of XXX

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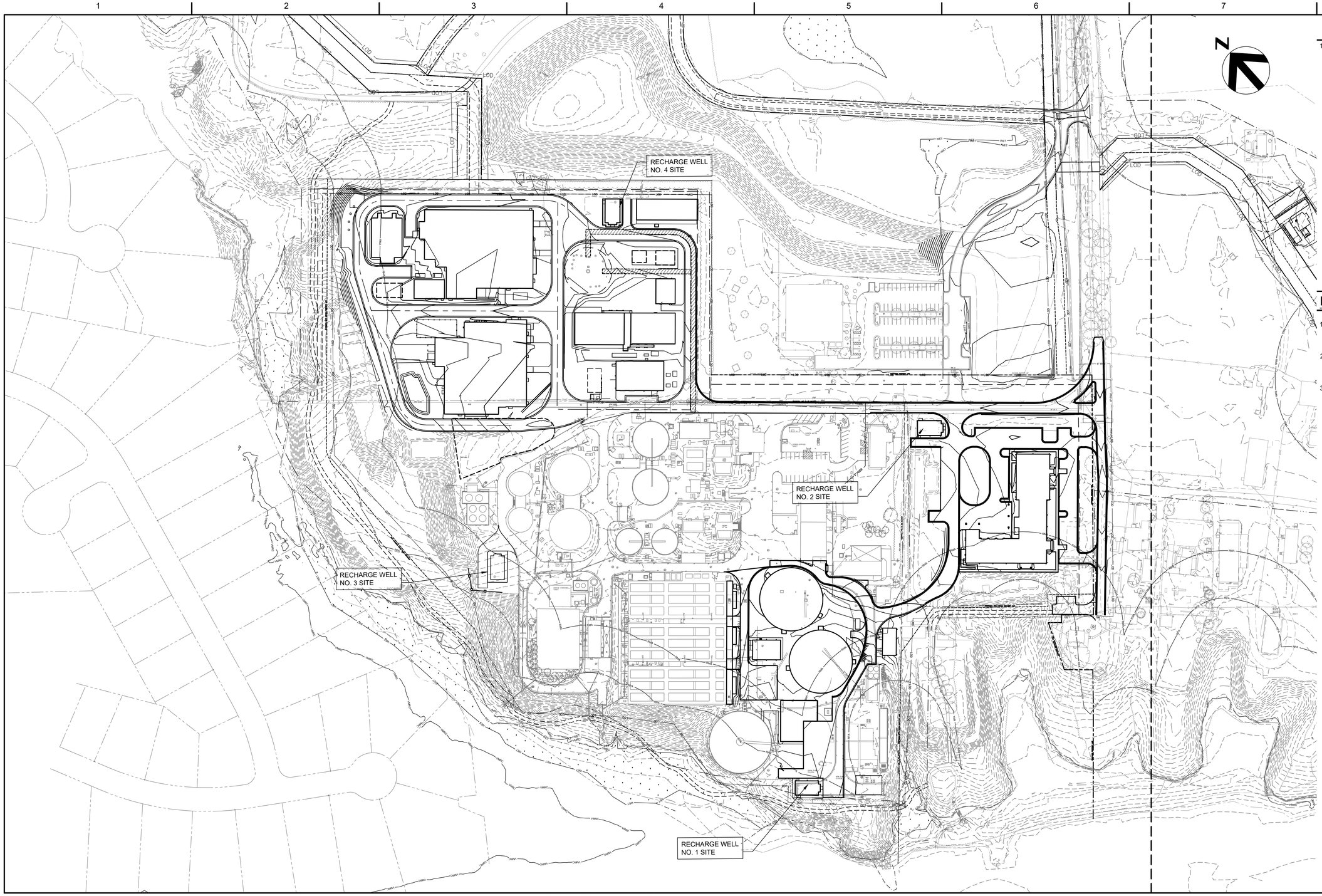

1. -

KEYNOTES

1. REMOVE DESIGN-BUILDER'S OFFICE AND PARKING COMPLEX. AREA SHALL BE RESTORED PER THE CIVIL DRAWINGS.
2. 30-F OOT TRANSITIONAL BUFFER. REFER TO CIVIL/LANDSCAPING DRAWINGS FOR REQUIREMENTS.
3. FLAXMILL CREEK TRAIL (BY OTHERS).

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ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSION
DESIGNED BY	D. SISSON
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

JRTP AND SWIFT SITE PLAN FINAL MAJOR WORK AREAS

0 1" 2"

FILENAME

SCALE 1" = 100'

DWG NO. G0019

of XXX

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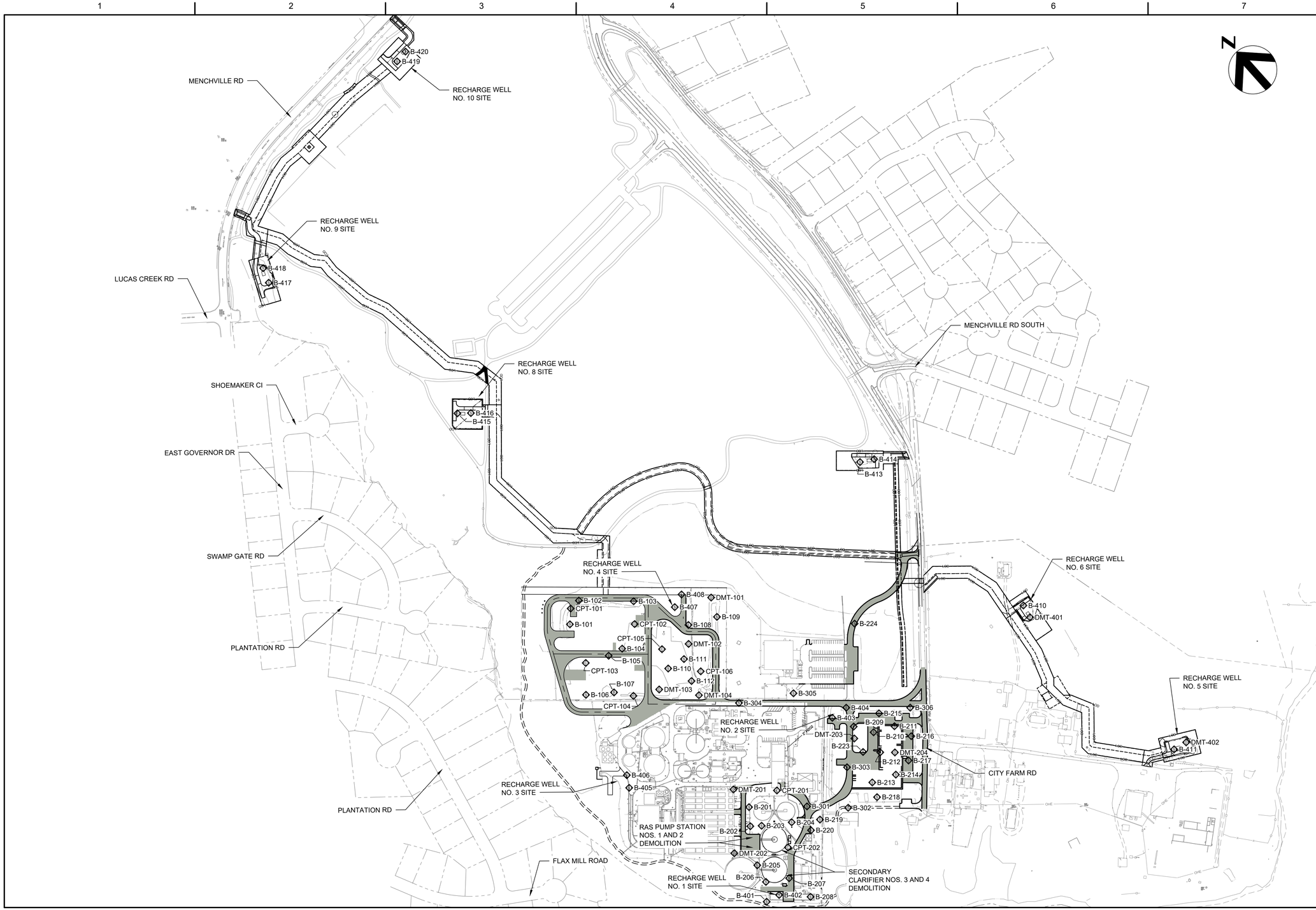

GENERAL NOTES

1. FOR DETAILED INFORMATION REFER TO GEOTECHNICAL REPORT FROM SCHNABEL ENGINEERING

KEYNOTES

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

BORING LOCATION OVERALL PLAN

0 1" 2"

FILENAME

SCALE ----

DWG NO. G0020

of XXX

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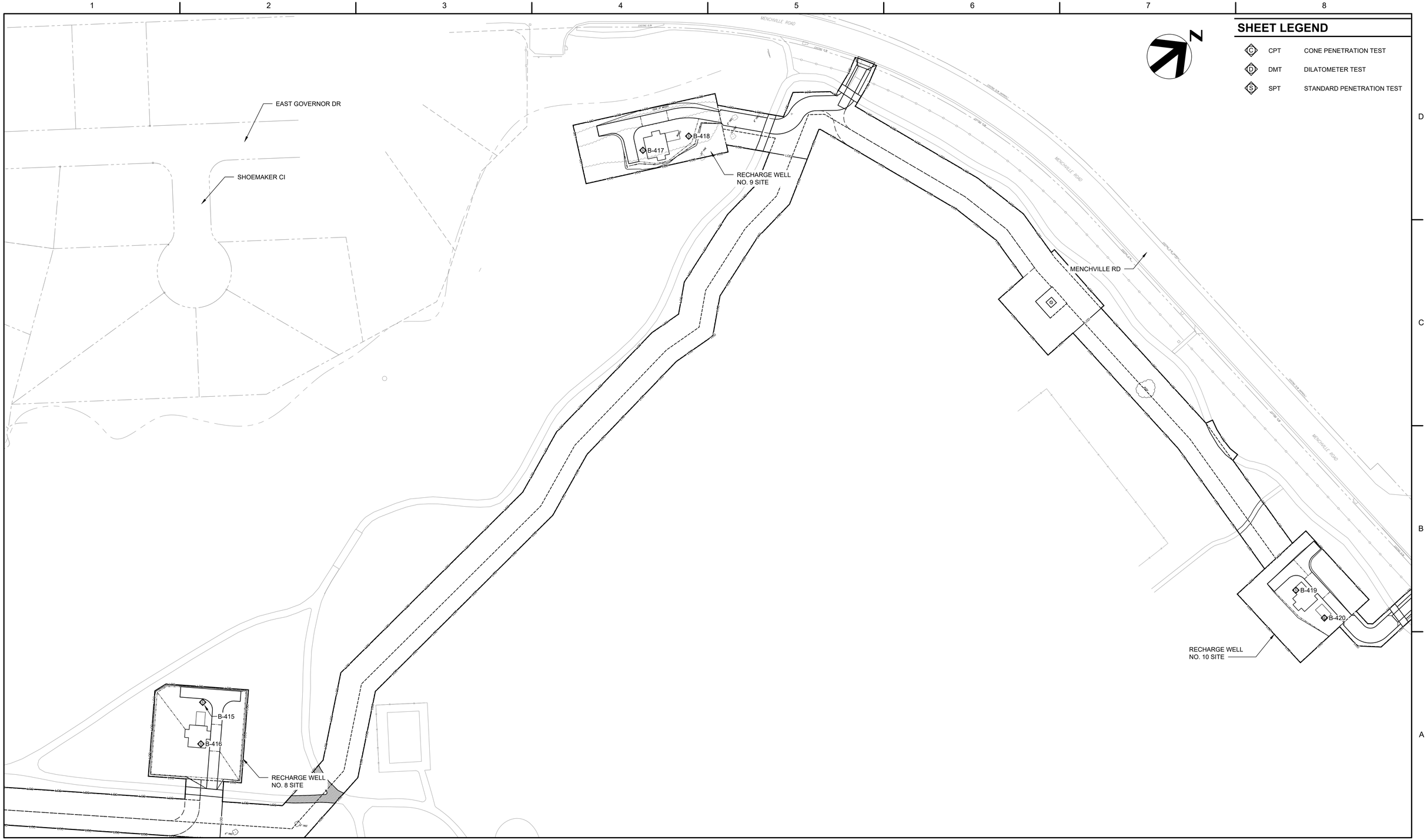

SHEET LEGEND

C	CPT	CONE PENETRATION TEST
D	DMT	DILATOMETER TEST
S	SPT	STANDARD PENETRATION TEST

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Virginia Beach, VA 23462
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Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

BORING LOCAITON PARTIAL PLAN 1

0 1" 2"

FILENAME

SCALE ----

DWG NO. **G0021**

of XXX

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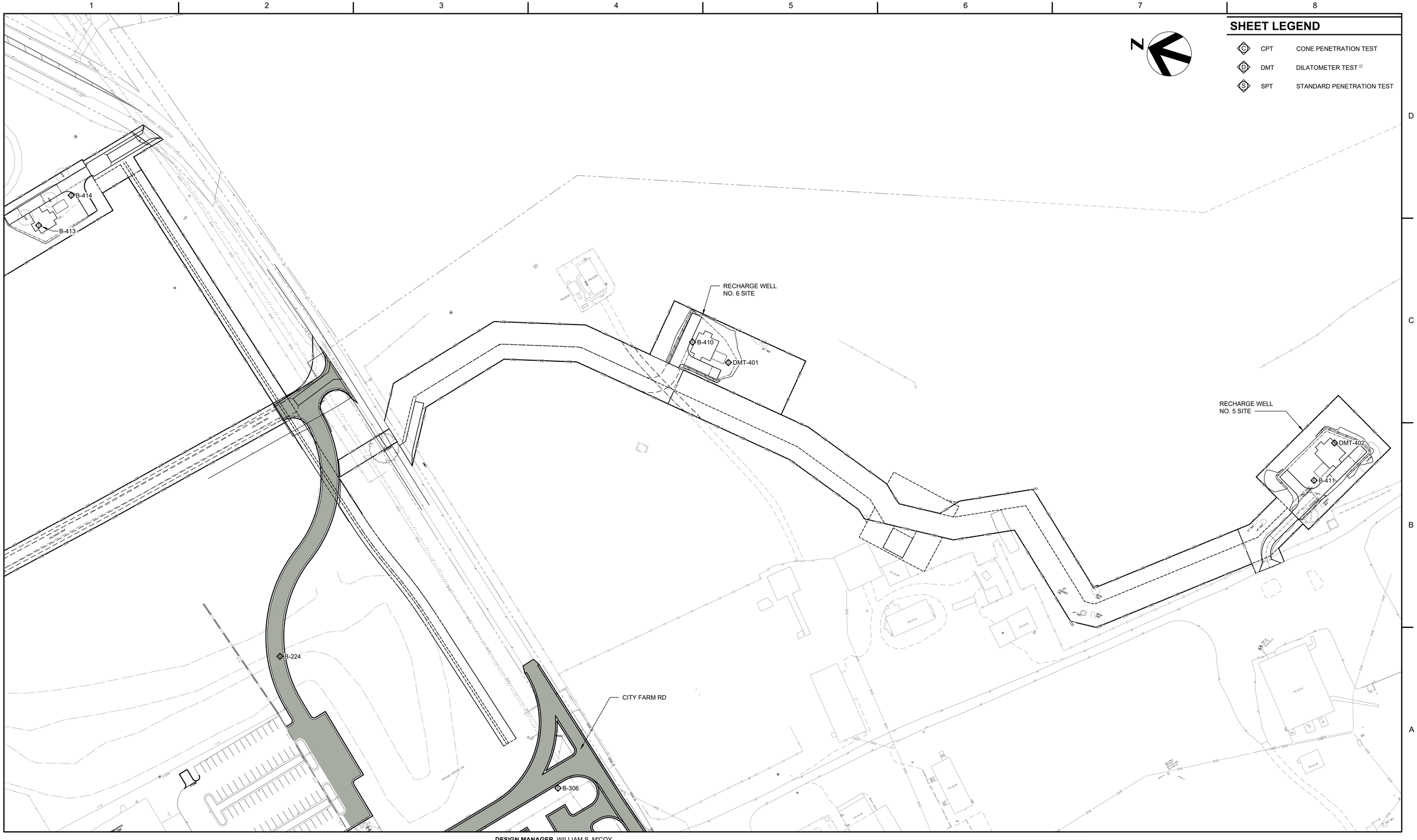

HDR
US-A
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

BORING LOCATION PARTIAL PLAN 2

0 1" 2"

FILENAME

SCALE ----

DWG NO. G0022

of XXX

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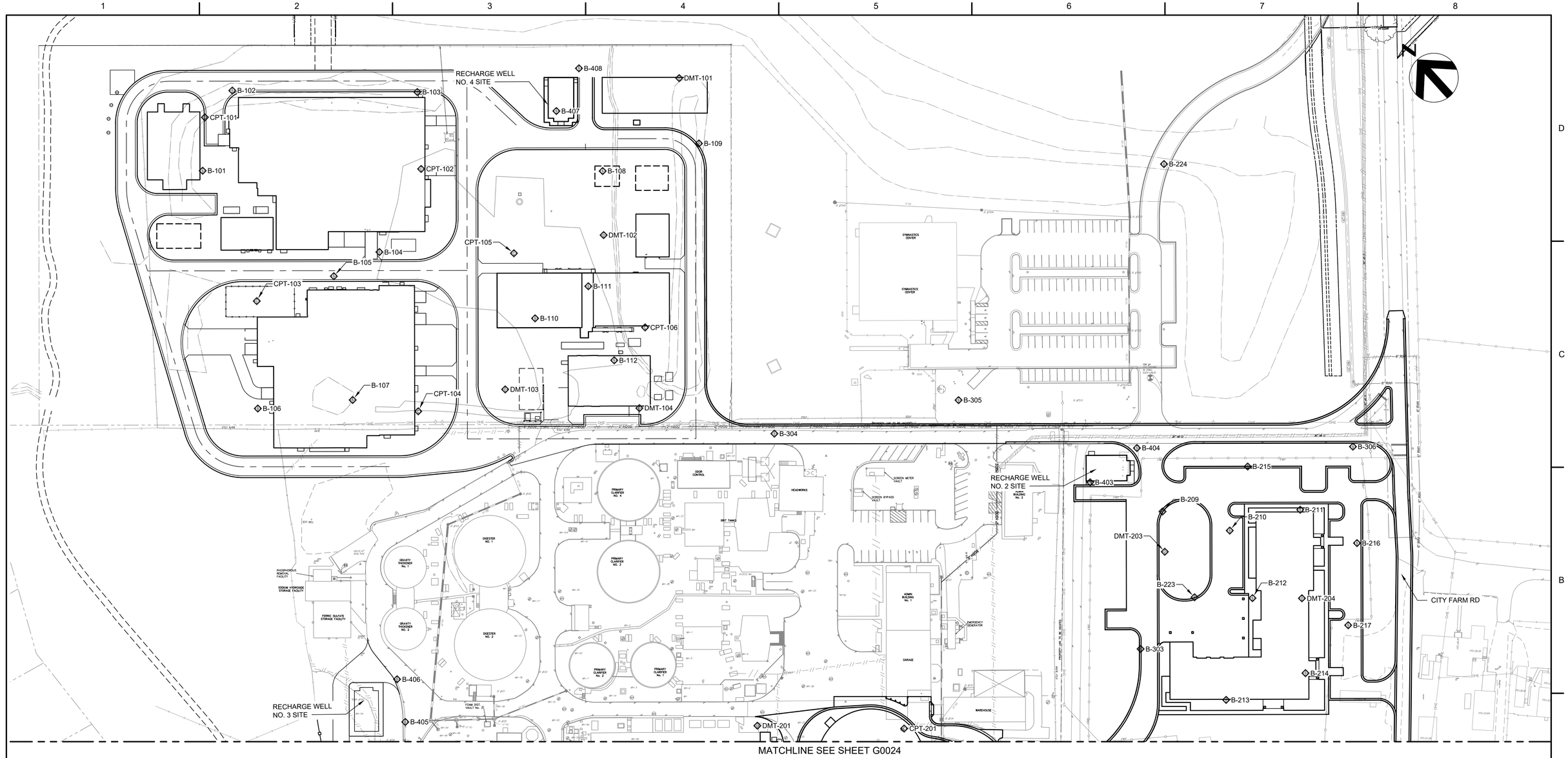

SHEET LEGEND

C	CPT	CONE PENETRATION TEST
D	DMT	DILATOMETER TEST
S	SPT	STANDARD PENETRATION TEST

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10/8/2021 9:55 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	D. SISSON
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

BORING LOCATION PARTIAL PLAN 3

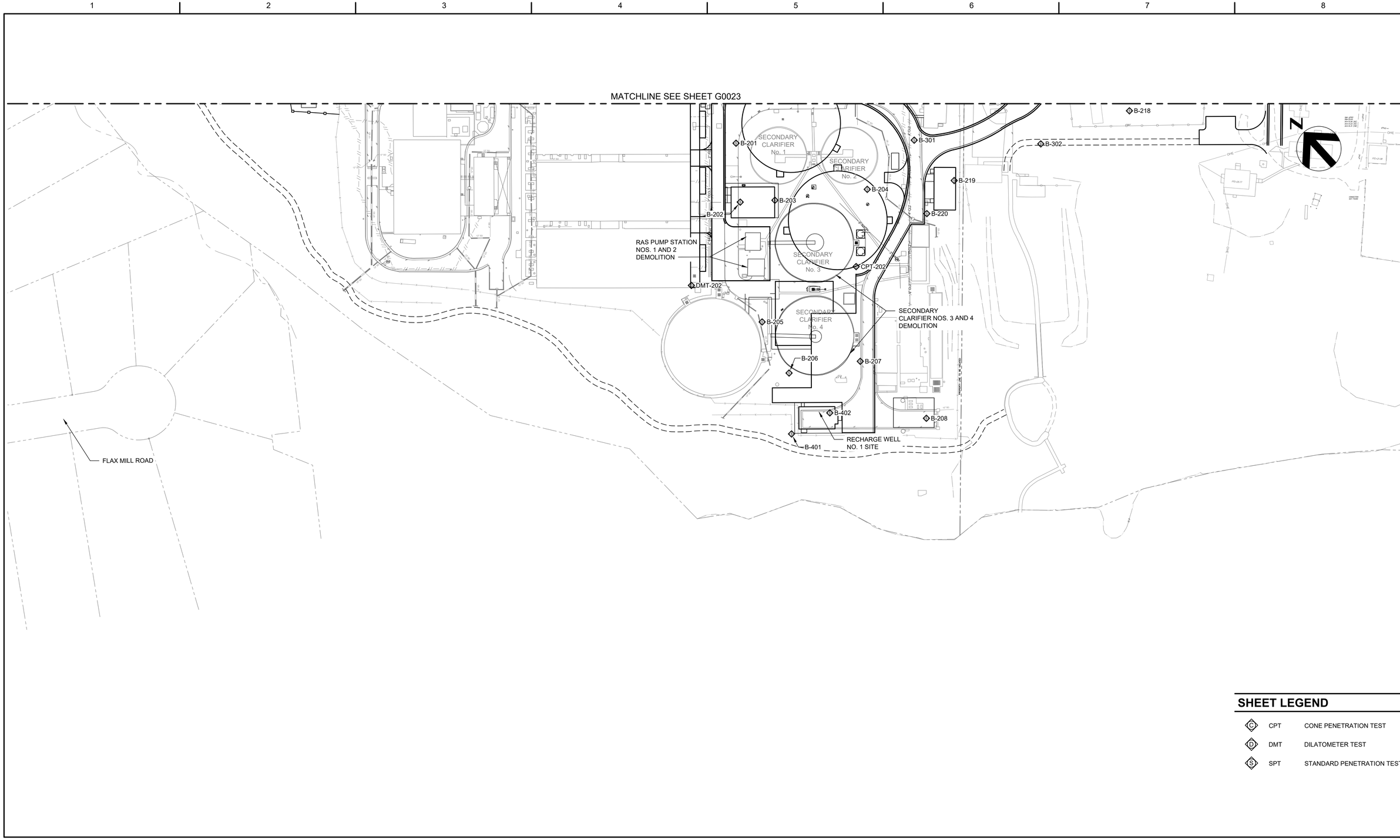
0 1" 2"

FILENAME

SCALE 1" = 60'

DWG NO. G0023

of XXX



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	D. SISSON
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

BORING LOCATION PARTIAL PLAN 4

0 1" 2"

FILENAME

SCALE 1" = 60'

DWG NO. G0024

of XXX

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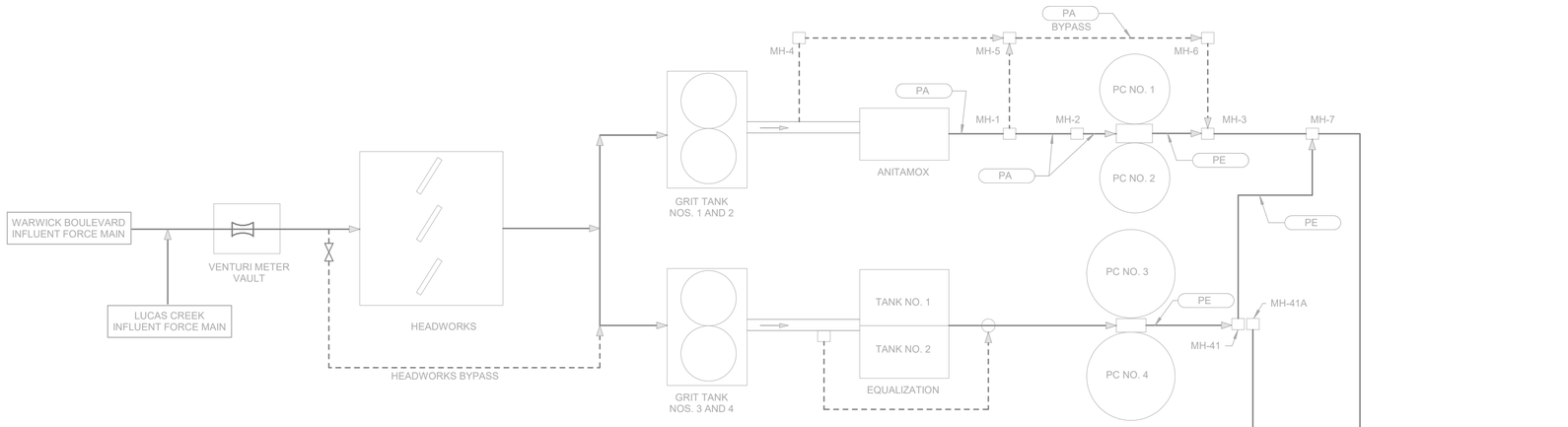

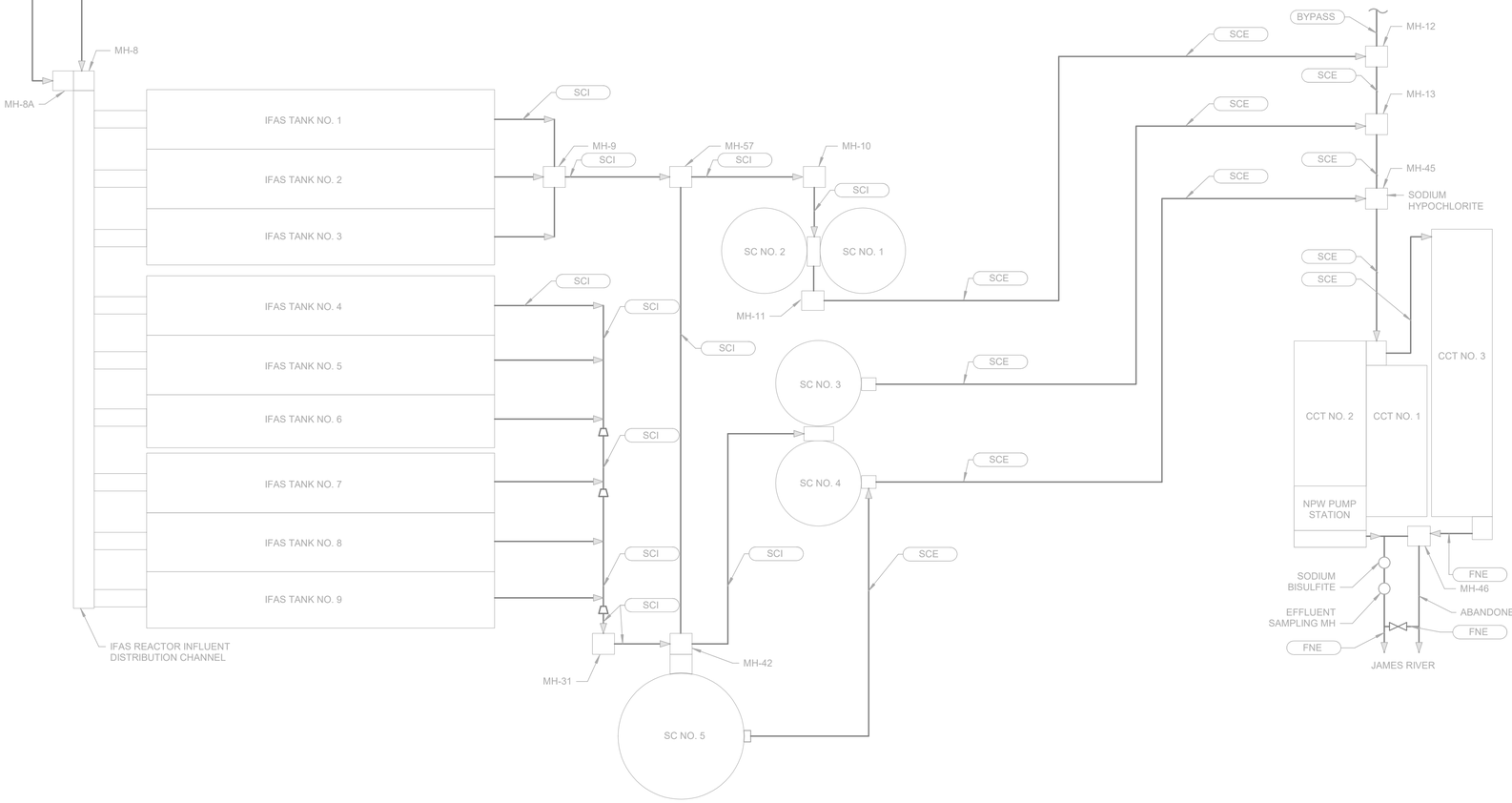

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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	Designer
CHECKED BY	Checker
DRAWN BY	Author
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EXISTING PROCESS FLOW DIAGRAM

0 1" 2"

FILENAME	10292462-0002-G.rvt
SCALE	NOT TO SCALE

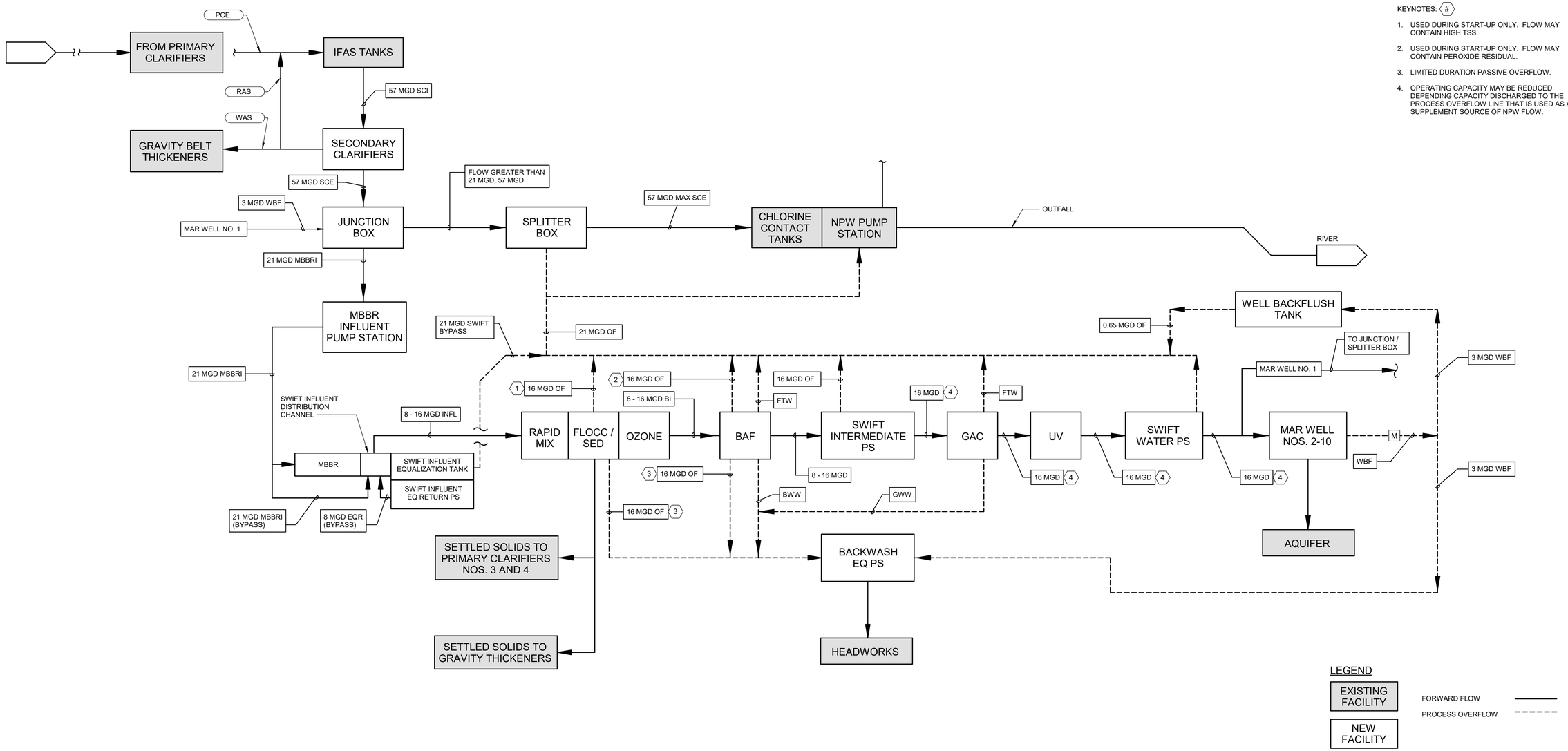
DWG NO. **G0030**

GENERAL NOTES:

1. NOMINAL / RATED CAPACITIES SHOWN. OPERATING CAPACITY MAY VARY.

KEYNOTES: (#)

1. USED DURING START-UP ONLY. FLOW MAY CONTAIN HIGH TSS.
2. USED DURING START-UP ONLY. FLOW MAY CONTAIN PEROXIDE RESIDUAL.
3. LIMITED DURATION PASSIVE OVERFLOW.
4. OPERATING CAPACITY MAY BE REDUCED DEPENDING CAPACITY DISCHARGED TO THE PROCESS OVERFLOW LINE THAT IS USED AS A SUPPLEMENT SOURCE OF NPW FLOW.



LEGEND

EXISTING FACILITY

NEW FACILITY

FORWARD FLOW

PROCESS OVERFLOW

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. SEAGLE
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

PROCESS FLOW SCHEMATIC

0 1" 2"

FILENAME 10292462-0002-G.rvt

SCALE NTS

DWG NO. G0031

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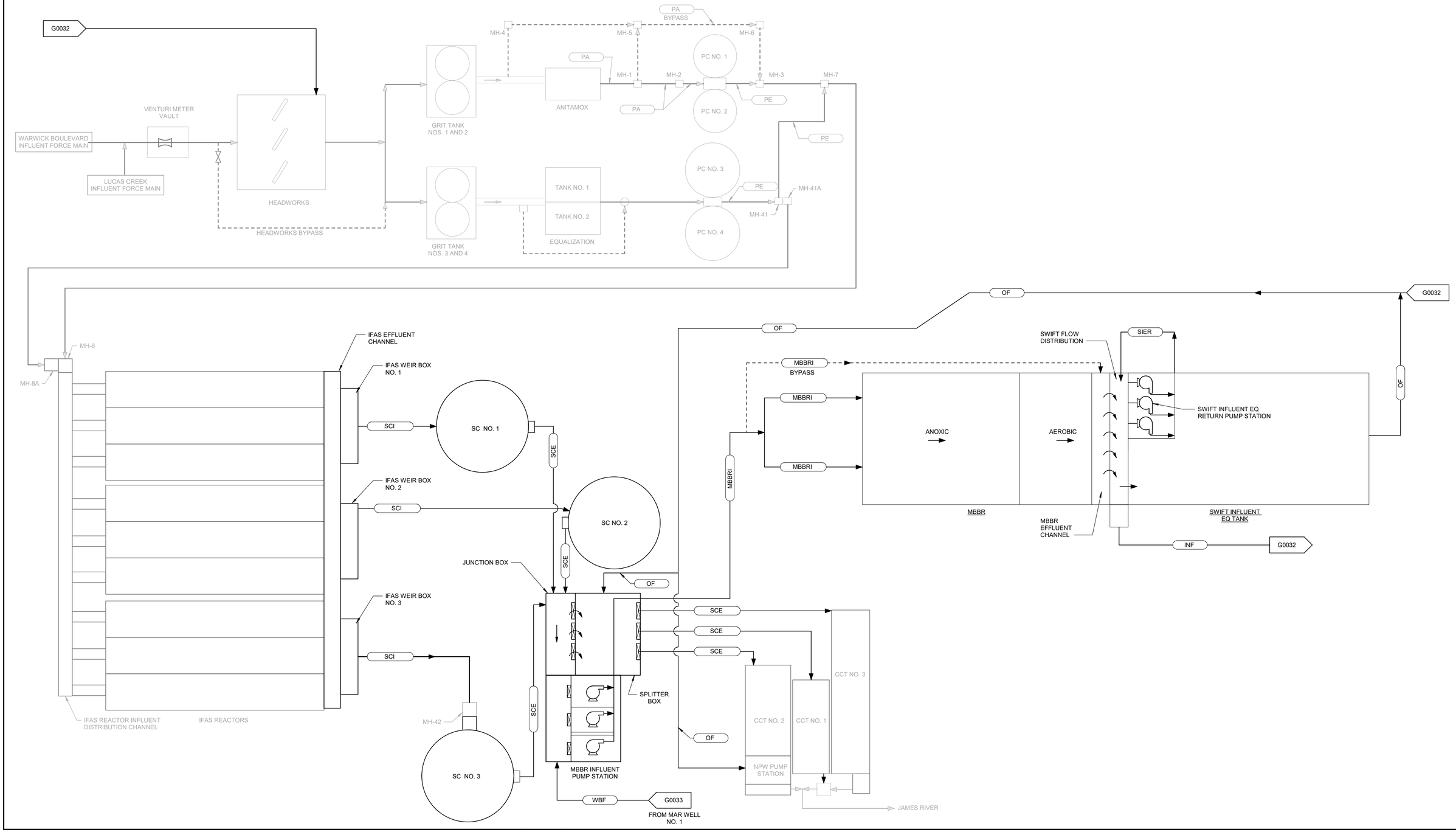

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	Designer
CHECKED BY	Checker
DRAWN BY	Author
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

PROCESS FLOW DIAGRAM

0 1" 2"

FILENAME 10292462-0002-G.rvt
SCALE NOT TO SCALE

DWG NO. **G0032**

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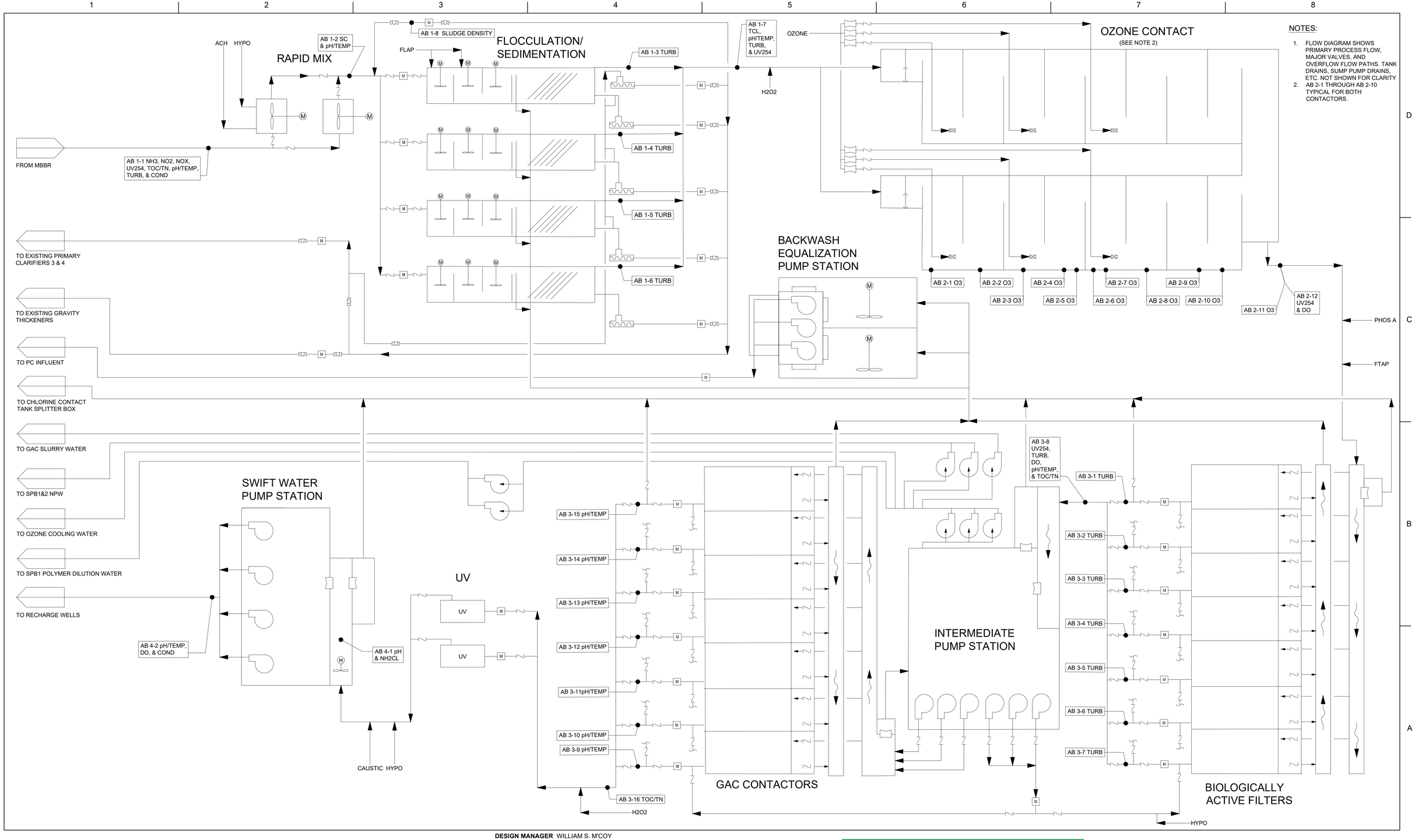

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Virginia Beach, VA 23462
757.456.5380

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Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHEAL B. SHAFER
DESIGNED BY	
CHECKED BY	
DRAWN BY	
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

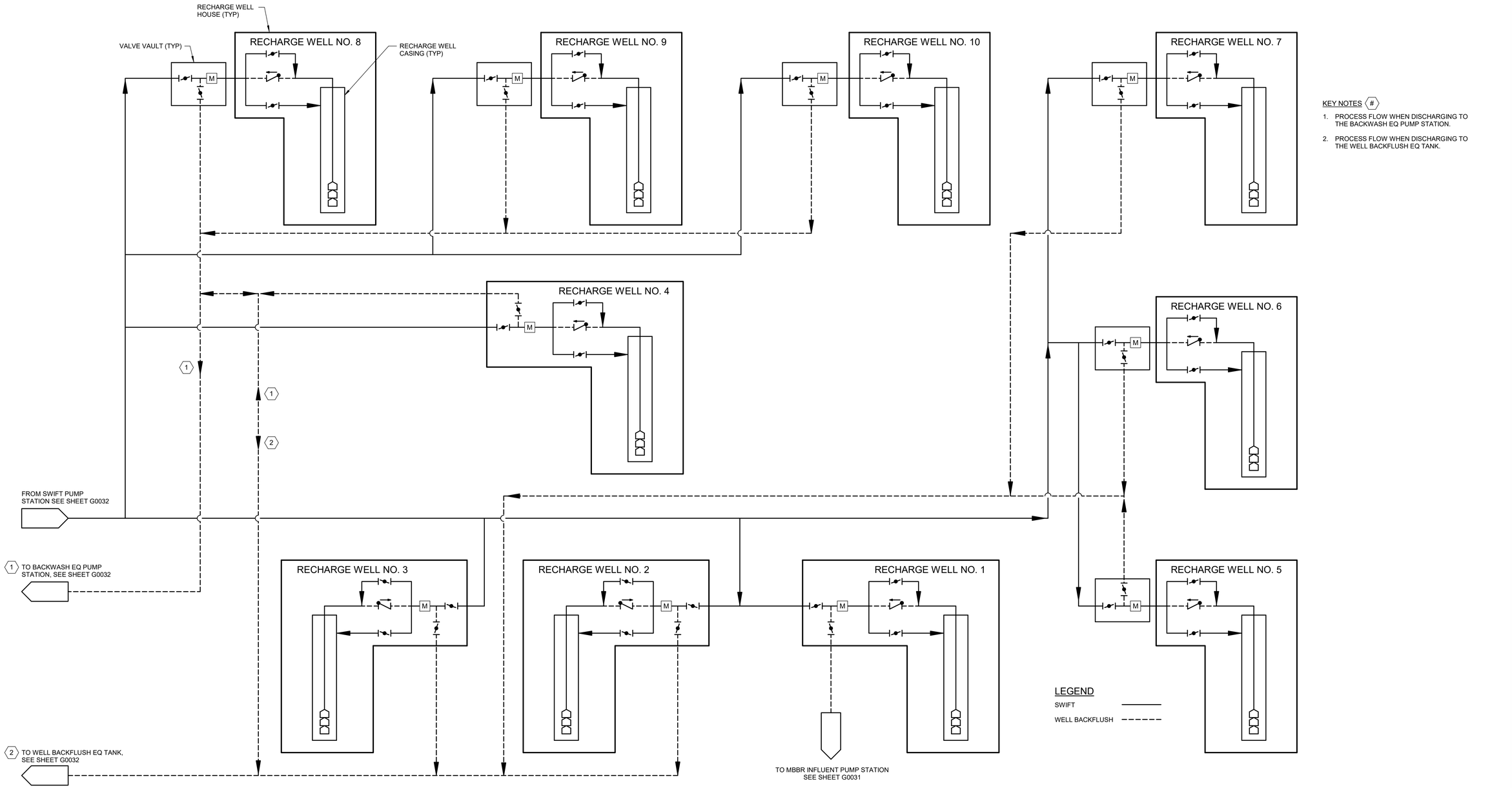
SWIFT PROCESS FLOW DIAGRAM

0 1" 2"

FILENAME G0032.DWG

SCALE -

DWG NO. **G0033**



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	Designer
CHECKED BY	Checker
DRAWN BY	Author
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL PROCESS FLOW DIAGRAM

0 1" 2"

FILENAME 10292462-0002-G.rvt
SCALE NTS

DWG NO. **G0034**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-0002-G.rvt
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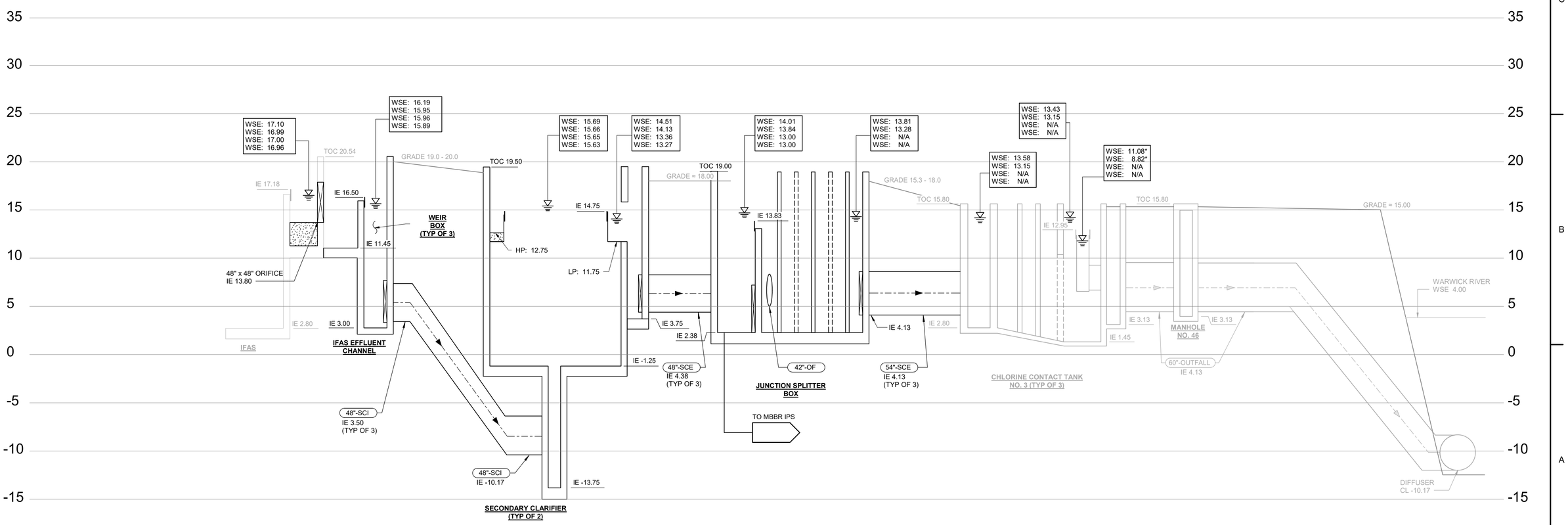
WSE: XX.XX = PEAK HYDRAULIC (DESIGN MAX HYDRAULIC CAPACITY)
WSE: XX.XX = PEAK PROCESS (DESIGN MAX DAY)
WSE: XX.XX = DESIGN MAX MONTH
WSE: XX.XX = DESIGN AVERAGE

CONDITION	PLANT INFLUENT FLOW (MGD)	RAS FLOW (MGD)	FLOW TO MBBR (MGD)	FLOW TO SWIFT FACILITES (MGD)	FLOW TO OUTFALL (MGD)
PEAK HYDRAULIC (DESIGN MAX HYDRAULIC CAPACITY)	57	16	0	0	57
PEAK PROCESS (DESIGN MAX DAY)	36.4	16	21	16	15.4
DESIGN MAX MONTH	20.9	16	20.9	16	0.0
DESIGN AVERAGE	16.4	15.8	16.4	12.5	0.0

UNIT PROCESS	TOTAL NO. OF UNITS	UNIT IN SERVICE
IFAS REACTORS	9	8
SECONDARY CLARIFIERS	3	2 (DESIGN AVERAGE & MAX MONTH), 3 (PEAK PROCESS & PEAK HYDRAULIC)
JUNCTION SPLITTER BOX	1	1
CHLORINE CONTACT TANKS	3	3
OUTFALLS	2	2
MBBR	1	1 (DESIGN AVERAGE, MAX MONTH, PEAK PROCESS), 0 (PEAK HYDRAULIC)

GENERAL NOTES

1. WAS & NPW FLOWS WERE CONSIDERED NEGLIGIBLE FOR ANALYSIS.
2. JUNCTION SPLITTER BOX GATES OPEN UNDER PEAK HYDRAULIC CONDITIONS.
3. SECONDARY CLARIFIER SHOWN IS TYPICAL OF SECONDARY CLARIFIER NOS. 1 AND 2. SECONDARY CLARIFIER NO. 3 IS CONSIDERED SIMILAR FOR HYDRAULIC PROFILE.
4 ASTERISK (*) DENOTES APPROXIMATE WATER ELEVATIONS PENDING FINAL CONFIRMATION ON OUTFALL MODIFICATIONS.



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	JASON R. KERNS	
DESIGNED BY	Designer	
CHECKED BY	Checker	
DRAWN BY	Author	
ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL
PROJECT NUMBER	10292462	

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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HRSD
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

ANRI HYDRAULIC PROFILE

0 1" 2"
FILENAME 10292462-0002-G.rvt
SCALE 12" = 1'-0"
DWG NO. G0041

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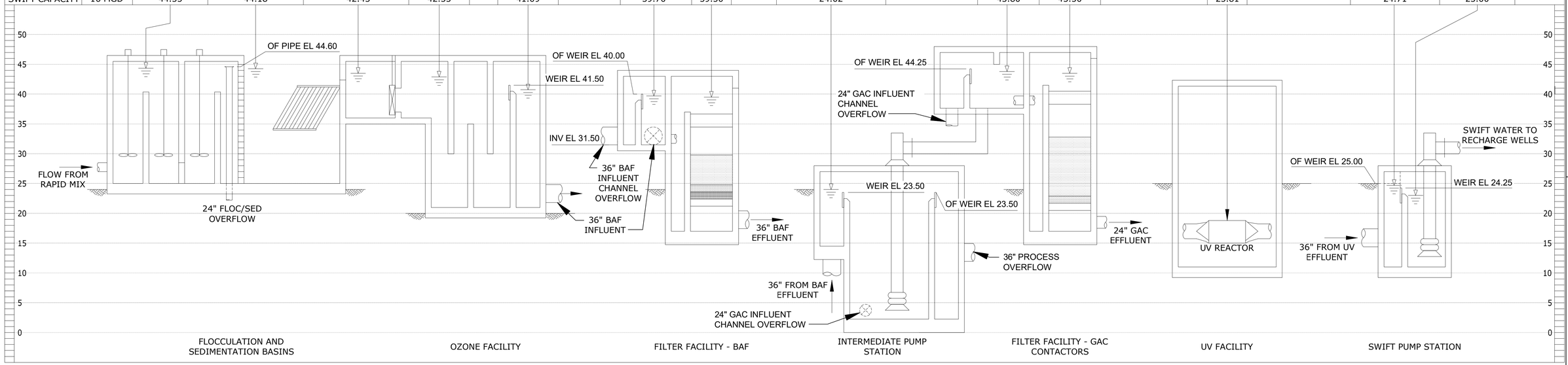
NOTES:

1. ASSUME ONE FLOCCULATION AND SEDIMENTATION BASIN IS OUT OF SERVICE.
2. ASSUME ONE BAF UNIT IS OUT OF SERVICE FOR A TOTAL OF 6 FILTERS IN SERVICE AT A PLANT FLOW OF 16.0 MGD.
3. ASSUME TWO GAC UNITS ARE OUT OF SERVICE FOR A TOTAL OF 5 FILTERS IN SERVICE AT A PLANT FLOW OF 16.0 MGD.
4. ASSUME ONE UV REACTOR IS OUT OF SERVICE FOR A TOTAL OF 1 REACTOR IN SERVICE AT A PLANT FLOW OF 16.0 MGD.

CONDITION	PLANT FLOW	FLOCCULATION BASIN 1	SEDIMENTATION BASIN	SEDIMENTATION BASIN EFFLUENT CHANNEL	OZONE INFLUENT		OZONE EFFLUENT		BAF INFLUENT CHANNEL	BAF		INTERMEDIATE PUMP STATION INFLUENT CHANNEL		GAC INFLUENT CHANNEL	GAC CONTACTOR		UV		SWIFT PUMP STATION INFLUENT CHANNEL	SWIFT PUMP STATION	
SWIFT CAPACITY	16 MGD	44.35	44.18	42.43	42.33		41.09		39.70	39.50		24.02		43.80	43.50		25.81		24.71	23.00	



HYDRAULIC PROFILE
NTS

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

US-A
Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHEAL B. SHAFER
DESIGNED BY	
CHECKED BY	
DRAWN BY	
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT HYDRAULIC PROFILE

0 1" 2"

FILENAME G0043.DWG
SCALE -

DWG NO. **G0043**

9/30/2021 8:18 AM

HRSD JAMES RIVER SWIFT RAS PUMP STATION (1250)

1.0 GENERAL INFORMATION

THE RAS PUMP STATION AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING PRIMARILY CONSISTS OF A RAS PUMP ROOM AND AN ELECTRICAL ROOM.

PROJECT NAME	HRSD JAMES RIVER SWIFT RAS PUMP STATION
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW RAS PUMP STATION.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
OCCUPANCY GROUPS	*FACTORY F-1*	*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*	
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*	
FIRE DISTRICT	*N/A*	
FLOOD HAZARD AREA	*N/A*	
BUILDING HEIGHT (FT)	*20*	
NUMBER OF STORIES	*1*	
FIRE AREA (SF)	*3,646*	
SITE FIRE FLOW	*1,500 GPM (2 HR)*	*VSFPC §B105*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*	*VSFPC §C102.1*
GROSS BUILDING AREA (SF)	*2,206*	

BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	LOWER LEVEL*	-	1,440	1,440
	GROUND LEVEL	-	*2,206*	*2,206*
	TOTALS	*0*	*2,206*	*2,206*

*THE LOWER LEVEL QUALIFIES AS A BASEMENT AND WILL NOT BE INCLUDED IN THE ALLOWABLE FLOOR AREA OR THE NUMBER OF STORIES.

4.1 SPECIAL DETAILED OCCUPANCY & USE REQUIREMENTS

NFPA 820 (2020) - SOLID TREATMENT PROCESSES DESIGN AND CONSTRUCTION REQUIREMENTS					
AREA	NEC CLASSIFICATION (CLASS I, GROUP D)	REQUIRED VENTILATION	REQUIRED CONSTRUCTION MATERIALS	REQUIRED FIRE PROTECTION	REFERENCE
SEDIMENTATION TANKS	*UNCLASSIFIED (PRECEDED BY PRIMARY SEDIMENTATION)*	*NR*	*NR*	*FIRE HYDRANTS*	*TABLE 5.2.2, ROW 16*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

				CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*			
MAXIMUM ALLOWABLE AREA (SF)	*15,500*			*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*			*VCC §508.2*
INCIDENTAL USES	*NONE*			
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?	
	NONE			
MIXED OCCUPANCY	*N/A*			*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*			
	FRONTAGE INCREASE CALCULATION			
TABULAR ALLOWABLE AREA (At)	*N/A*			*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*			*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*			
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*			
WIDTH OF PUBLIC WAY (FT)	*N/A*			
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*			*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*NOT APPLICABLE*			
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)
	LOWER LEVEL	*N/A*	*N/A*	***N/A***
	GROUND LEVEL	*N/A*	*N/A*	***N/A***

NOTE: SEE SECTION 4.0 FOR AREA CALCULATION.

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	*VCC TBL 601*
	BEARING WALLS	EXTERIOR	*0-HOUR*	
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	*VCC TBL 601*
	FLOOR ASSEMBLY		*0-HOUR*	
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: THE RAS PUMP STATION AT HRSD SWIFT PROVIDES A SINGLE STAIRWELL FROM THE LOWER LEVEL TO THE UPPER LEVEL. THE STAIRWELL WILL BE TREATED AS AN EXIT STAIRWELL WITH A 1-HOUR FIRE RATING TO MEET THE ALLOWABLE COMMON PATH OF TRAVEL DISTANCE FROM THE LOWER LEVEL. THE UPPER LEVEL HAS MULTIPLE EXITS AND DOES NOT REQUIRE RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN FOUR FLOORS)	*YES*	*YES*	*1-HOUR*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*N/A*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*N/A*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*N/A*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS, RAMPS, EXIT PASSAGEWAYS	CORRIDORS / ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*VCC*	*§1008*
EXIT SIGNS	*YES*	*YES*	*VCC*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*LOWER LEVEL*	*6*	*SEE PLAN*
	GROUND LEVEL	*5*	
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*NO*	*NO*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*OCC LOAD < 50: 36" OCC LOAD ≥ 50: 44" MECH, PLUMBING, ELECTRICAL*	*36" 44" 24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*< 1/2*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*YES*	*YES*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*YES*	*YES*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RAS PUMP STATION CODE ANALYSIS

0 1" 2"

FILENAME 10292462-1250-RPS-A.rvt
SCALE NONE

DWG NO. **G1250**

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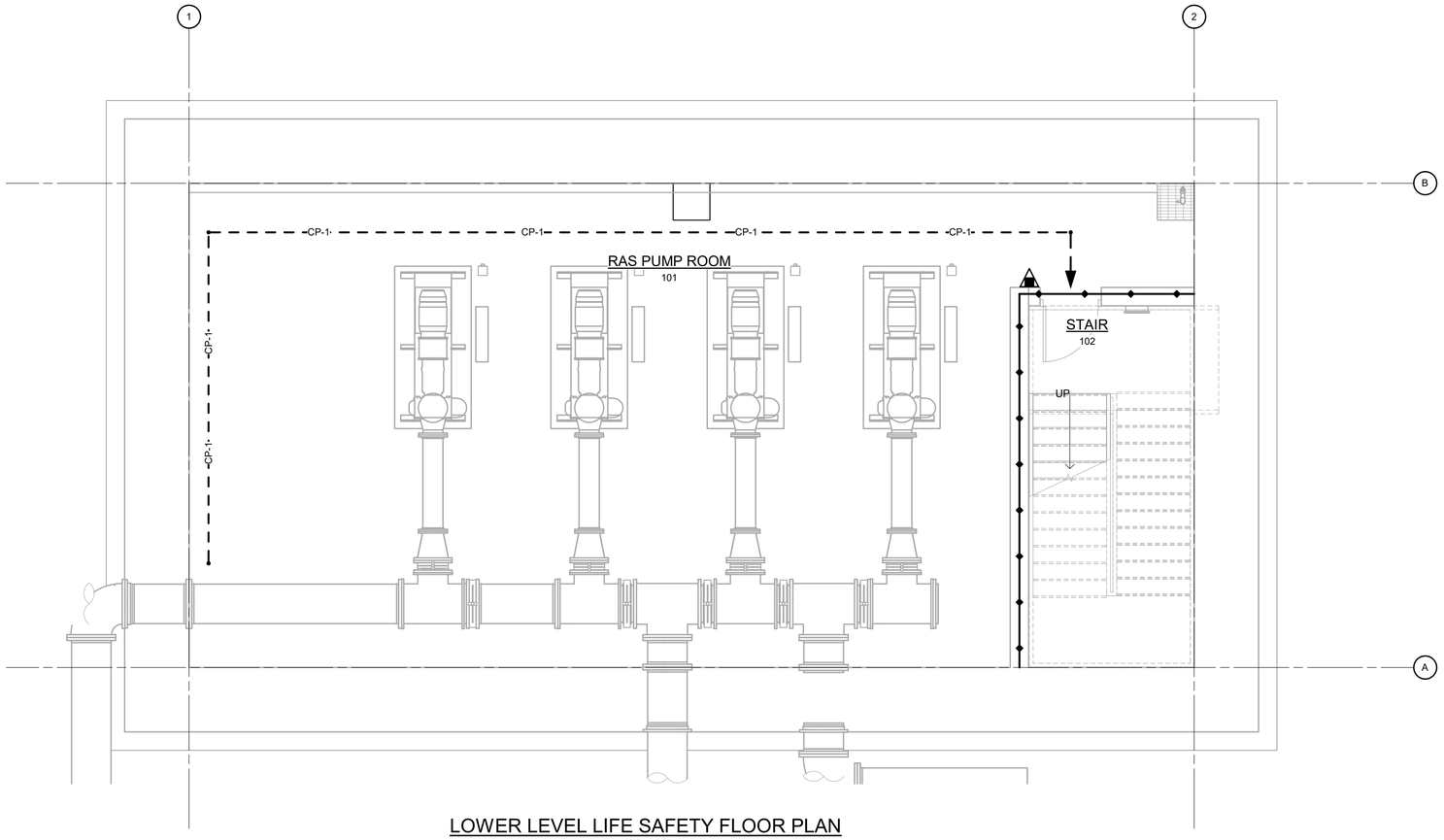

LOWER LEVEL LIFE SAFETY FLOOR PLAN

1/4" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).
2. SEE SHEET G1252 FOR OCCUPANT LOAD CALCULATION.

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A	CLEAR DOOR WIDTH [FEET - INCHES]
B	OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

ABC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
COMMON PATH	CP

EXIT DISCHARGE

EXIT DISCHARGE ARROW

WALL RATING

1 HOUR FIRE BARRIER

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
CP-1	68' - 0"	75' - 0"

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WORK PACKAGE 2

RAS PUMP STATION
LOWER LEVEL LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-1250-RPS-A.rvt

SCALE 1/4" = 1'-0"

DWG NO. G1251

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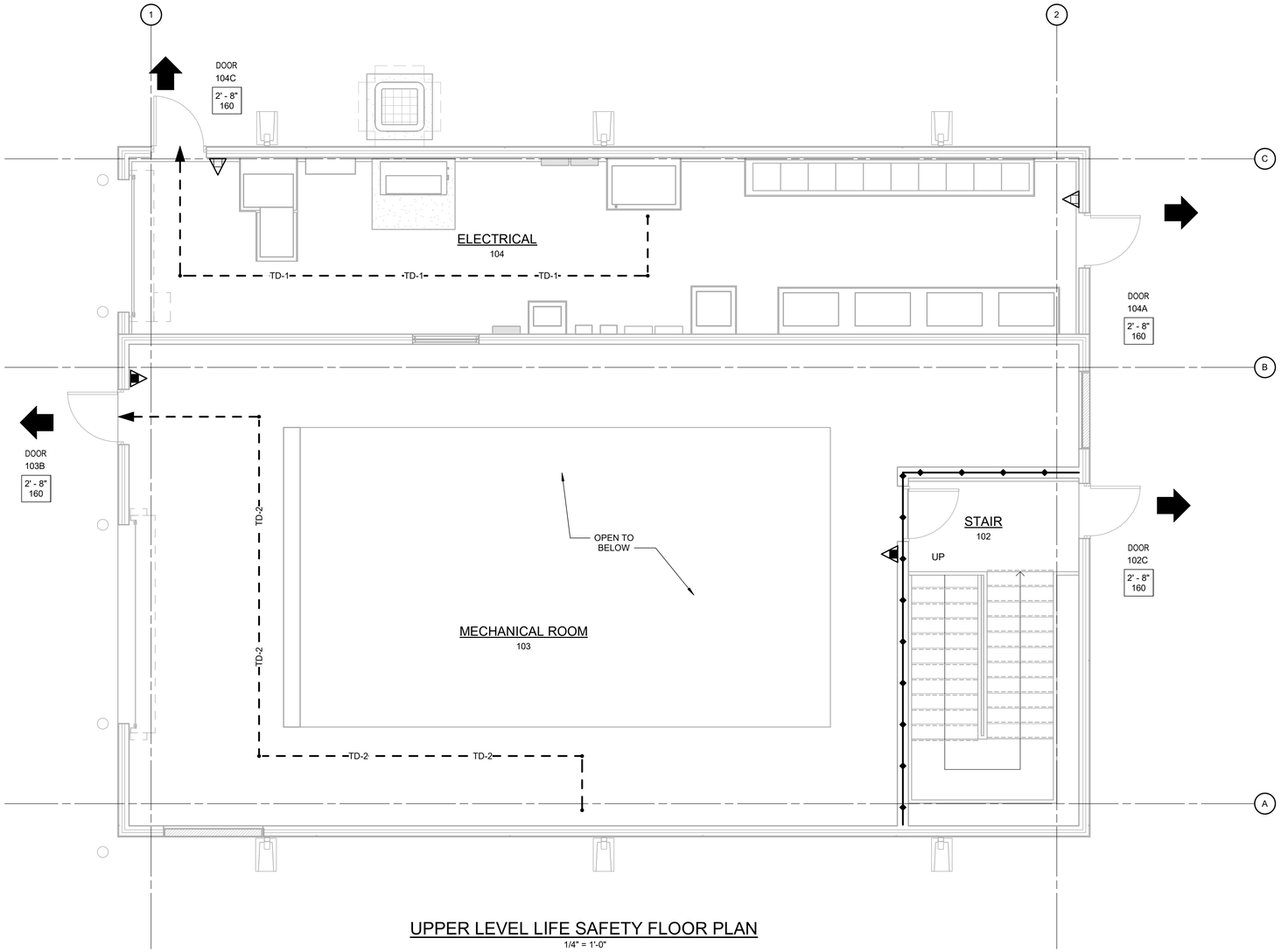

UPPER LEVEL LIFE SAFETY FLOOR PLAN

1/4" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A — CLEAR DOOR WIDTH [FEET - INCHES]

B — OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

ABC FIRE EXTINGUISHER

BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	TD

EXIT DISCHARGE

EXIT DISCHARGE ARROW

WALL RATING

1 HOUR FIRE BARRIER

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
TD-1	39' - 6"	250' - 0"
TD-2	52' - 0"	250' - 0"

MEANS OF EGRESS WIDTH CAPACITY

EXIT ID	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
102C	0.2	2' - 8"	160
103B	0.2	2' - 8"	160
104A	0.2	2' - 8"	160
104C	0.2	2' - 8"	160

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102, 103, 104	STORAGE / MECHANICAL	11
TOTAL		11

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RAS PUMP STATION
UPPER LEVEL LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-1250-RPS-A.rvt

SCALE 1/4" = 1'-0"

DWG NO. G1252

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HRSD JAMES RIVER SWIFT
MBBR BLOWER BUILDING 1350

1.0 GENERAL INFORMATION

MBBR BLOWER BUILDING 1350 AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING CONSISTS OF TWO ROOMS: ONE WITH NON-WASTEWATER PROCESS EQUIPMENT AND THE OTHER WITH SUPPORTING ELECTRICAL EQUIPMENT.

PROJECT NAME	HRSD JAMES RIVER SWIFT MBBR BLOWER BUILDING 1350
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE MBBR BLOWER BUILDING.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

				CODE REF
TYPE OF CONSTRUCTION	*II-B*			*VCC CH 6*
OCCUPANCY GROUPS	*FACTORY F-1*			*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*			
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*			
FIRE DISTRICT	*N/A*			
FLOOD HAZARD AREA	*N/A*			
BUILDING HEIGHT (FT)	*16*			
NUMBER OF STORIES	*1*			
FIRE AREA (SF)	*2,011*			
SITE FIRE FLOW	*1,500 GPM (2 HR)*			*VSFPC §B105*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*			*VSFPC §C102.1*
GROSS BUILDING AREA (SF)	*2,011*			
BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	FIRST FLOOR	-	*2,011*	*2,011*
	TOTALS	*0*	*2,011*	*2,011*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

				CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*			
MAXIMUM ALLOWABLE AREA (SF)	*15,500*			*VCC §506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*			*VCC §508.2*
INCIDENTAL USES	*NONE*			
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?	
	NONE			
MIXED OCCUPANCY	*NONE*			*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*			
FRONTAGE INCREASE CALCULATION				
TABULAR ALLOWABLE AREA (At)	*15,500*			*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*			*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*			
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*			
WIDTH OF PUBLIC WAY (FT)	*N/A*			
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*			*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*N/A*			
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)
	FIRST FLOOR	*N/A*	*N/A*	***N/A***

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	
	BEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 601*
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: THE MBBR BLOWER BUILDING AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*N/A*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*N/A*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*N/A*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*N/A*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS, RAMPS, EXIT PASSAGEWAYS	CORRIDORS / ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*FIRST FLOOR*	*7*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*YES*	*YES*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / ELECTRICAL SYSTEMS*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*> 1/2*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC T1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR BLOWER BUILDING CODE ANALYSIS

0 1" 2"

FILENAME 10292462-1350-BELE-A.rvt
SCALE NONE

DWG NO. **G1350**

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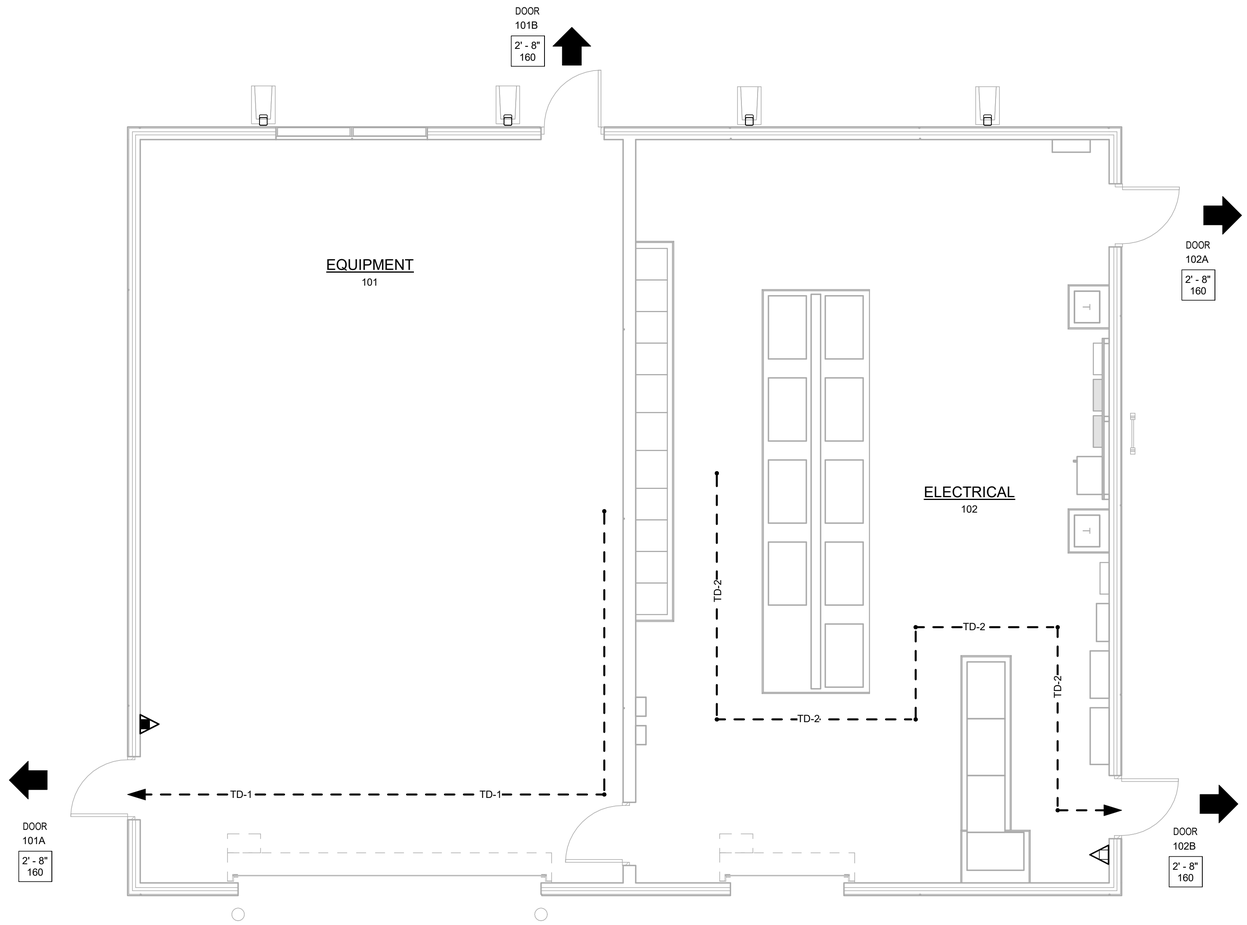

LIFE SAFETY FLOOR PLAN
1/4" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A	CLEAR DOOR WIDTH [FEET - INCHES]
B	OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

- ABC FIRE EXTINGUISHER
- BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	TD

EXIT DISCHARGE

EXIT DISCHARGE ARROW

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
TD-1	40' - 0"	200' - 0"
TD-2	49' - 0"	200' - 0"

MEANS OF EGRESS WIDTH CAPACITY

	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
EXIT ID	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
101A	0.2	2' - 8"	160
101B	0.2	2' - 8"	160
102A	0.2	2' - 8"	160
102B	0.2	2' - 8"	160

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102	STORAGE / MECHANICAL	7
	TOTAL	7

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR BLOWER BUILDING LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-1350-BELE-A.rvt
SCALE 1/4" = 1'-0"

DWG NO. G1351

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HRSD JAMES RIVER SWIFT ADMINISTRATIVE AND MAINTENANCE BUILDING

1.0 GENERAL INFORMATION

THE ADMINISTRATIVE AND MAINTENANCE BUILDING AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE ADMINISTRATIVE PORTION OF THE BUILDING CONSISTS OF A CONTROL ROOM, OFFICE SPACE, LOCKER ROOMS, AND CONFERENCE ROOMS. THE MAINTENANCE PORTION OF THE BUILDING CONSISTS OF ELECTRICAL SHOPS, MECHANICAL TOOL ROOM, AND A WELDING AREA WHERE REPAIRS ON INDIVIDUAL PARTS ARE MADE. VEHICLE MAINTENANCE IS NOT PERFORMED IN THIS AREA.

PROJECT NAME	HRSD JAMES RIVER SWIFT ADMINISTRATIVE AND MAINTENANCE BUILDING
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW ADMINISTRATIVE BUILDING.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

				CODE REF
TYPE OF CONSTRUCTION	*II-B*			
OCCUPANCY GROUPS	*FACTORY F-1, BUSINESS B*			*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*ASSEMBLY A-3 (SEE SECTION 5.1), STORAGE S-1*			
AUTOMATIC SPRINKLER SYSTEM	*THE F-1 FIRE AREA EXCEEDS 12,000 FT2; THEREFORE, AN NFPA 13 COMPLIANT WET-PIPE SUPPRESSION SYSTEM IS INSTALLED THROUGHOUT THE FACILITY IN ACCORDANCE WITH IBC §903.2.4.*			
FIRE ALARM SYSTEM	*PROVIDED FOR MONITORING THE SPRINKLER SYSTEM ONLY*			
STANDPIPES	*NOT PROVIDED*			
FIRE DISTRICT	*N/A*			
FLOOD HAZARD AREA	*N/A*			
BUILDING HEIGHT (FT)	*29*			
NUMBER OF STORIES	*1*			
FIRE AREA (SF)	*20,500*			*VSFPC §B105*
SITE FIRE FLOW	*1,000 GPM*			*VSFPC §C102.1*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*			
GROSS BUILDING AREA (SF)	*20,500*			
BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	FIRST FLOOR	-	*20,500*	*20,500*
	TOTALS	*0*	*20,500*	*20,500*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*20' (1)*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*75' (3)*	

5.1 ALLOWABLE AREA

					CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*				
MAXIMUM ALLOWABLE AREA (SF)	*62,000*				*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*ASSEMBLY A-3* *THE COMMUNITY CONFERENCE ROOM IS 817 SF WHICH IS LESS THAN 10% OF THE TOTAL BUILDING'S FLOOR AREA.* *STORAGE S-1* *THE SUM OF THE AREAS OF ROOMS 154 (440 SF) AND 149 (370 SF) IS LESS THAN 10% OF THE BUILDING'S FLOOR AREA.*				*VCC §508.2*
INCIDENTAL USES	*NONE*				
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?		
	NONE				
MIXED OCCUPANCY	*NON-SEPARATED OCCUPANCIES*				*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*N/A*				
	FRONTAGE INCREASE CALCULATION				
TABULAR ALLOWABLE AREA (At)	*N/A*				*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*				*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*				
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*				
WIDTH OF PUBLIC WAY (FT)	*N/A*				
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*				*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*NOT APPLICABLE*				
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)	
	FIRST FLOOR	*N/A*	*N/A*	***N/A***	

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	
	BEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 601*
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: THE ADMINISTRATIVE BUILDING AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*NA*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*NA*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*NA*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*NA*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NON-SEPARATED, MIXED-OCCUPANCY. NO SEPARATION REQUIRED BETWEEN ACCESSORY AND MAIN OCCUPANCIES.*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*SMOKE PARTITION FOR MECHANICAL ROOM AND LAUNDRY ROOM*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	A, B, F, S	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	A-3	*CLASS B*	*CLASS B*	*CLASS C*	*VCC TBL 803.13*
	B	*CLASS B*	*CLASS C*	*CLASS C*	
	F	*CLASS C*	*CLASS C*	*CLASS C*	
	S	*CLASS C*	*CLASS C*	*CLASS C*	

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*YES*	*YES*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*NFPA 2001*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO**	*YES**	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO*	*TBD***	*FCC 47 CFR PART 90.219*	*§918*

**A FIRE ALARM WILL BE INSTALLED TO MONITOR THE SPRINKLER SYSTEM ONLY.*

***THE CONTRACTOR SHALL DETERMINE THE NECESSITY OF THE EMERGENCY RESPONDER RADIO BY PERFORMING AN EMERGENCY RESPONDER RADIO COVERAGE (ERRC) TEST DURING CONSTRUCTION.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*BUSINESS*	*150 GROSS SF / OCC*	*VCC TBL 1004.5*
	ASSEMBLY - UNCONCENTRATED	*15 NET SF / OCC*	
	STORAGE / MECHANICAL	*300 GROSS SF / OCC*	
	INDUSTRIAL AREA	*100 GROSS SF/OCC*	
TOTAL OCCUPANT LOAD	*MAIN LEVEL*	*203*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*YES*	*YES*	*VCC §1009*
COMMON PATH OF TRAVEL	*A* *B, F-1, S*	*< 75'* *< 100'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*A, F-1, S-1* *B*	*< 250'* *< 300'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*A* *B, F-1, S*	*< 20'* *< 50'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*OCC LOAD < 50* *OCC LOAD ≥ 50* *MECH, PLUMBING, ELECTRICAL*	*36"* *44"* *24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION			
	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/3 THE DIAGONAL*	*< 1/3*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE			
	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

PROVIDED - SEE CIVIL AND ARCHITECTURAL DRAWINGS

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING CODE ANALYSIS

0 1" 2"

FILENAME 10292462-ADM-AS.rvt
SCALE NONE

DWG NO. **G1700**

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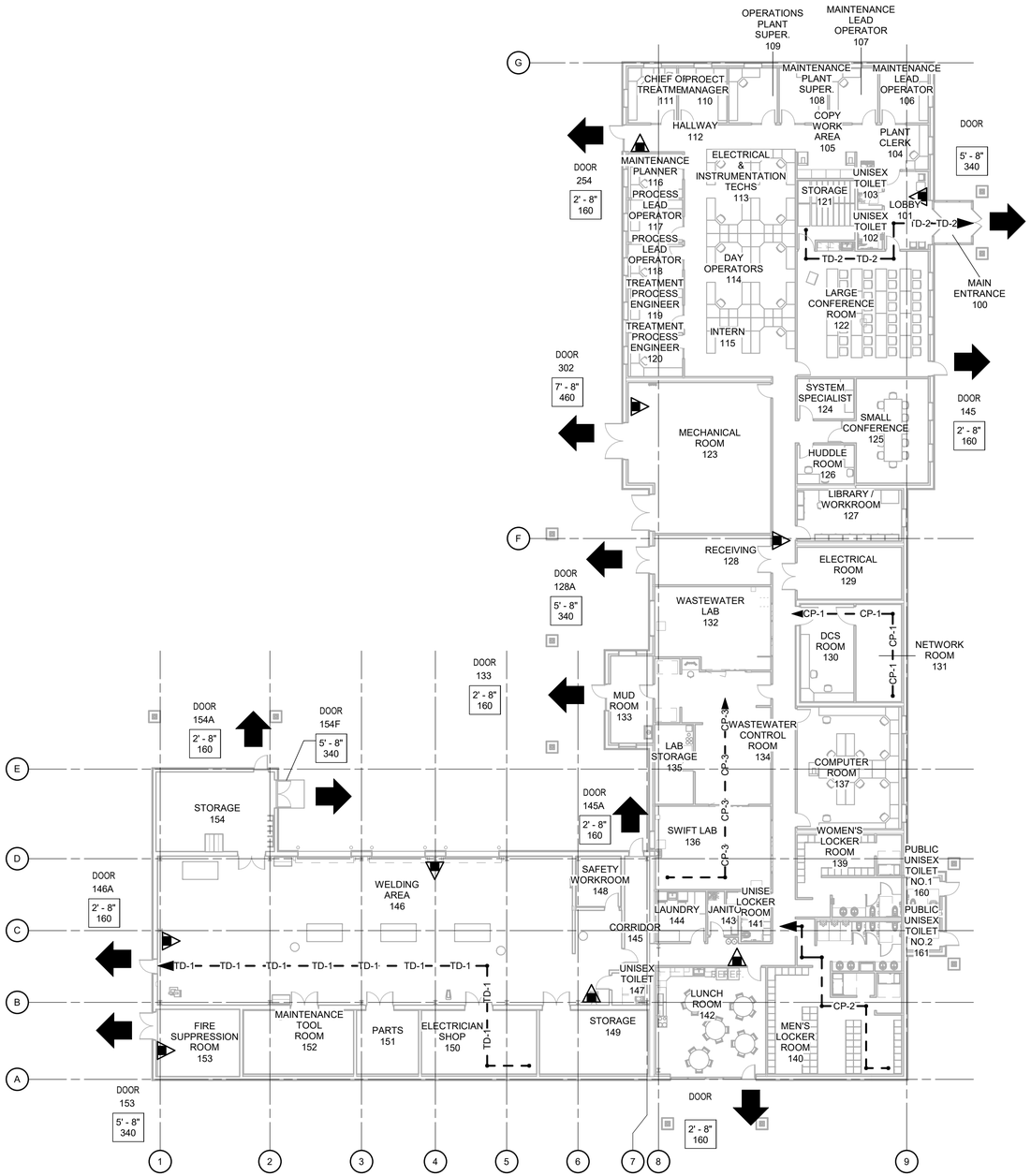

LIFE SAFETY FLOOR PLAN

1/16" = 1'-0"

OCCUPANT LOAD SCHEDULE		
ROOM #	**OCCUPANT USE TYPE**	**OCCUPANT LOAD**
122, 125	ASSEMBLY - UNCONCENTRATED	81
121, 123, 129, 130, 131, 143, 144, 149, 150, 151, 152, 153, 154	STORAGE / MECHANICAL	15
146	INDUSTRIAL	36
REMAINDER	BUSINESS	71
	TOTAL	**203**

MEANS OF EGRESS WIDTH CAPACITY			
	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
EXIT ID	**EGRESS CAPACITY FACTOR**	**CLEAR WIDTH**	**OCCUPANT LOAD CAPACITY**
	0.2	2' - 8"	160
	0.2	5' - 8"	340
128A	0.2	5' - 8"	340
133	0.2	2' - 8"	160
145	0.2	2' - 8"	160
145A	0.2	2' - 8"	160
146A	0.2	2' - 8"	160
153	0.2	5' - 8"	340
154A	0.2	2' - 8"	160
154F	0.2	5' - 8"	340
254	0.2	2' - 8"	160
302	0.2	7' - 8"	460

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY		
EGRESS PATH ID	**EGRESS DISTANCE**	
	PROVIDED	**MAXIMUM PERMITTED**
CP-1	41' - 6"	100' - 0"
CP-2	51' - 6"	100' - 0"
CP-3	53' - 6"	100' - 0"
TD-1	106' - 6"	250' - 0"
TD-2	52' - 6"	250' - 0"
TD-3	85' - 0"	250' - 0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A — CLEAR DOOR WIDTH [FEET - INCHES]

B — OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	**SYMBOL**
TRAVEL DISTANCE	TD
COMMON PATH	CP

EXIT DISCHARGE

EXIT DISCHARGE ARROW

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HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-ADM-AS.rvt

SCALE 1/16" = 1'-0"

DWG NO. G1701

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HRSD JAMES RIVER SWIFT MAIN ELECTRICAL BUILDING

1.0 GENERAL INFORMATION

THE MAIN ELECTRICAL BUILDING AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING PRIMARILY CONSISTS OF A GENERATOR ROOM AND SWITCHGEAR ROOM AT GRADE LEVEL. THERE ARE TWO DIESEL GENERATORS LOCATED IN THIS BUILDING THAT PROVIDE EMERGENCY POWER TO THE TREATMENT PLANT. THE FUEL SUPPLY CONSISTS OF TWO DAY TANKS (TOTAL VOLUME DOES NOT EXCEED 660 GALLONS) AND TWO 30,000 GALLON BULK UNDERGROUND STORAGE TANKS.

PROJECT NAME	HRSD JAMES RIVER SWIFT ELECTRICAL BUILDING
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW MAIN ELECTRICAL BUILDING.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
OCCUPANCY GROUPS	*FACTORY F-1*	*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*	
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*	
FIRE DISTRICT	*N/A*	
FLOOD HAZARD AREA	*N/A*	
BUILDING HEIGHT (FT)	*48*	
NUMBER OF STORIES	*1*	
FIRE AREA (SF)	*6,174*	*VSFPC §B105*
SITE FIRE FLOW	*1,750 GPM*	*VSFPC §C102.1*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*	
GROSS BUILDING AREA (SF)	*6,174*	

BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	GROUND LEVEL	-	*6,174*	*6,174*
	TOTALS	*0*	*6,174*	*6,174*

4.1 SPECIAL DETAILED OCCUPANCY & USE REQUIREMENTS

REQUIREMENT	PROVIDED	CODE REF
PROVIDE AN EMERGENCY POWER / STANDBY SYSTEM IN ACCORDANCE WITH THE VSFPC, NFPA 70, NFPA 110, AND NFPA 111.	*DIESEL GENERATOR SYSTEM SHALL BE INSTALLED COMPLIANT WITH VSFPC, NFPA 70, NFPA 110, AND NFPA 111.*	*VCC §2702.1.3*
AGGREGATE CAPACITY OF FUEL OIL STORAGE TANKS IN A BUILDING SHALL NOT EXCEED 660 GALLONS	*DIESEL FUEL STORED IN THE BUILDING WILL NOT EXCEED 660 GALLONS*	*VSFPC §603.3.1*
UNDERGROUND STORAGE TANKS SHALL COMPLY WITH VCC AND NFPA 31	*TWO 30,000 GALLON BULK STORAGE UNDERGROUND TANKS PROVIDED*	*VSFPC §603.3.3*
THE WALLS, FLOORS, AND CEILING OF THE ENGINE GENERATOR ROOM SHALL HAVE A 1-HOUR FIRE RESISTANCE RATING	*1-HOUR FIRE BARRIER PROVIDED BETWEEN GENERATOR ROOM AND THE SWITCHGEAR ROOM*	*NFPA 37 §4.1.2.1.1 (2015)*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

				CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*			
MAXIMUM ALLOWABLE AREA (SF)	*15,500*			*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*			*VCC §508.2*
INCIDENTAL USES	*NONE*			
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?	
	NONE			
MIXED OCCUPANCY	*NONE*			*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*			
	FRONTAGE INCREASE CALCULATION			
TABULAR ALLOWABLE AREA (At)	*N/A*			*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*			*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*			
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*			
WIDTH OF PUBLIC WAY (FT)	*N/A*			
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*			*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*NOT APPLICABLE*			
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)
	GROUND LEVEL	*N/A*	*N/A*	***N/A***

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	*VCC TBL 601*
	BEARING WALLS	EXTERIOR	*0-HOUR*	
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: THE ELECTRICAL BUILDING AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*NA*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*NA*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*NA*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*NA*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
GENERATOR SEPARATION	*1-HOUR RATED WALLS, FLOORS, AND CEILINGS*			*NFPA 37 §4.1.2.1.1*
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*GROUND LEVEL*	*21*	
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*YES*	*YES*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / ELECTRICAL SYSTEMS*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*< 1/2*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		CODE REF
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING CODE ANALYSIS

0 1" 2"

FILENAME 10292462-1800-MELE-A.rvt
SCALE NONE
DWG NO. **G1800**

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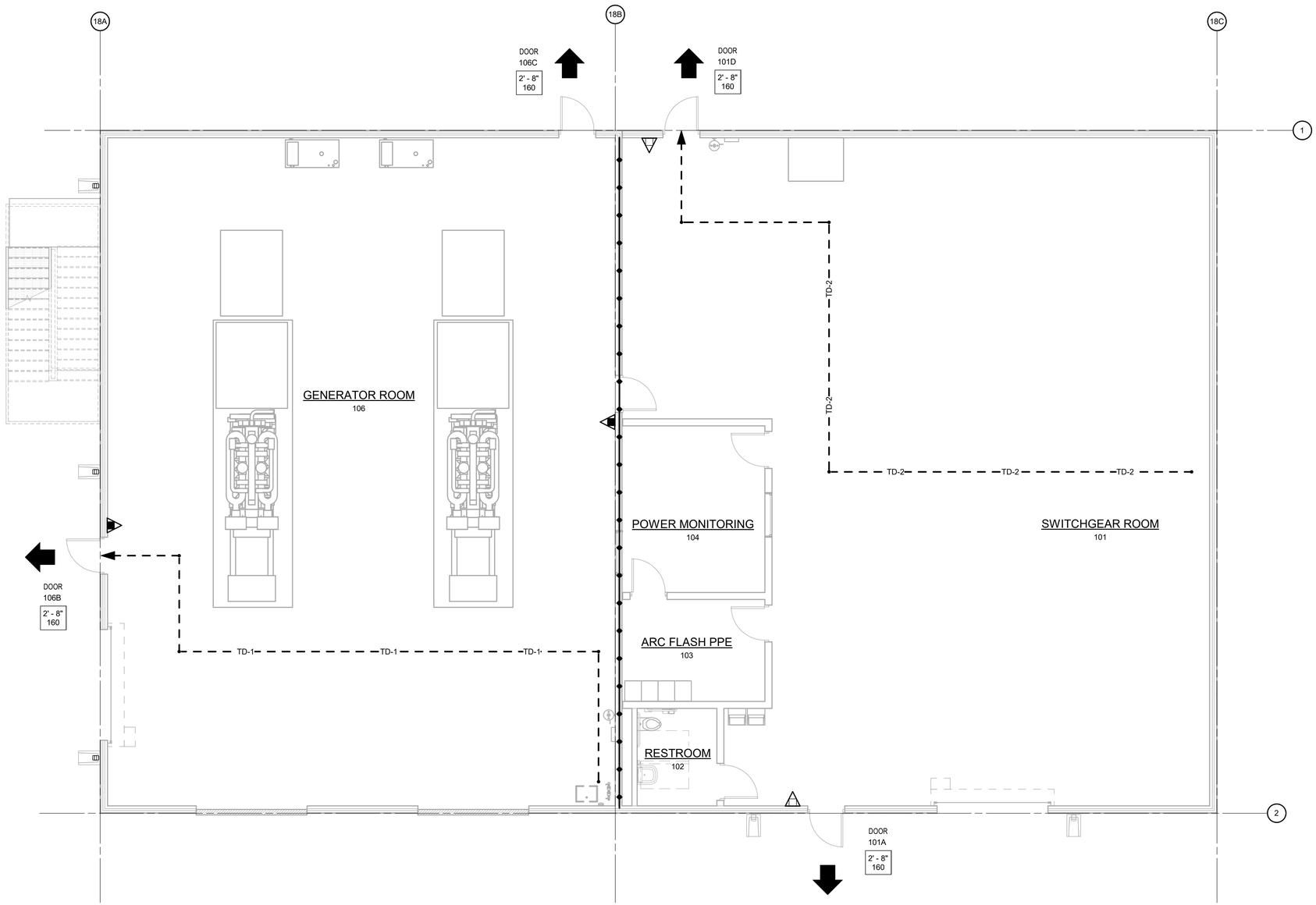

LIFE SAFETY PLAN
3/16" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A — CLEAR DOOR WIDTH [FEET - INCHES]
B — OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

ABC FIRE EXTINGUISHER
BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	TD

EXIT DISCHARGE

EXIT DISCHARGE ARROW

WALL RATING

1 HOUR FIRE BARRIER

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
TD-1	65' - 6"	200' - 0"
TD-2	77' - 0"	200' - 0"

MEANS OF EGRESS WIDTH CAPACITY

EXIT ID	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
101A	0.2	2' - 8"	160
101D	0.2	2' - 8"	160
106B	0.2	2' - 8"	160
106C	0.2	2' - 8"	160

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102, 103, 104, 106	STORAGE / MECHANICAL	21
TOTAL		21

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-1800-MELE-A.rvt
SCALE 3/16" = 1'-0"

DWG NO. G1801

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1800-MELE-A.rvt
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HRSD JAMES RIVER SWIFT SOUTH ELECTRICAL BUILDING 1840

1.0 GENERAL INFORMATION

THE SOUTH ELECTRICAL BUILDING AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING CONSISTS OF A SINGLE ROOM WITH ELECTRICAL EQUIPMENT.

PROJECT NAME	HRSD JAMES RIVER SWIFT ELECTRICAL BUILDING 1840
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW ELECTRICAL BUILDING1840.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

				CODE REF
TYPE OF CONSTRUCTION	*II-B*			
OCCUPANCY GROUPS	*FACTORY F-1*			*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*			
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*			
FIRE DISTRICT	*N/A*			
FLOOD HAZARD AREA	*N/A*			
BUILDING HEIGHT (FT)	*15.5*			
NUMBER OF STORIES	*1*			
FIRE AREA (SF)	*1,500*			*VSFPC §B105*
SITE FIRE FLOW	*1,500 GPM*			*VSFPC §C102.1*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*			
GROSS BUILDING AREA (SF)	*1,500*			
BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	FIRST FLOOR	-	*1,500*	*1,500*
	TOTALS	*0*	*1,500*	*1,500*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

					CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*				
MAXIMUM ALLOWABLE AREA (SF)	*15,500*				*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*				*VCC §508.2*
INCIDENTAL USES	*NONE*				
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?		
	NONE				
MIXED OCCUPANCY	*NONE*				*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*				
FRONTAGE INCREASE CALCULATION					
TABULAR ALLOWABLE AREA (At)	*N/A*				*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*				*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*				
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*				
WIDTH OF PUBLIC WAY (FT)	*N/A*				
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*				*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*NOT APPLICABLE*				
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)		Aa (sf)
	FIRST FLOOR	*N/A*	*N/A*		***N/A***

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	*VCC TBL 601*
	BEARING WALLS	EXTERIOR	*0-HOUR*	
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: THE ELECTRICAL BUILDING AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*NA*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*NA*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*NA*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*NA*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*FIRST FLOOR*	*5*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*YES*	*YES*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / ELECTRICAL SYSTEMS*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1 50 ≤ OL ≤ 500: 2 501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*< 1/2*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

SOUTH ELECTRICAL BUILDING CODE ANALYSIS

0 1" 2"

FILENAME FILENAME.rvt
SCALE NONE

DWG NO. **G1840**

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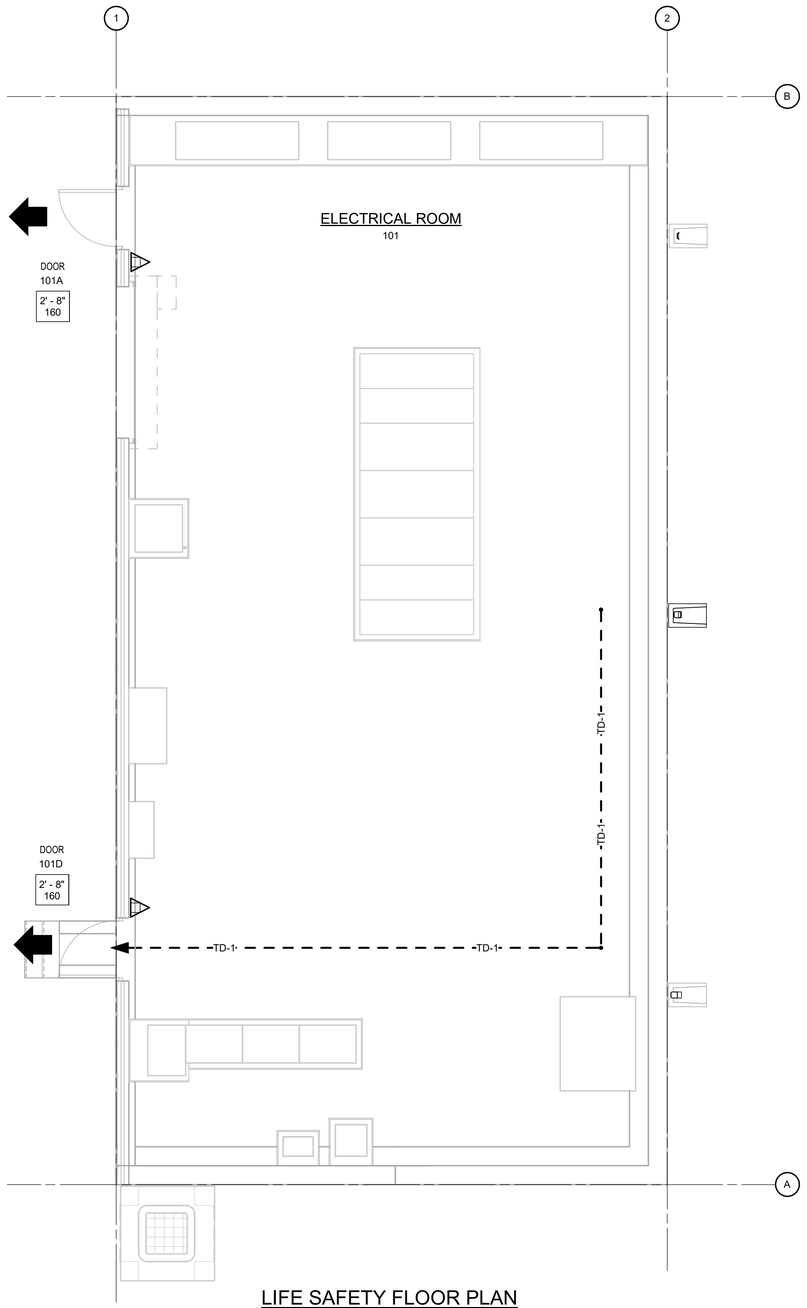

LIFE SAFETY FLOOR PLAN
1/4" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A
B

CLEAR DOOR WIDTH [FEET - INCHES]

OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	TD

EXIT DISCHARGE

EXIT DISCHARGE ARROW

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY		
EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
TD-1	44' - 0"	200' - 0"

MEANS OF EGRESS WIDTH CAPACITY			
	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
EXIT ID	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
101A	0.2	2' - 8"	160
101D	0.2	2' - 8"	160

OCCUPANT LOAD SCHEDULE		
ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101	STORAGE / MECHANICAL	5
	TOTAL	5

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
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PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SOUTH ELECTRICAL BUILDING LIFE SAFETY PLAN

0 1" 2"

FILENAME FILENAME.rvt
SCALE 1/4" = 1'-0"

DWG NO. G1841

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HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 1

1.0 GENERAL INFORMATION

RECHARGE WELL NO. 1 AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING CONSISTS OF TWO ROOMS: ONE WITH PROCESS EQUIPMENT AND THE OTHER WITH SUPPORTING ELECTRICAL EQUIPMENT.

PROJECT NAME	HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 1
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW RECHARGE WELL NO. 1.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

				CODE REF
TYPE OF CONSTRUCTION	*II-B*			
OCCUPANCY GROUPS	*FACTORY F-1*			*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*			
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*			
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*			
FIRE DISTRICT	*N/A*			
FLOOD HAZARD AREA	*N/A*			
BUILDING HEIGHT (FT)	*14.67*			
NUMBER OF STORIES	*1*			
FIRE AREA (SF)	*1,450*			
SITE FIRE FLOW	*1,500 GPM*			*VSFPC §B105*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*			*VSFPC §C102.1*
GROSS BUILDING AREA (SF)	*1,450*			
BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	FIRST FLOOR	-	*1,450*	*1,450*
	TOTALS	*0*	*1,450*	*1,450*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

					CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*				
MAXIMUM ALLOWABLE AREA (SF)	*15,500*				*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*				*VCC §508.2*
INCIDENTAL USES	*NONE*				
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?		
	NONE				
MIXED OCCUPANCY	*NONE*				*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*				
FRONTAGE INCREASE CALCULATION					
TABULAR ALLOWABLE AREA (At)	*15,500*				*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*				*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*				
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*				
WIDTH OF PUBLIC WAY (FT)	*N/A*				
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*				*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*N/A*				
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)	
	FIRST FLOOR	*N/A*	*N/A*	***N/A***	

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	*VCC TBL 601*
	BEARING WALLS	EXTERIOR	*0-HOUR*	
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: RECHARGE WELL NO. 1 AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*N/A*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*N/A*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*N/A*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*N/A*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	IBC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*FIRST FLOOR*	*5*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*NO*	*NO*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / ELECTRICAL SYSTEMS*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION			
	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*< 1/2*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE			
	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 1

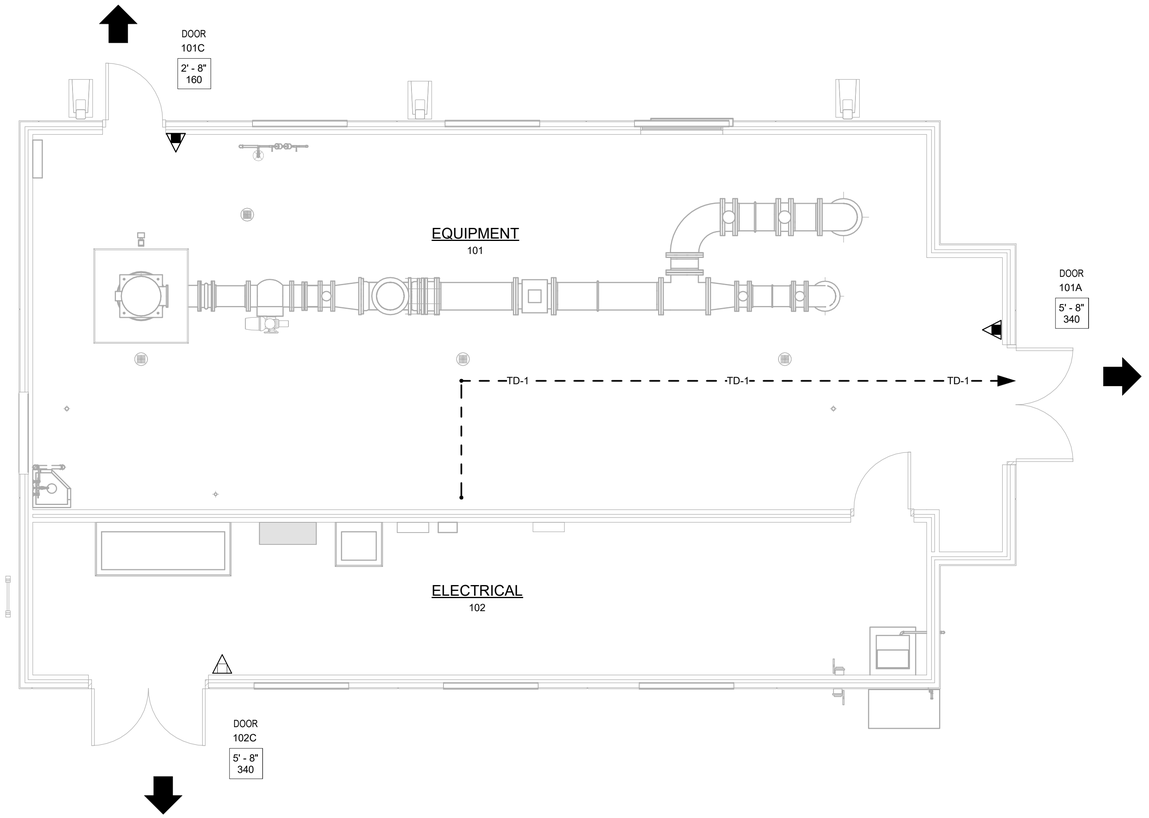
RECHARGE WELL NO. 1 CODE ANALYSIS

0 1" 2"

FILENAME 10292462-3000-RW1-A.rvt
SCALE NONE

DWG NO. **G3001**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-3000-RW1-A.rvt
10/1/2021 10:56:15 AM



LIFE SAFETY PLAN
1/4" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A	CLEAR DOOR WIDTH [FEET - INCHES]
B	OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

- ABC FIRE EXTINGUISHER
- BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	— — TD — — ▶

EXIT DISCHARGE

EXIT DISCHARGE ARROW ▶

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
TD-1	35' - 6"	200' - 0"

MEANS OF EGRESS WIDTH CAPACITY

EXIT ID	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
101A	0.2	5' - 8"	340
101C	0.2	2' - 8"	160
102C	0.2	5' - 8"	340

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102	STORAGE / MECHANICAL	5
	TOTAL	**5**

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DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 1

RECHARGE WELL NO. 1 LIFE SAFETEY PLAN

0 1" 2"

FILENAME 10292462-3000-RW1-A.rvt
SCALE 1/4" = 1'-0"

DWG NO. G3002

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HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 5

1.0 GENERAL INFORMATION

RECHARGE WELL NO. 5 AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING CONSISTS OF TWO ROOMS: ONE WITH PROCESS EQUIPMENT AND THE OTHER WITH SUPPORTING ELECTRICAL EQUIPMENT.

PROJECT NAME	HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 5
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW RECHARGE WELL NO. 5.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

					CODE REF
TYPE OF CONSTRUCTION	*II-B*				
OCCUPANCY GROUPS	*FACTORY F-1*				*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*				
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*				
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*				
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*				
FIRE DISTRICT	*N/A*				
FLOOD HAZARD AREA	*N/A*				
BUILDING HEIGHT (FT)	*16*				
NUMBER OF STORIES	*1*				
FIRE AREA (SF)	*665*				
SITE FIRE FLOW	*1,500 GPM*				*VSFPC §B105*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*				*VSFPC §C102.1*
GROSS BUILDING AREA (SF)	*665*				
BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)	
	FIRST FLOOR	-	*665*	*665*	
	TOTALS	*0*	*665*	*665*	

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

				CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*			
MAXIMUM ALLOWABLE AREA (SF)	*15,500*			*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*			*VCC §508.2*
INCIDENTAL USES	*NONE*			
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?	
	NONE			
MIXED OCCUPANCY	*NONE*			*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*			
	FRONTAGE INCREASE CALCULATION			
TABULAR ALLOWABLE AREA (At)	*15,500*			*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*			*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*			
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*			
WIDTH OF PUBLIC WAY (FT)	*N/A*			
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*			*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*N/A*			
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)
	FIRST FLOOR	*N/A*	*N/A*	***N/A***

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	
	BEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 601*
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: RECHARGE WELL NO. 5 AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*N/A*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*N/A*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*N/A*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*N/A*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*FIRST FLOOR*	*3*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*
8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*NO*	*NO*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / PLUMBING / ELECTRICAL SYSTEMS OR EQUIPMENT*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION			
	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*> 1/2*	*VCC §1007.1.1*
8.14 EXIT ENCLOSURES AND EXIT DISCHARGE			
	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 5 CODE ANALYSIS

0 1" 2"

FILENAME 10292462-3040-RW5-A.rvt
SCALE NONE

DWG NO. **G3040**

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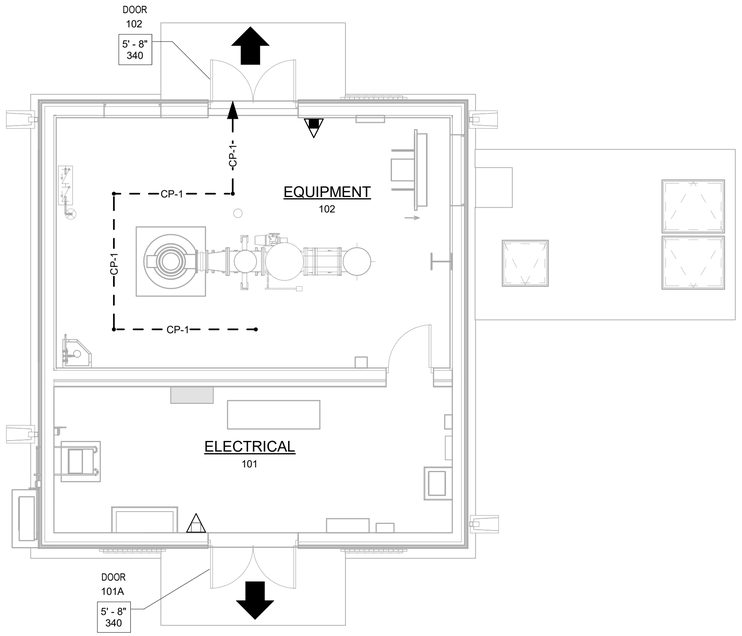

LIFE SAFETY PLAN
3/16" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A	CLEAR DOOR WIDTH [FEET - INCHES]
B	OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

ABC FIRE EXTINGUISHER

BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
COMMON PATH	CP

EXIT DISCHARGE

EXIT DISCHARGE ARROW

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
CP-1	34' - 6"	75' - 0"

MEANS OF EGRESS WIDTH CAPACITY

	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
EXIT ID	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
101A	0.2	5' - 8"	340
102	0.2	5' - 8"	340

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102	STORAGE / MECHANICAL	3
	TOTAL	**3**

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HDR US-A Ulliman Schutte – Alberici Joint Venture
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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 5 LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-3040-RW5-A.rvt
SCALE 3/16" = 1'-0"

DWG NO. **G3041**

HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 7

1.0 GENERAL INFORMATION

RECHARGE WELL NO. 7 AT THE HRSD JAMES RIVER SWIFT FACILITY IS A NEW CONSTRUCTION PROJECT IN NEWPORT NEWS, VIRGINIA. THE BUILDING CONSISTS OF TWO ROOMS: ONE WITH PROCESS EQUIPMENT AND THE OTHER WITH SUPPORTING ELECTRICAL EQUIPMENT.

PROJECT NAME	HRSD JAMES RIVER SWIFT RECHARGE WELL NO. 7
PROJECT ADDRESS	111 CITY FARM ROAD, NEWPORT NEWS, VIRGINIA
OWNER OR AUTHORIZED AGENT	HAMPTON ROADS SANITATION DISTRICT
OWNED BY	HAMPTON ROADS SANITATION DISTRICT
AUTHORITY HAVING JURISDICTION	CITY OF NEWPORT NEWS

2.0 DESIGN RECORD TEAM

LEAD DESIGN PROFESSIONAL: JASON KERNS

3.0 DESIGN CODE COMPLIANCE

THE FOLLOWING CODE REVIEW NARRATIVE IS PROVIDED TO SERVE AS A BASIS OF UNDERSTANDING FOR THE DEVELOPMENT OF THE SPECIFICATIONS AND DESIGN OF THE NEW RECHARGE WELL NO. 7.

STATE OF VIRGINIA	
BUILDING CODE	2018 VIRGINIA CONSTRUCTION CODE (VCC)
EXISTING BUILDING CODE	2018 VIRGINIA EXISTING BUILDING CODE
FIRE CODE	2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE (VSFPC)
MECHANICAL CODE	2018 VIRGINIA MECHANICAL CODE
PLUMBING CODE	2018 VIRGINIA PLUMBING CODE
ELECTRICAL CODE	2017 NATIONAL ELECTRICAL CODE
ENERGY CODE	2018 VIRGINIA ENERGY CONSERVATION CODE
FUEL GAS CODE	2018 VIRGINIA FUEL GAS CODE
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OWNER DEFINED STANDARDS	
DESIGN CRITERIA	NONE IDENTIFIED

4.0 BUILDING DATA

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
OCCUPANCY GROUPS	*FACTORY F-1*	*VCC CH 3*
ACCESSORY OCCUPANCY GROUPS	*NONE*	
AUTOMATIC SPRINKLER SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
FIRE ALARM SYSTEM	*NOT PROVIDED / NOT REQUIRED*	
STANDPIPES	*NOT PROVIDED / NOT REQUIRED*	
FIRE DISTRICT	*N/A*	
FLOOD HAZARD AREA	*N/A*	
BUILDING HEIGHT (FT)	*18.92*	
NUMBER OF STORIES	*1*	
FIRE AREA (SF)	*1,050*	
SITE FIRE FLOW	*1,500 GPM*	*VSFPC §B105*
MINIMUM NUMBER OF FIRE HYDRANTS	*1*	*VSFPC §C102.1*
GROSS BUILDING AREA (SF)	*1,050*	

BUILDING AREA	FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
	FIRST FLOOR	-	*1,050*	*1,050*
	TOTALS	*0*	*1,050*	*1,050*

5.0 ALLOWABLE HEIGHT

		CODE REF
TYPE OF CONSTRUCTION	*II-B*	
BASE HEIGHT ALLOWED (NO. STORIES)	*55' (2)*	*VCC TBL 504.3, 504.4*
INCREASE FOR SPRINKLERS	*N/A*	
TOTAL ALLOWABLE HEIGHT (NO. STORIES)	*55' (2)*	

5.1 ALLOWABLE AREA

				CODE REF
RESTRICTIVE OCCUPANCY	*FACTORY F-1*			
MAXIMUM ALLOWABLE AREA (SF)	*15,500*			*VCC TBL 506.2*
ACCESSORY OCCUPANCY GROUPS	*NONE*			*VCC §508.2*
INCIDENTAL USES	*NONE*			
SPECIAL REQUIREMENTS	REQUIREMENT	TRIGGER	MET?	
	NONE			
MIXED OCCUPANCY	*NONE*			*VCC §508*
APPLICABLE OCCUPANCY SEPARATIONS	*NONE*			
	FRONTAGE INCREASE CALCULATION			
TABULAR ALLOWABLE AREA (At)	*15,500*			*VCC TBL 506.2*
TABULAR NON-SPRINKLER AREA FACTOR (NS)	*N/A*			*VCC TBL 506.2*
BUILDING PERIMETER (FT)	*N/A*			
BUILDING PERIMETER ON A PUBLIC WAY OR OPEN SPACE (FT)	*N/A*			
WIDTH OF PUBLIC WAY (FT)	*N/A*			
AREA FACTOR INCREASE - FRONTAGE (If)	*N/A*			*VCC §506.3.3 EQ 5-5*
SUM OF RATIO CALCULATION	*N/A*			
ALLOWABLE AREA PER STORY Aa = [At + (NS * If)]	STORY	At (sf)	(NS * If)	Aa (sf)
	FIRST FLOOR	*N/A*	*N/A*	***N/A***

6.0 FIRE-RESISTANCE-RATING OF STRUCTURE

			RATING	CODE REF
CONSTRUCTION TYPE	*II-B*			
BUILDING ELEMENT	PRIMARY STRUCTURAL FRAME		*0-HOUR*	*VCC TBL 601*
	BEARING WALLS	EXTERIOR	*0-HOUR*	
		INTERIOR	*0-HOUR*	
	NONBEARING WALLS	EXTERIOR	*0-HOUR*	*VCC TBL 602*
		INTERIOR	*0-HOUR*	
	FLOOR ASSEMBLY		*0-HOUR*	*VCC TBL 601*
	ROOF ASSEMBLY		*0-HOUR*	

6.1 FIRE-RESISTANCE-RATED ASSEMBLIES & SEPARATIONS

EGRESS SUMMARY: RECHARGE WELL NO. 7 AT HRSD SWIFT PROVIDES MULTIPLE EXIT ACCESS PATHWAYS THAT ALLOW THE OCCUPANTS TO REACH THE EXTERIOR EXIT DOORWAYS WITHIN THE PERMITTED EXIT ACCESS TRAVEL DISTANCES, THEREBY NOT REQUIRING RATED EXIT ENCLOSURES TO EXTEND THE EXIT ACCESS TRAVEL DISTANCE.

	REQUIRED	PROVIDED	WALL TYPE	CODE REF
UNENCLOSED EXIT ACCESS SHAFT (LESS THAN THREE FLOORS)	*N/A*	*NO*	*N/A*	*VCC §1019*
OTHER SHAFT ENCLOSURES (LESS THAN FOUR FLOORS)	*N/A*	*NO*	*N/A*	*VCC §713.4*
EXIT PASSAGEWAYS	*N/A*	*NO*	*N/A*	*VCC §1024*
CORRIDOR SEPARATION	*N/A*	*NO*	*N/A*	*VCC TBL 1020.1*
OCCUPANCY SEPARATION	*NOT APPLICABLE*			*VCC §508.4*
PARTY/FIRE WALL SEPARATION	*NOT APPLICABLE*			*VCC §706*
SMOKE BARRIER SEPARATION	*NOT APPLICABLE*			*VCC §709*
TENANT SEPARATION	*NOT APPLICABLE (SINGLE TENANT BUILDING)*			
HORIZONTAL ASSEMBLIES	*NOT APPLICABLE*			*VCC CH. 7*
INCIDENTAL USE SEPARATION	*NOT APPLICABLE*			*VCC §509*

7.0 INTERIOR FINISHES

	OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACE	CODE REF
FLOOR FINISH	F	*CLASS II*	*CLASS II*	*CLASS II*	*VCC §804*
WALL & CEILING FINISH	F	*CLASS B*	*CLASS C*	*CLASS C*	*VCC TBL 803.13*

8.0 LIFE SAFETY SYSTEM REQUIREMENTS

	REQUIRED	PROVIDED	DESIGN STD	VCC CODE REF
EMERGENCY LIGHTING	*YES*	*YES*	*NFPA 72*	*§1008*
EXIT SIGNS	*YES*	*YES*	*NFPA 72*	*§1013*
AUTOMATIC SPRINKLER	*NO*	*NO*	*NFPA 13*	*§903*
ALTERNATIVE EXTINGUISHER	*NO*	*NO*	*N/A*	*§904*
STANDPIPE (< 30 FT AFG)	*NO*	*NO*	*NFPA 14*	*§905*
FIRE EXTINGUISHERS	*YES*	*YES*	*NFPA 10*	*§906*
FIRE ALARM & DETECTION	*NO*	*NO*	*NFPA 72*	*§907*
EMERGENCY ALARM	*NO*	*NO*	*NFPA 72*	*§908*
SMOKE CONTROL	*NO*	*NO*	*NFPA 92*	*§909*
SMOKE AND HEAT REMOVAL	*NO*	*NO*	*NFPA 92*	*§910*
FIRE COMMAND CENTER	*NO*	*NO*	*NFPA 72*	*§911*
FIRE PUMPS	*NO*	*NO*	*NFPA 20*	*§913*
CARBON MONOXIDE DETECTION	*NO*	*NO*	*NFPA 720*	*§915*
EM RESPONDER RADIO	*NO**	*NO*	*FCC 47 CFR PART 90.219*	*§918*

**AN IN-BUILDING EMERGENCY COMMUNICATION SYSTEM IS NOT REQUIRED IN ACCORDANCE WITH VCC §918.1 SINCE THE BUILDING IS A SINGLE STORY ABOVE GRADE LESS THAN 20,000 SQUARE FEET.*

8.1 LIFE SAFETY EGRESS REQUIREMENTS

8.11 OCCUPANT LOADS			CODE REF
OCCUPANT LOAD FACTORS	*STORAGE / MECHANICAL*	*300 GROSS SF / OCC*	*VCC TBL 1004.5*
TOTAL OCCUPANT LOAD	*FIRST FLOOR*	*4*	*SEE PLAN*
EGRESS CAPACITY	*OTHER:*	*0.2"/OCC*	*VCC §1005.3.2*

8.12 PATH OF TRAVEL	CRITERION	LIMIT	CODE REF
ACCESSIBLE MEANS OF EGRESS	*NO*	*NO*	*VCC §1009*
COMMON PATH OF TRAVEL	*F*	*< 75'*	*VCC TBL 1006.2.1*
EXIT ACCESS TRAVEL DISTANCE	*F-1*	*< 200'*	*VCC TBL 1017.2*
DEAD END CORRIDOR LIMIT	*F*	*< 20'*	*VCC §1020.4*
CORRIDOR WIDTH MINIMUM	*ACCESS TO MECHANICAL / ELECTRICAL SYSTEMS*	*24"*	*VCC TBL 1020.2*

8.1 LIFE SAFETY EGRESS REQUIREMENTS (CONT'D.)

8.13 EXIT & EXIT ACCESS DOOR CONFIGURATION	REQUIRED	PROVIDED	CODE REF
EXITS REQUIRED FROM A SPACE	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXITS REQUIRED FROM A FLOOR	*0 < OL < 50: 1* *50 ≤ OL ≤ 500: 2* *501 ≤ OL ≤ 1000: 3*	*SEE PLANS*	*VCC §1006*
EXIT SEPARATION DISTANCE	*1/2 THE DIAGONAL*	*SEE PLANS*	*VCC §1007.1.1*

8.14 EXIT ENCLOSURES AND EXIT DISCHARGE	REQUIRED	PROVIDED	CODE REF
EXIT ACCESS STAIRWAY ENCLOSURE	*NO*	*NO*	*VCC §1019.3*
INTERIOR EXIT STAIRWAYS	*NO*	*NO*	*VCC §1023*
EXITS	*YES*	*SEE PLANS*	*VCC §1022*
HORIZONTAL EXITS	*NO*	*NO*	*VCC §1026*
EXIT DISCHARGE	*TO PUBLIC R.O.W.*	*PROVIDED - SEE PLANS*	*VCC §1028*

9.0 ACCESSIBILITY

NOT PROVIDED. BUILDING QUALIFIES AS AN EQUIPMENT SPACE PER VCC §1103.2.9 AND IS EXEMPT FROM ACCESSIBILITY REQUIREMENTS.

10.0 ROOFS AND ROOFTOP EQUIPMENT

		CODE REF
FIRE CLASSIFICATION	*CLASS C*	*VCC TBL 1505.1*
ROOFTOP EQUIPMENT	*SEE MECHANICAL DRAWINGS*	*VCC §1510*
ROOFTOP STRUCTURES	*NOT APPLICABLE - NONE PROVIDED*	*VCC §1510*

11.0 NOT USED

12.0 OTHER DESIGN REQUIREMENTS

THE FOLLOWING REFERENCES AND DESIGN CRITERIA ARE INCLUDED HERE TO DEMONSTRATE COMPLIANCE WITH VIRGINIA BUILDING CODES.

12.1 SPECIAL APPROVALS

APPROVAL BY	DATE	SUMMARY
N/A		

12.2 STRUCTURAL DESIGN REQUIREMENTS

		CODE REF
DESIGN LOADS	*SEE STRUCT. GEN. NOTES*	
SEISMIC DESIGN CATEGORY	*SEE STRUCT. GEN. NOTES*	
RISK CATEGORY	*SEE STRUCT. GEN. NOTES*	*VCC TBL 1604.5*
SPECIAL INSPECTIONS	*SEE STRUCT. SPECIFICATIONS*	
OTHER DESIGN CRITERIA	*SEE STRUCT. GEN. NOTES*	

12.3 ENERGY SUMMARY

		CODE REF
12.3.1 MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT		
BUILDING HEATING LOAD	*SEE MECHANICAL*	
CONDITIONING SYSTEM	*SEE MECHANICAL*	
EQUIPMENT EFFICIENCIES	*SEE MECHANICAL*	
12.3.2 ELECTRICAL SYSTEM AND EQUIPMENT		
METHOD OF COMPLIANCE	*PRESCRIPTIVE*	*ASHRAE 90.1*
LIGHTING SCHEDULE	*SEE E SHEETS*	
ADD'L PRESCRIPT. COMPLIANCE	*SEE LIGHTING GENERAL NOTES*	

HDR US-A Ulliman Schutte – Alberici Joint Venture
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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. CHRISTIANSEN
CHECKED BY	A. SENK
DRAWN BY	T. FREEMAN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 7 CODE ANALYSIS

0 1" 2"

FILENAME 10292462-3060-RW7-A.rvt
SCALE NONE

DWG NO. **G3060**

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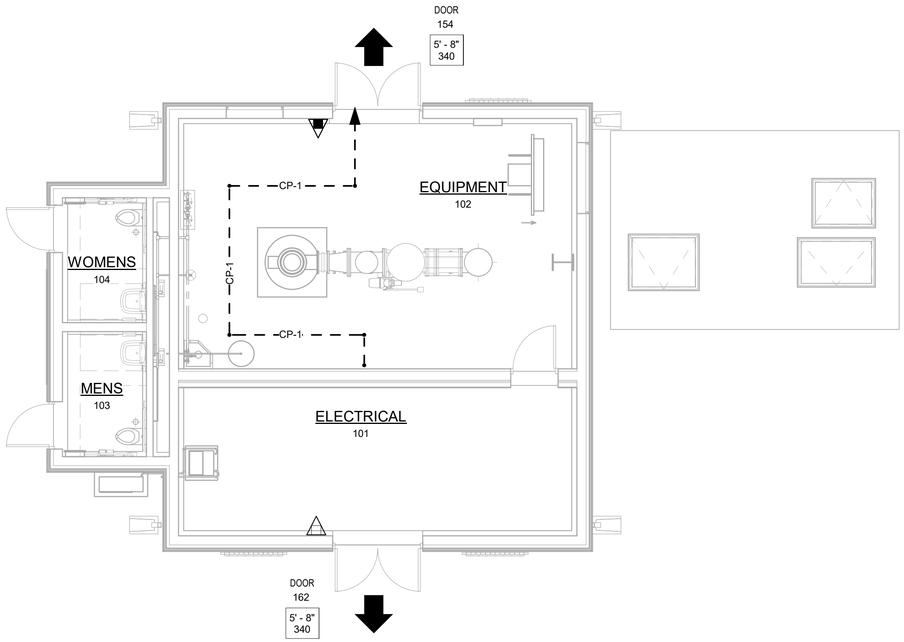

LIFE SAFETY PLAN
3/16" = 1'-0"

LIFE SAFETY NOTES:

1. FOR EXIT LIGHTS AND EMERGENCY LIGHTING, SEE ELECTRICAL LIGHTING DRAWINGS (E SERIES).

LIFE SAFETY SYMBOLS:

EXIT DOOR TAG

A	CLEAR DOOR WIDTH [FEET - INCHES]
B	OCCUPANT LOAD CAPACITY [NO.OF PEOPLE]

OTHERS

ABC FIRE EXTINGUISHER

BC FIRE EXTINGUISHER

LINE TYPES FOR MEANS OF EGRESS:

COMPONENT	SYMBOL
TRAVEL DISTANCE	TD

EXIT DISCHARGE

EXIT DISCHARGE ARROW

MEANS OF EGRESS ARRANGEMENT DISTANCE SCHEDULE - BUILDING SUMMARY

EGRESS PATH ID	EGRESS DISTANCE	
	PROVIDED	MAXIMUM PERMITTED
CP-1	36' - 6"	75' - 0"

MEANS OF EGRESS WIDTH CAPACITY

EXIT ID	PROVIDED EGRESS CAPACITY - LEVEL COMPONENTS & RAMPS		
	EGRESS CAPACITY FACTOR	CLEAR WIDTH	OCCUPANT LOAD CAPACITY
154	0.2	5' - 8"	340
162	0.2	5' - 8"	340

OCCUPANT LOAD SCHEDULE

ROOM #	OCCUPANT USE TYPE	OCCUPANT LOAD
101, 102, 103, 104	STORAGE / MECHANICAL	4
TOTAL		4

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RECHARGE WELL NO. 7
LIFE SAFETY PLAN

0 1" 2"

FILENAME 10292462-3060-RW7-A.rvt
SCALE 3/16" = 1'-0"

DWG NO. G3061

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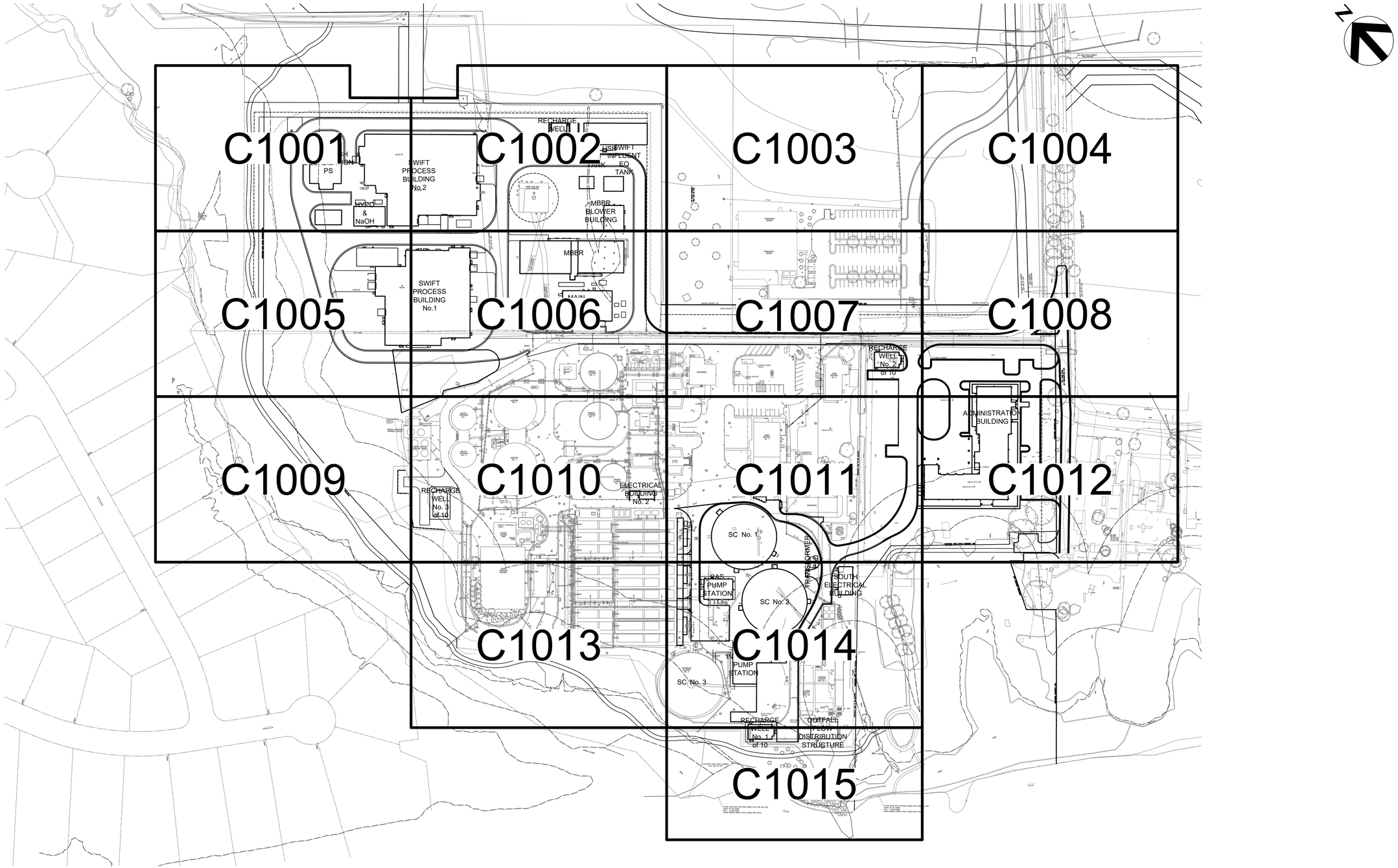

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PROJECT ENGINEER	D. SISSON
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
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WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION OVERALL KEY PLAN

0 1" 2"

FILENAME P2-02C-KEYS.DWG

SCALE ----

DWG NO. C1000

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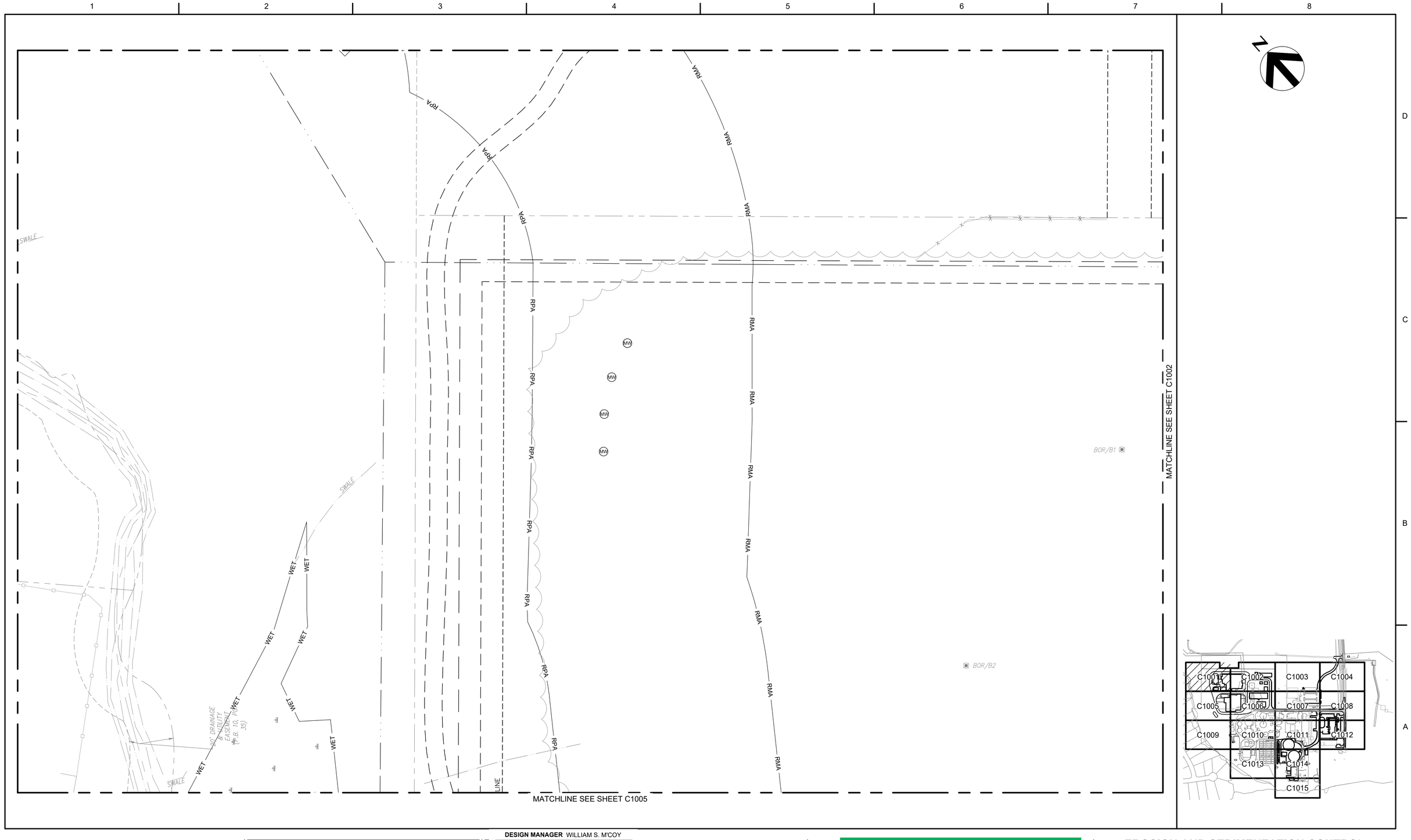
10/5/2021 7:08 AM



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WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 1

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. **C1001** ##

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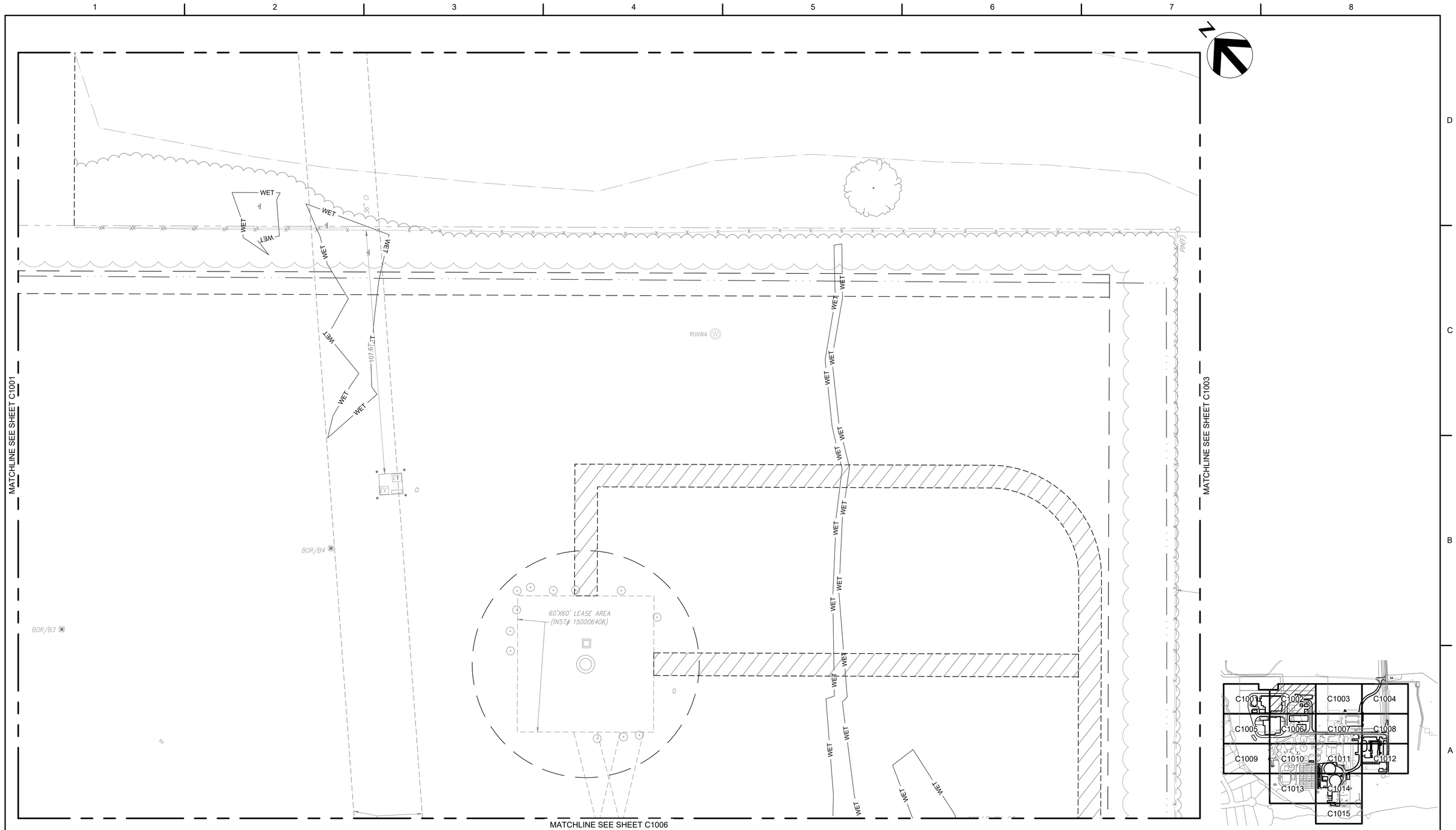

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WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 2

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO.
C1002
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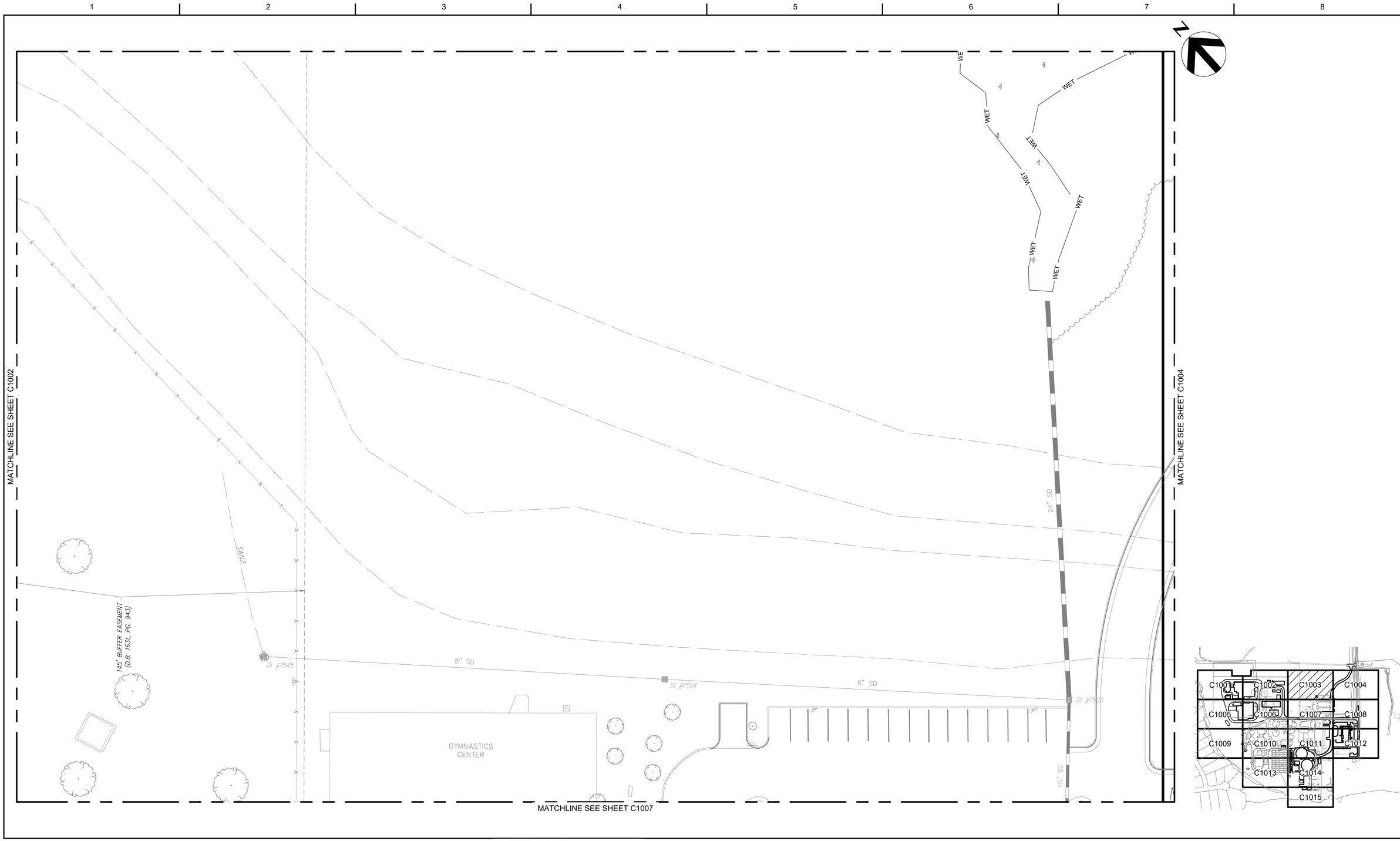

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EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 3

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. C1003

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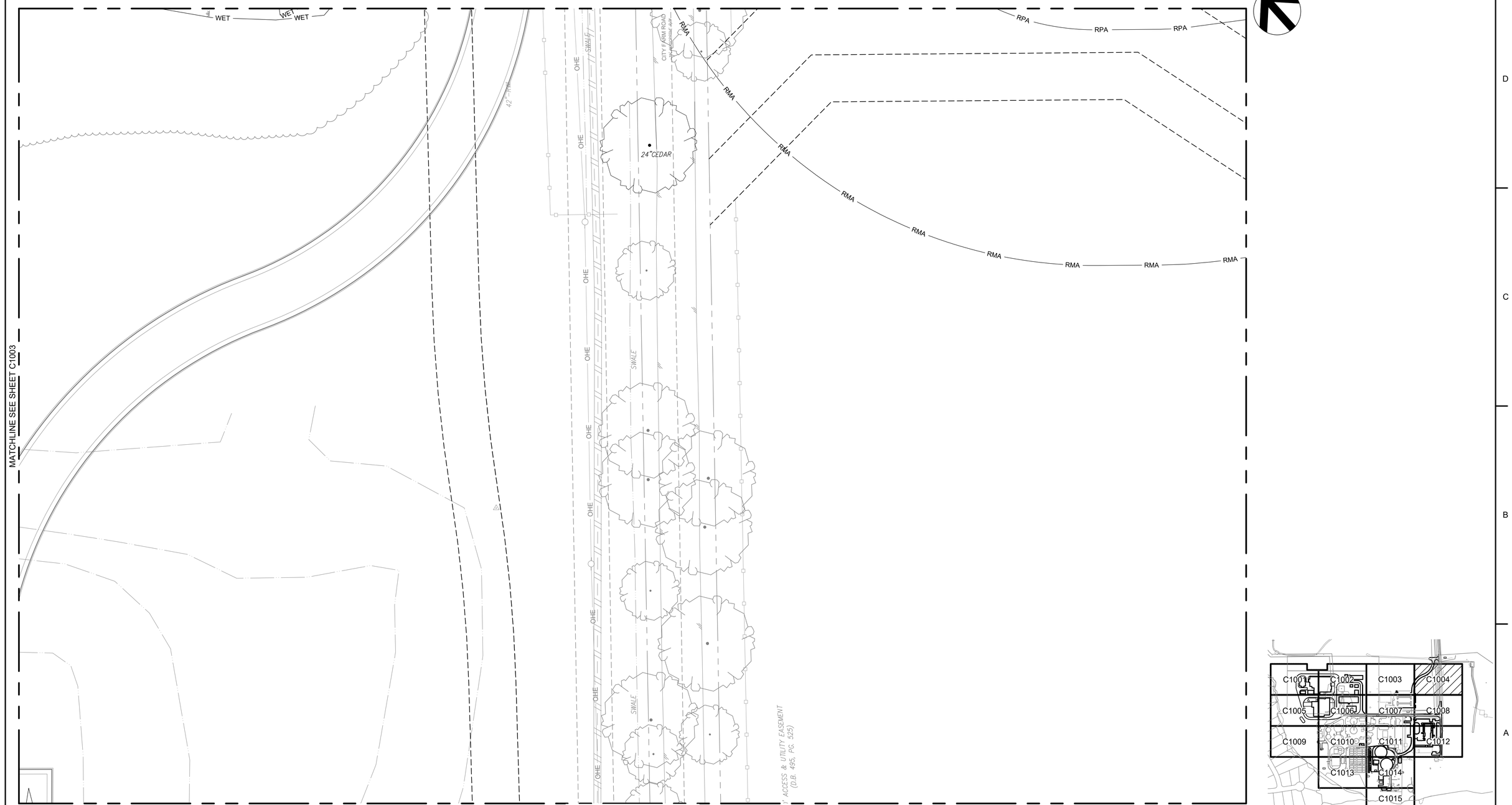

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JR SWIFT FACILITY (GN016360) AND
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WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 4

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. C1004

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MATCHLINE SEE SHEET C1001

MATCHLINE SEE SHEET C1006

MATCHLINE SEE SHEET C1009

PROPOSED OPEN SPACE EASEMENT

WET

RPA

RMA

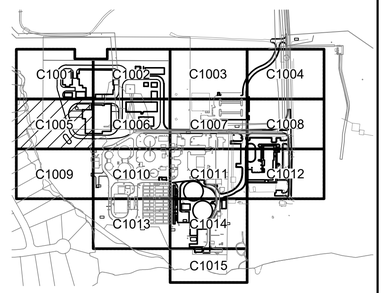
℄ IS ALONG ℄ CREEK

BOR/B5

BOR/B6

TEST WELL

VMRC



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JR SWIFT FACILITY (GN016360) AND
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WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 5

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. C1005 ##

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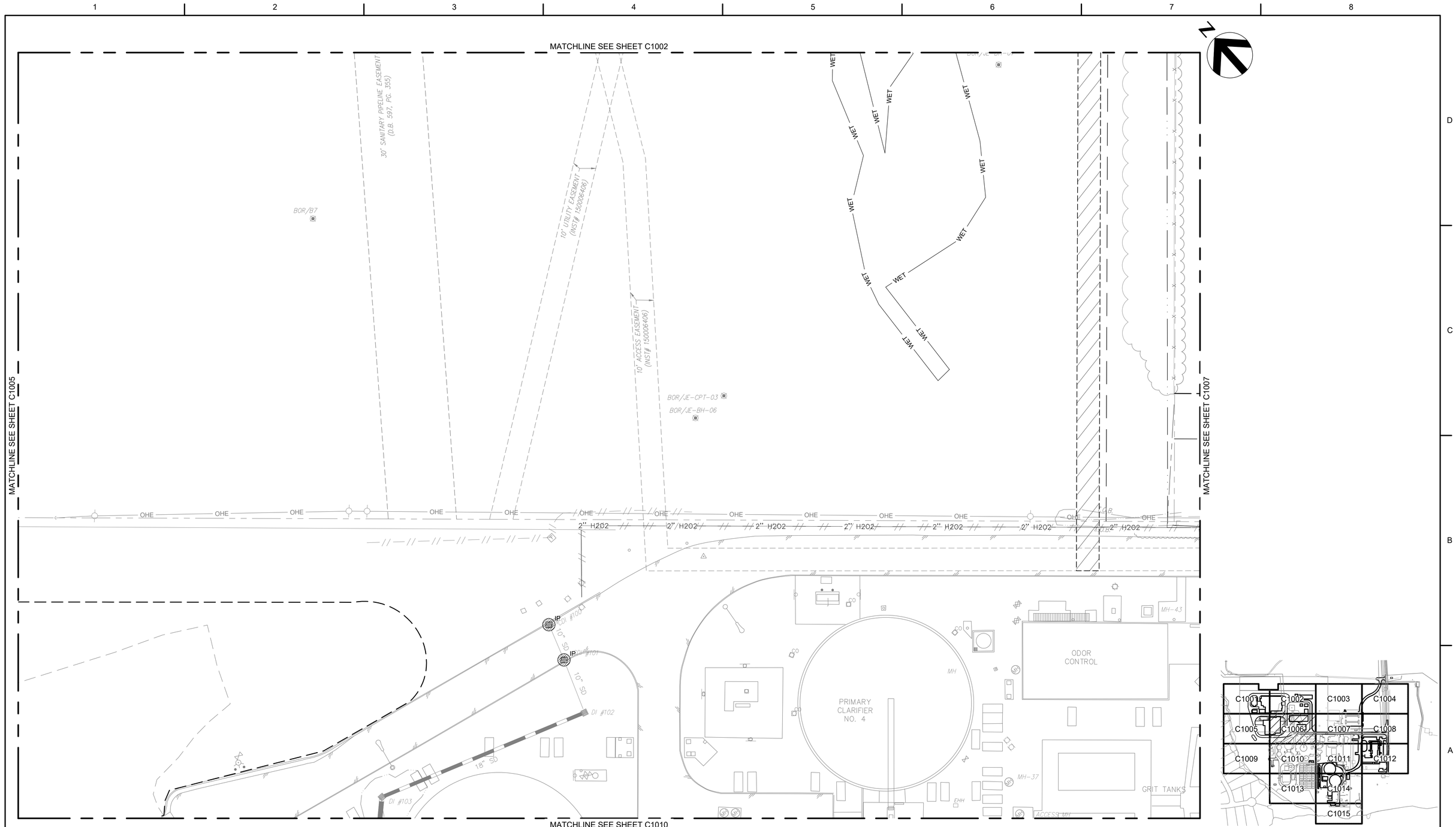

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 6

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO. **C1006** ##

MATCHLINE SEE SHEET C1003

MATCHLINE SEE SHEET C1006

MATCHLINE SEE SHEET C1008

MATCHLINE SEE SHEET C1011

GYMNASTICS CENTER

IP
DI #7501

DI #7502

DI #7503

DI #7513

15" SD

12" SD

MET

TBM #4
CUT SQUARE
IN CONC.
ELEV.=26.01

PROPOSED PROPERTY LINE

PROPOSED PROPERTY LINE

HRSD EASEMENT
(INST# 150000158)

30' ACCESS & UTILITY EASEMENT
(D.B. 495, PG. 525)

OHE
2" H202
SWALE
PROPERTY LINE TO BE VACATED

HEADWORKS

SCREEN METER VAULT

SCREEN BYPASS VAULT

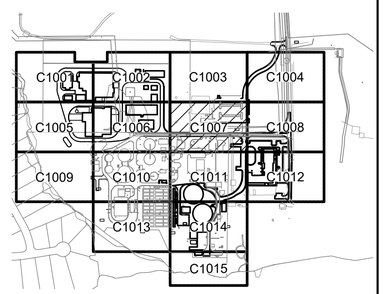
ADMIN BUILDING No. 2

FH

FO

15'X24' EASEMENT
(D.B. 1631, PG. 943)

RW#2



HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 7

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. C1007 ##

10/5/2021 6:58 AM
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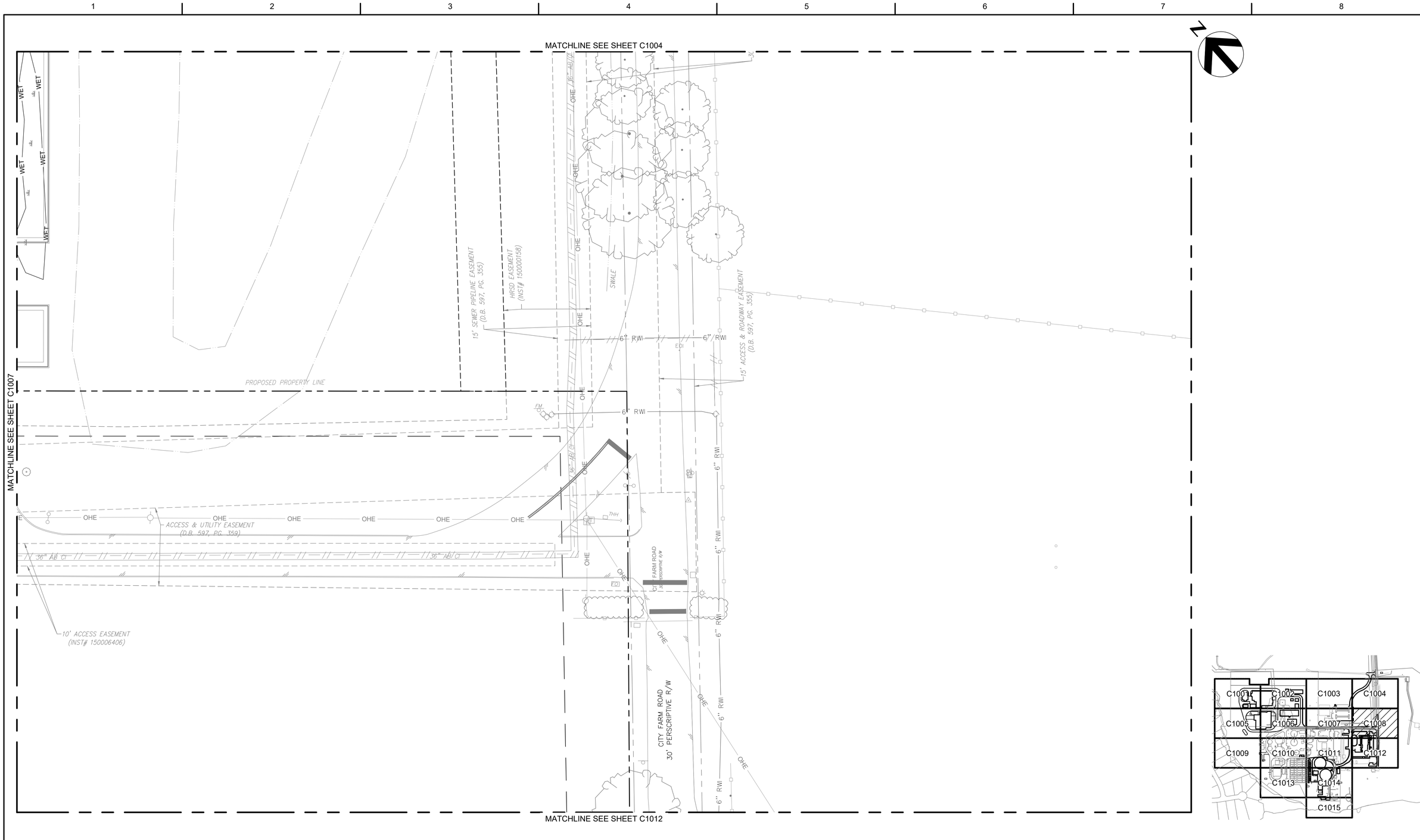

10/5/2021 6:58 AM
C:\pwworking\east01\d2090835\P2-C1001.dwg, C1008 AND DEMOLITION PLAN 8, 10/5/2021 6:58:45 AM, ANMUELLER

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757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 8

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO.
C1008
##

MATCHLINE SEE SHEET C1005

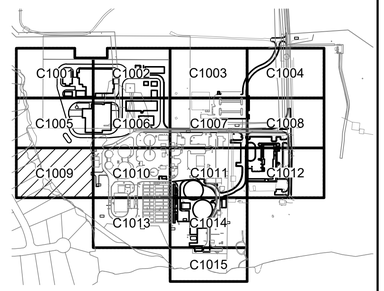
MATCHLINE SEE SHEET C1010

PHOSPHOROUS REMOVAL FACILITY

SODIUM HYDROXIDE STORAGE FACILITY

PROPOSED GREEN SPACE EASEMENT LINE

VMRC WET RPA RMA



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 9

0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. **C1009** ##

10/5/2021 6:58 AM
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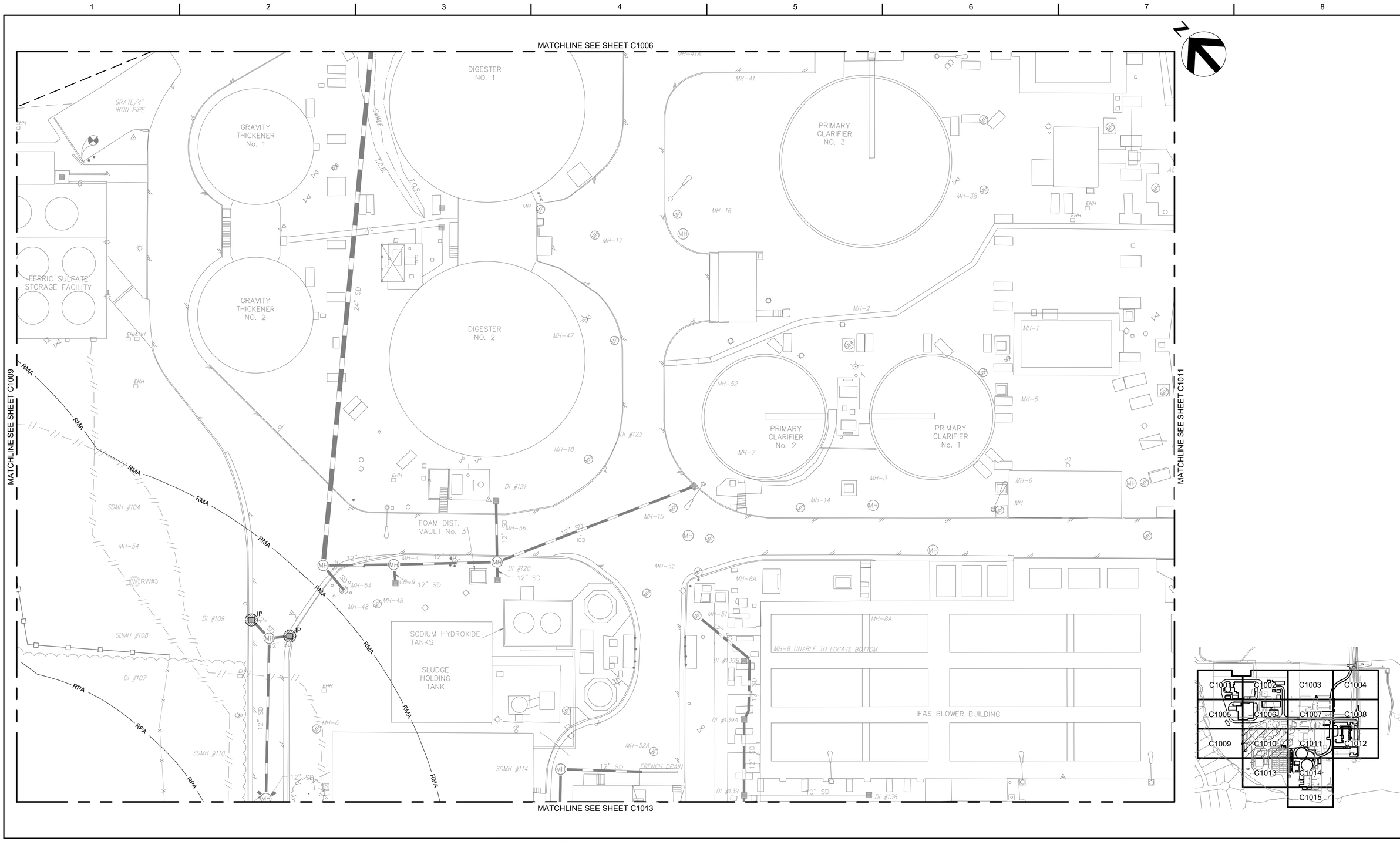

10/5/2021 6:58 AM
C:\pwworking\east01\d2090835\P2-C1001.dwg, C1010 AND DEMOLITION PLAN 10, 10/5/2021 6:58:51 AM, ANMUELLER

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249 Central Park Ave., Ste 201
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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 10

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO. C1010
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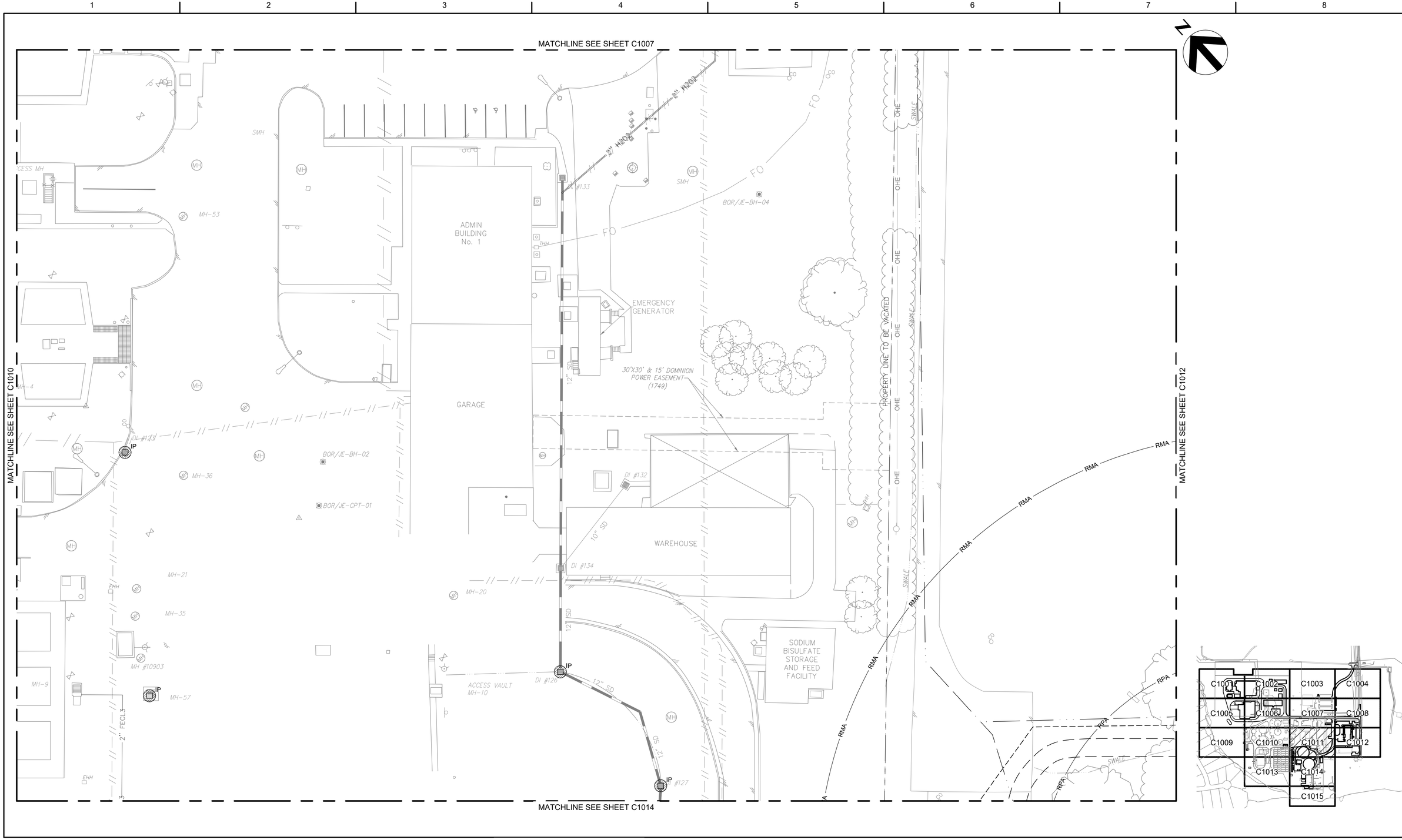

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C:\pwworking\east01\d2090835\P2-C1001.dwg, C1011 AND DEMOLITION PLAN 11, 10/5/2021 6:58:54 AM, ANMUELLER

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 11

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO.
C1011
##

MATCHLINE SEE SHEET C1008

MATCHLINE SEE SHEET C1011

PROPOSED PROPERTY LINE

PROPOSED OPEN SPACE EASEMENT LINE

BOR/JE-BH-05

BOR/JE-CPT-02

BOR/JE-BH-03

RMA

RPA

OHE

SWALE

6" RWI

8"PVC

FFE=26.24

FFE=26.26

FFE=23.77

FFE=26.00

FFE=23.24

FFE=23.64

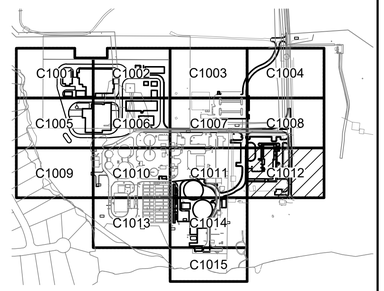
FFE=22.84

FFE=21.28

FFE=21.56

FFE=19.31

SMH #7001
RIM=20.65
INV=15.96 (NE)
INV=15.93 (SE)
INV=16.31 (SW)



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

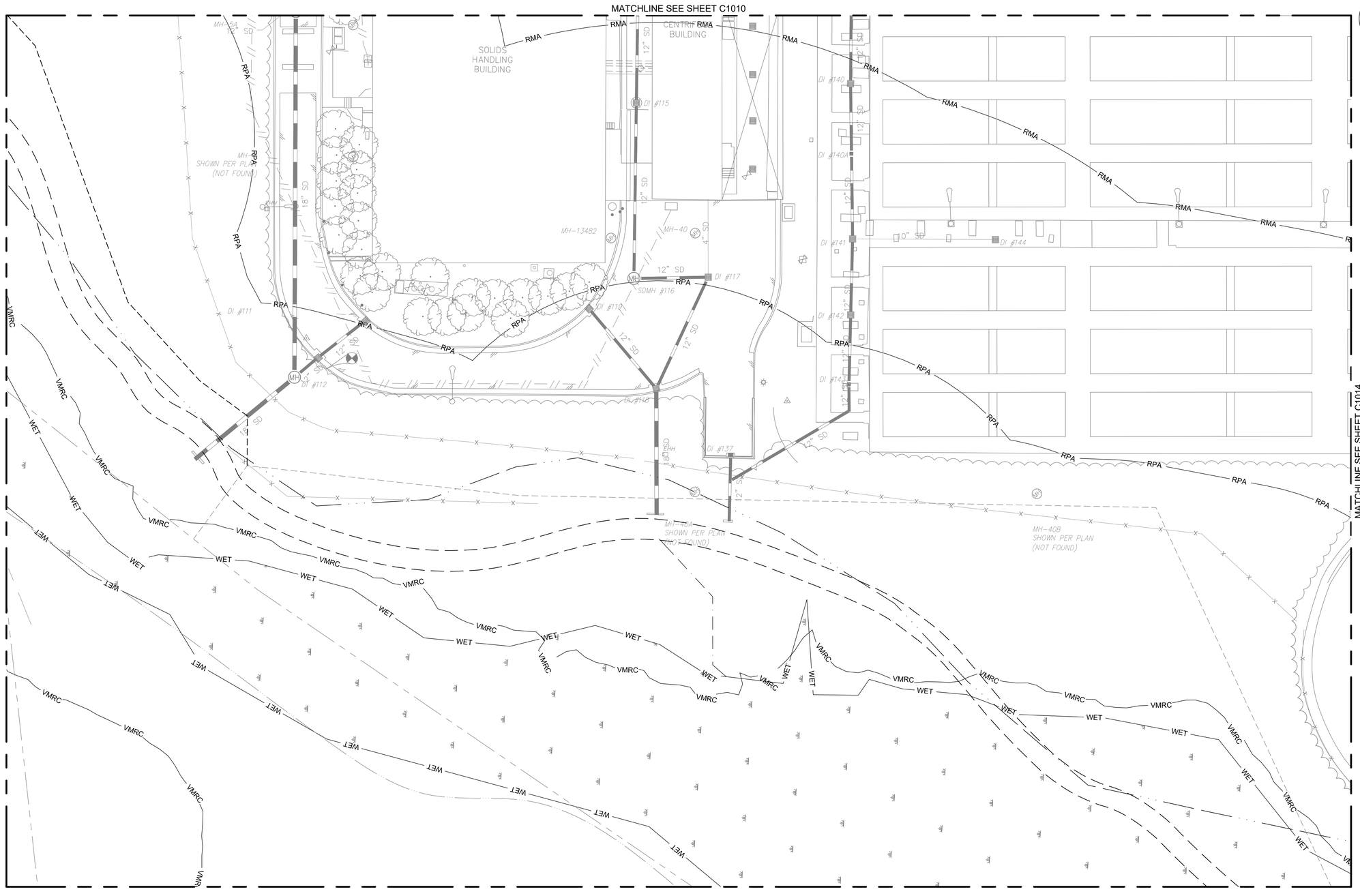
EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 12

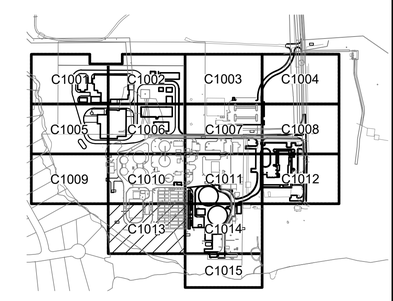
0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. C1012 ##





10/5/2021 6:59 AM
C:\pwworking\east01\d2090835\P2-C1001.dwg, C1013 AND DEMOLITION PLAN 13, 10/5/2021 6:59:00 AM, ANMUELLER

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US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 13

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO. C1013
##

MATCHLINE SEE SHEET C1011

MATCHLINE SEE SHEET C1013

MATCHLINE SEE SHEET C1015

SECONDARY CLARIFIER NO. 5

SECONDARY CLARIFIER NO. 4

SECONDARY CLARIFIER NO. 3

RAS PUMP STATION No. 2

RAS PUMP STATION No. 1

AMMONIA TANK

CHLORINE CONTACT TANK No. 1

CHLORINE CONTACT TANK No. 2

CHLORINE CONTACT TANK No. 3

DRAIN PUMP STATION

NPW PUMP STATION

CONC. RETAINING WALL

GRASS AREA

PROPOSED OPEN SPACE EASEMENT LINE

PROPERTY LINE TO BE VACATED

MH-11 RIM=18.30

MH-49 RIM=17.54 BOTTOM=6.74

MH #12603 RIM=16.84

MH #12469

TANK WALL ELEV= 18.06

BOTTOM OF V-NOTCH WEIR = 15.76 WEIR = 15.74

BOTTOM OF V-NOTCH WEIR = 15.75 WEIR = 15.77

TANK WALL ELEV= 18.02

TANK WALL ELEV= 18.04

BOTTOM OF V-NOTCH WEIR = 15.80 WEIR = 15.77

BOTTOM OF V-NOTCH WEIR = 15.74 WEIR = 15.77

BOTTOM OF V-NOTCH WEIR = 15.81

TANK WALL ELEV= 18.03

MH-32 CONTROL PANEL

CONC. WALK=12.58(N) INV=4.13(ENE) INV=4.65(SW) INV=2.35(S)

VALVE PIT

MH-HANDHOLE OF TOP OF TANK

SDMH #136

SDMH #136A

MH-30

MH-44

MH-45

MH-13

DI #135

DI #129

DI #BURIED

IP #129

IP NO#

GRATE

PUMP

WET WELL

WMRC

EHH

2" FECL3

2" NAOH

BOR/JE-BH-01

12" SD

10" SD

1.0%

0.5%

0.8%

RMA

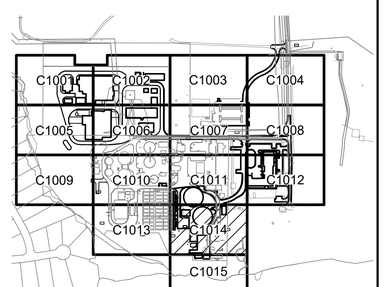
RPA

IP

MH

SS

EHH



10/5/2021 6:59 AM
C:\pwworking\east\d0269835\P2-C1001.dwg, C1014 AND DEMOLITION PLAN 14, 10/5/2021 6:59:04 AM, ANMUELLER

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

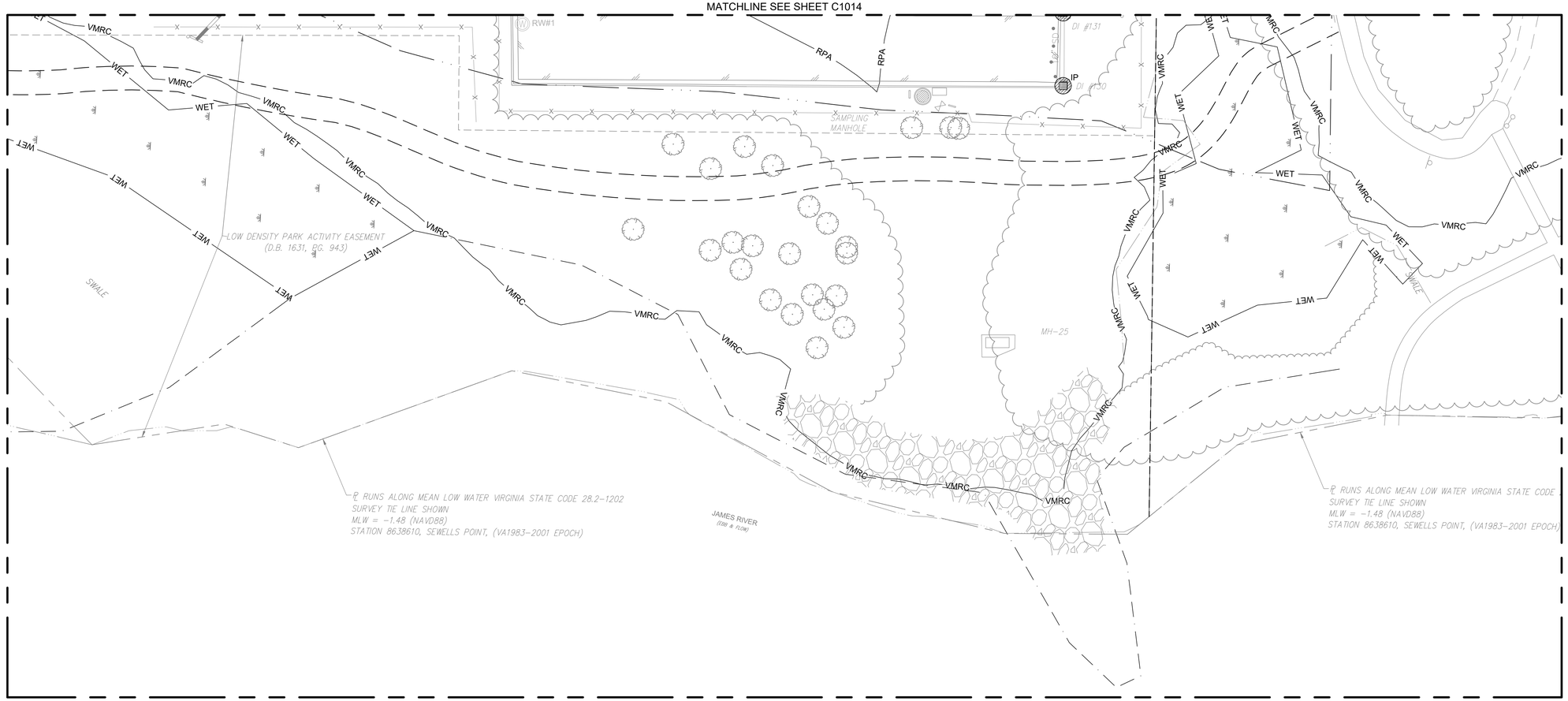
EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 14

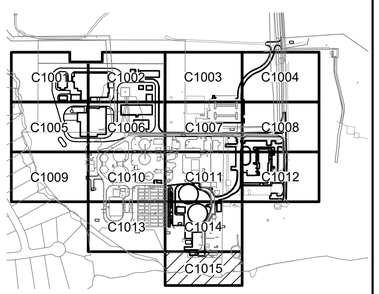
0 1" 2"

FILENAME P2-C1001.DWG

SCALE ----

DWG NO. **C1014** ##





10/5/2021 6:59 AM
C:\pwworking\east01\d2090835\P2-C1001.dwg, C1015 AND DEMOLITION PLAN 15, 10/5/2021 6:59:07 AM, ANMUELLER

HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENTATION CONTROL AND DEMOLITION PLAN 15

0 1" 2"

FILENAME P2-C1001.DWG
SCALE ----

DWG NO. C1015
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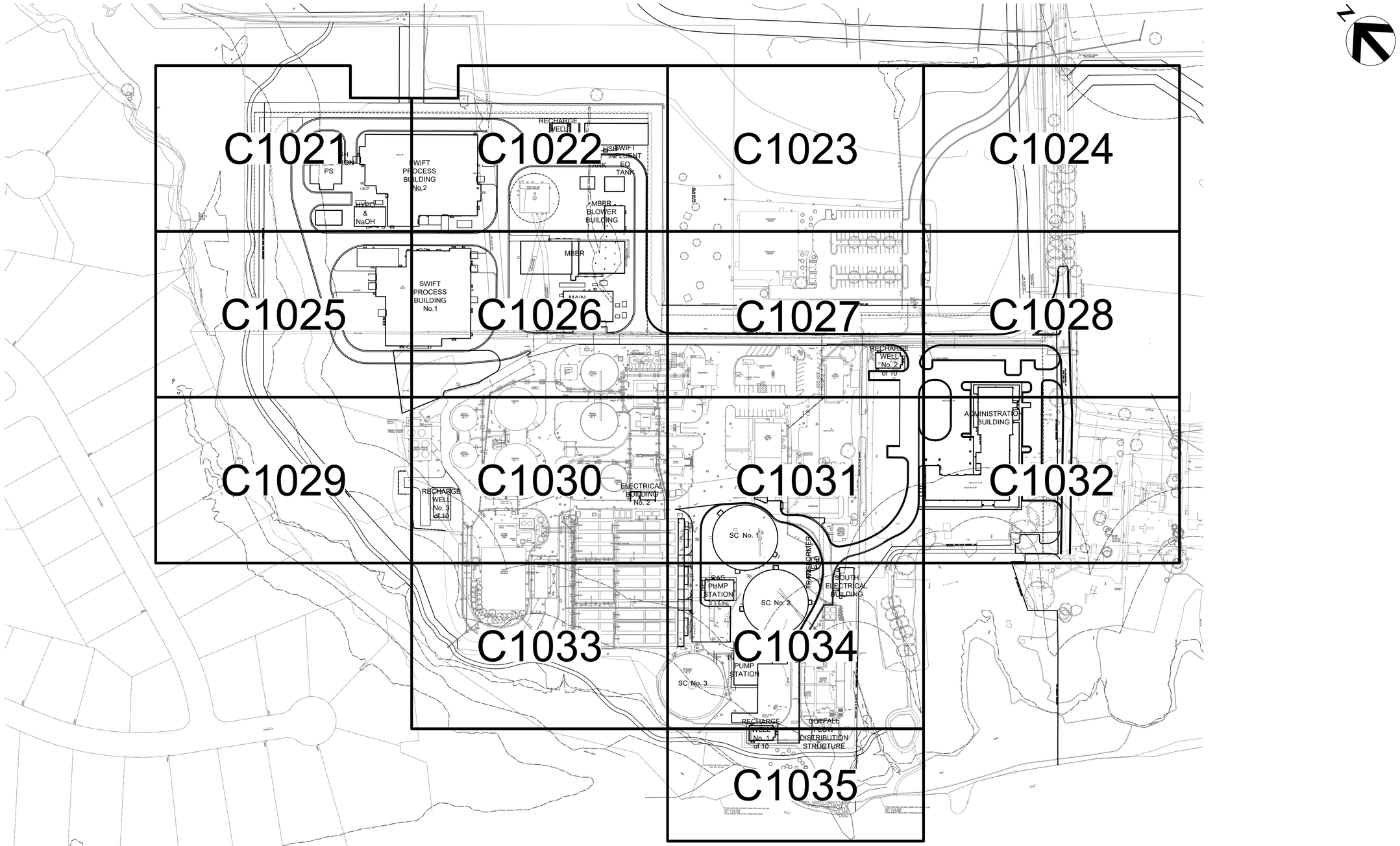

HDR
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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CHECKED BY	C. COWGILL
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PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION OVERALL KEY PLAN

0 1" 2"

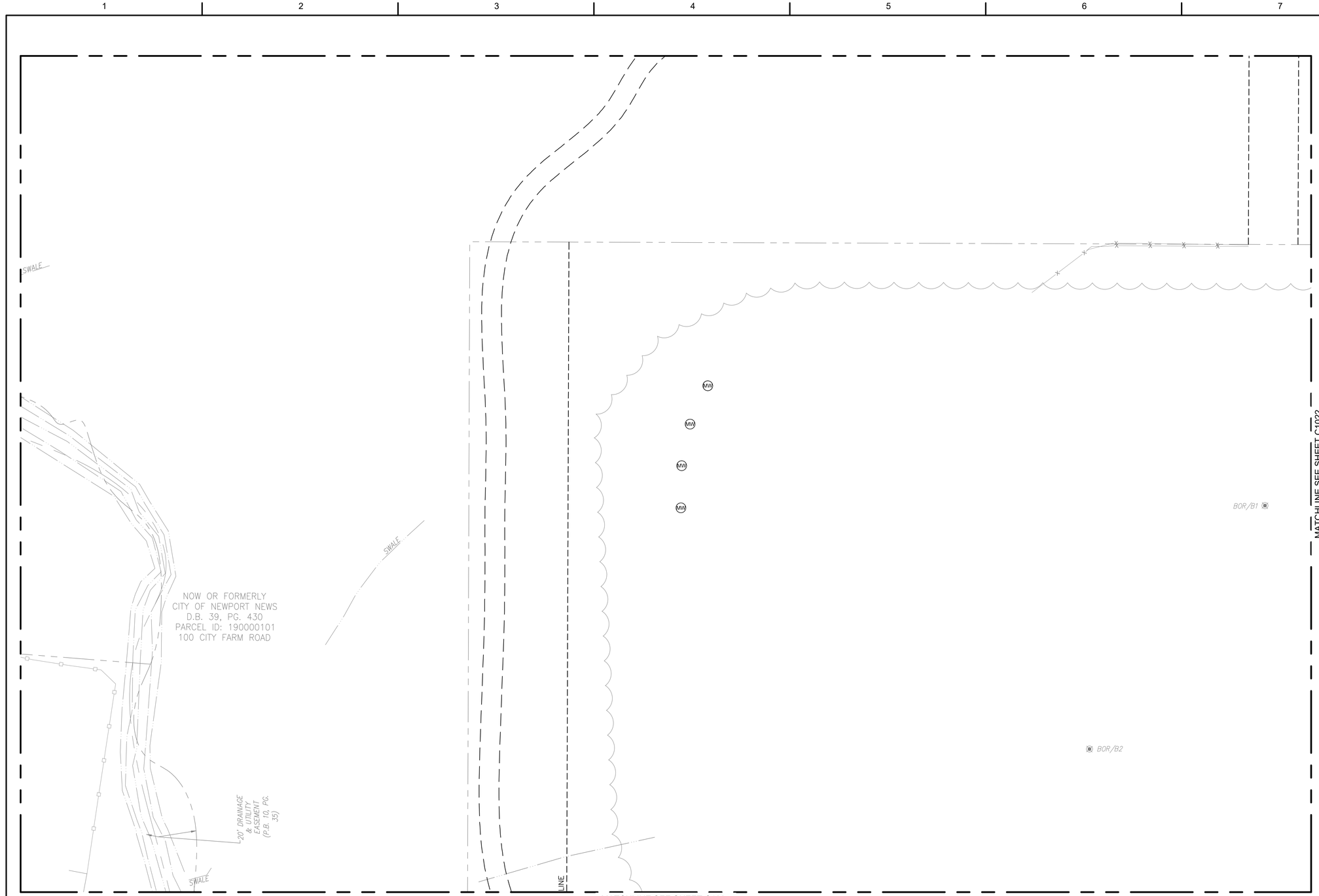
FILENAME P2-02C-KEYS.DWG

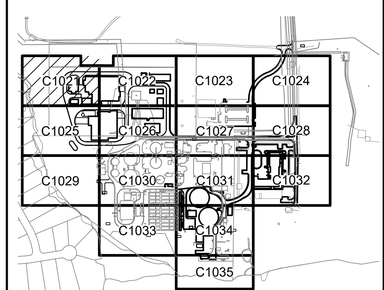
SCALE ----

DWG NO. C1020

C:\pwworking\east01\d2090835\P2-02C-Keys.dwg, C1020 OVERALL KEY PLAN, 10/5/2021 7:09:02 AM, ANMUELLER

10/5/2021 7:09 AM





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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 1

0 1" 2"

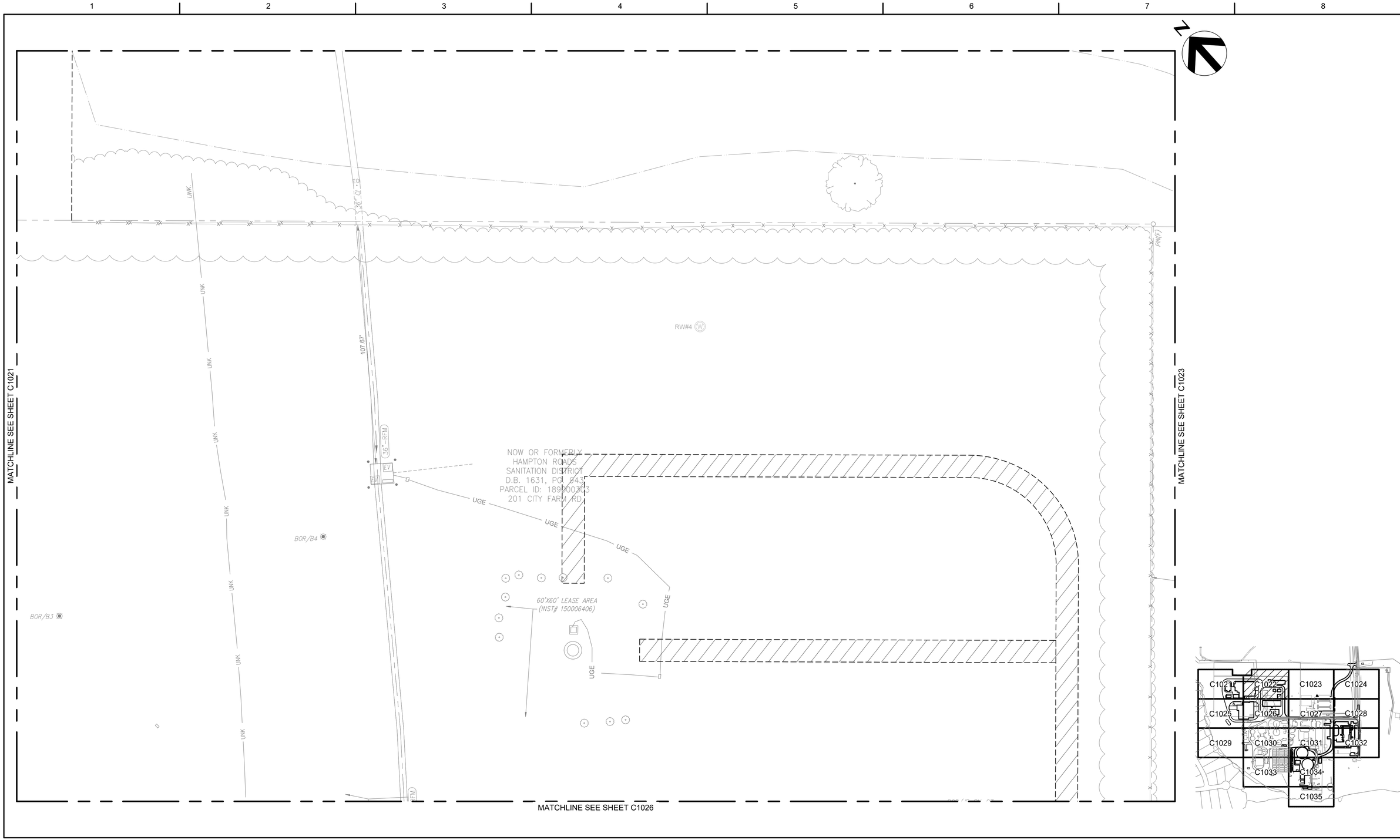
FILENAME P2-C1020.DWG

SCALE ----

DWG NO. **C1021**

10/5/2021 6:49 AM

C:\pwworking\neast01\d2090835\P2-C1020.dwg, C1021 PLAN 1, 10/5/2021 6:49:43 AM, ANMUELLER



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10/5/2021 6:49 AM

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DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 2

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1022

N

MATCHLINE SEE SHEET C1022

MATCHLINE SEE SHEET C1024

NOW OR FORMERLY
CITY OF NEWPORT NEWS
D.B. 39, PG. 430
PARCEL ID: 190000101
100 CITY FARM ROAD

INV=21.74

24" SD

SWALE

145' BUFFER EASEMENT
(D.B. 1631, PG. 943)

DI #7545

8" SD

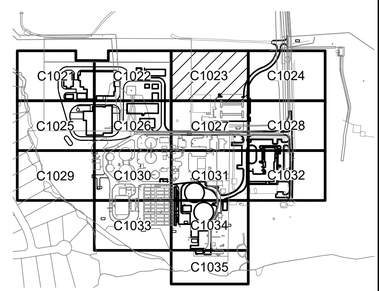
DI #7504

8" SD

DI #7500

15" SD

MATCHLINE SEE SHEET C1027



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DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 3

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. **C1023**

10/5/2021 6:50 AM

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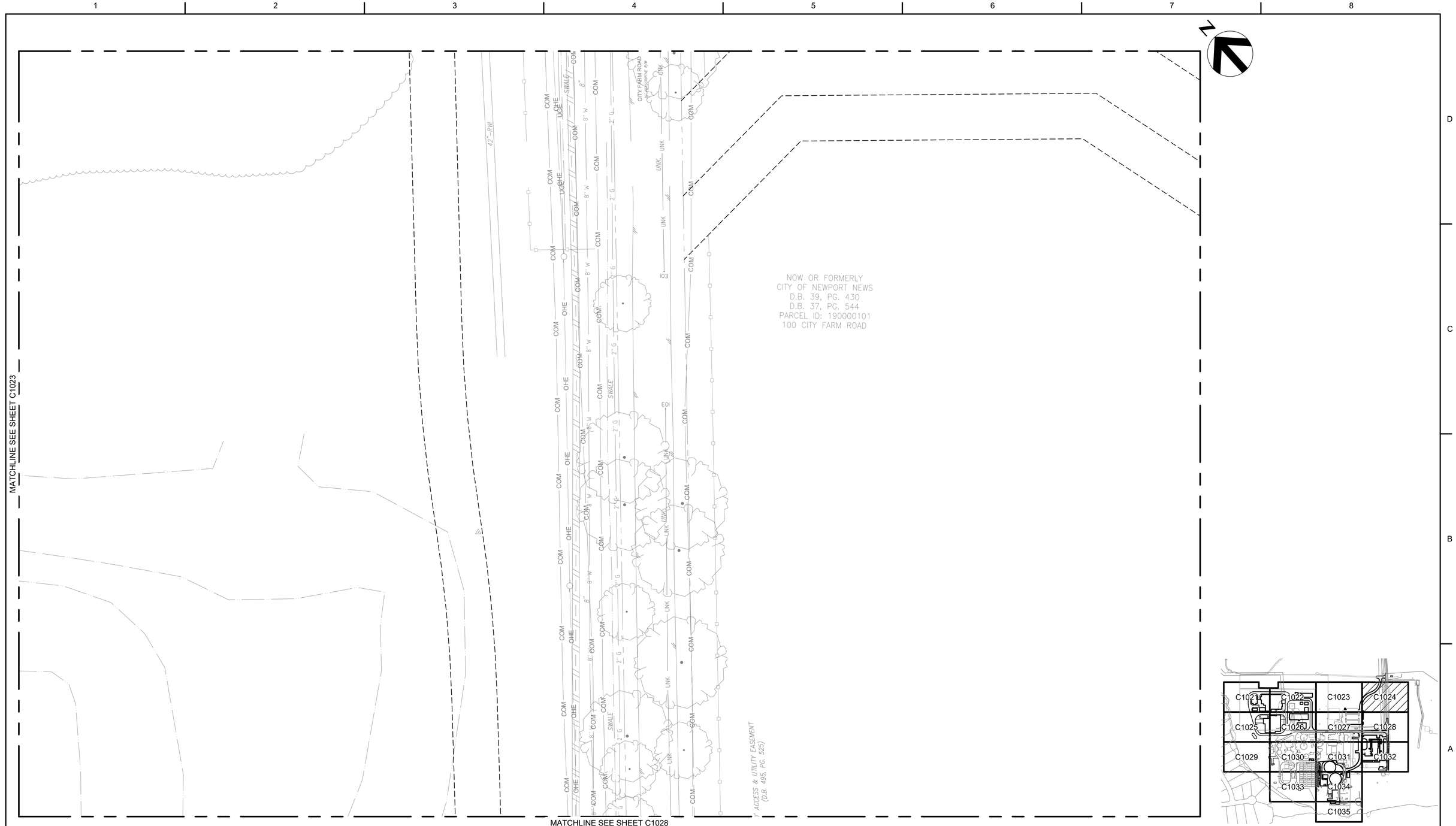

HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
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757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
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DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 4

0 1" 2"

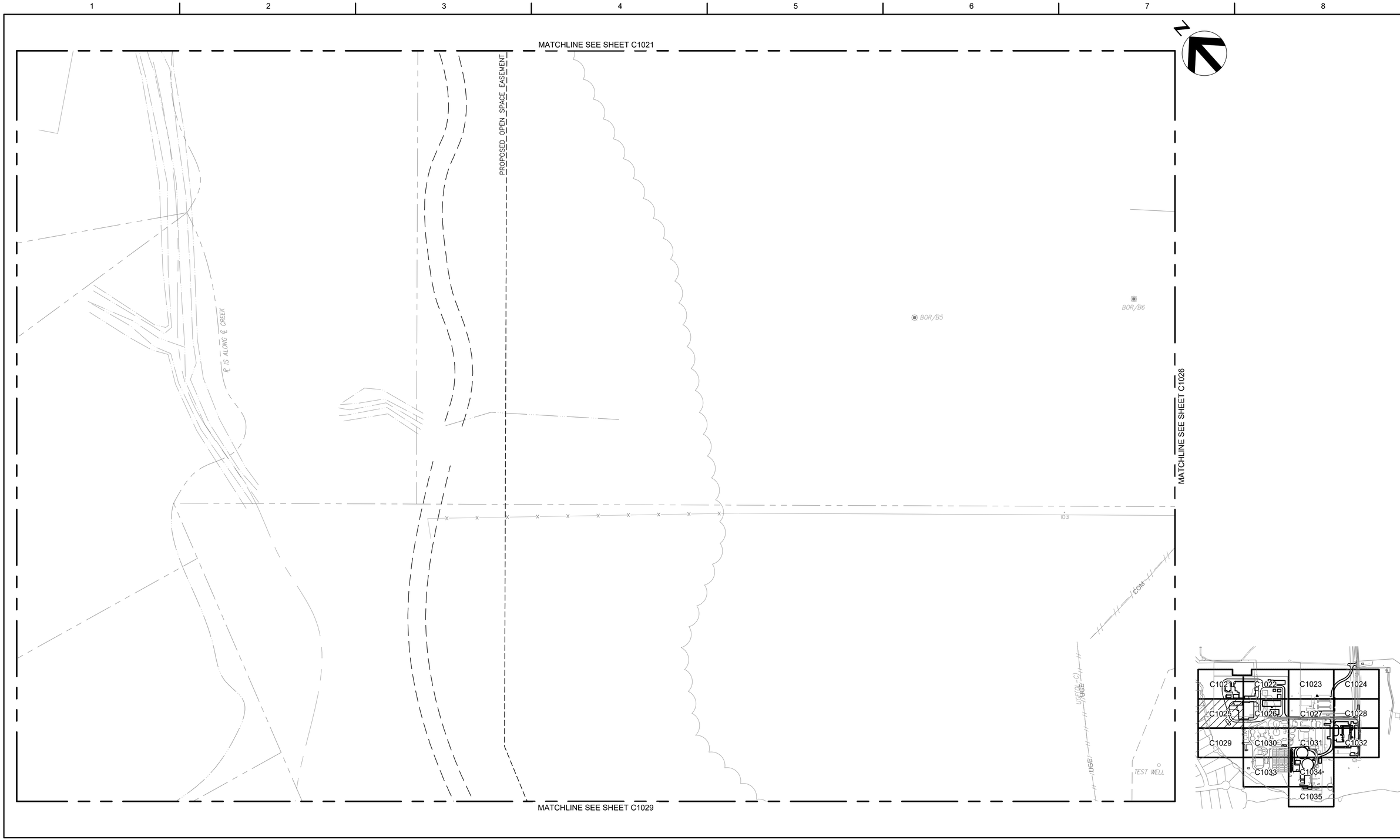
FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1024

C:\pwworking\east01\d2090835\P2-C1020.dwg, C1024 PLAN 4, 10/5/2021 6:50:11 AM, ANMUELLER

10/5/2021 6:50 AM



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10/5/2021 6:50 AM

HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 5

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

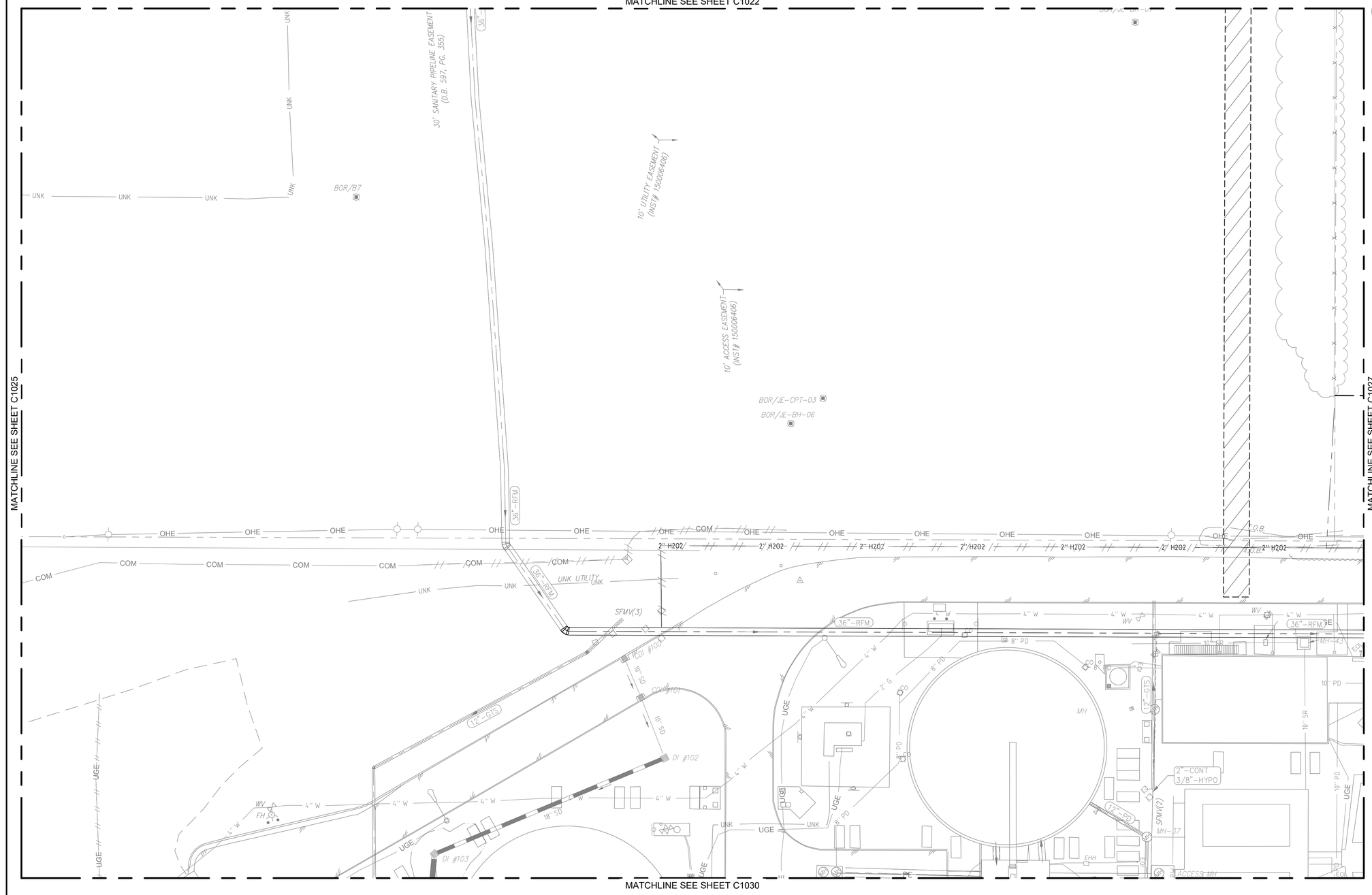
DWG NO. C1025

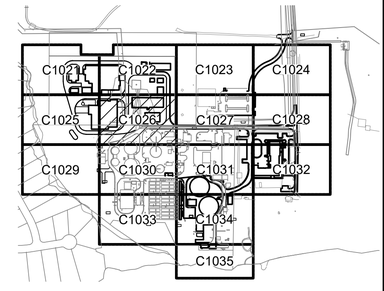
MATCHLINE SEE SHEET C1022

MATCHLINE SEE SHEET C1025

MATCHLINE SEE SHEET C1027

MATCHLINE SEE SHEET C1030





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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 6

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. **C1026**

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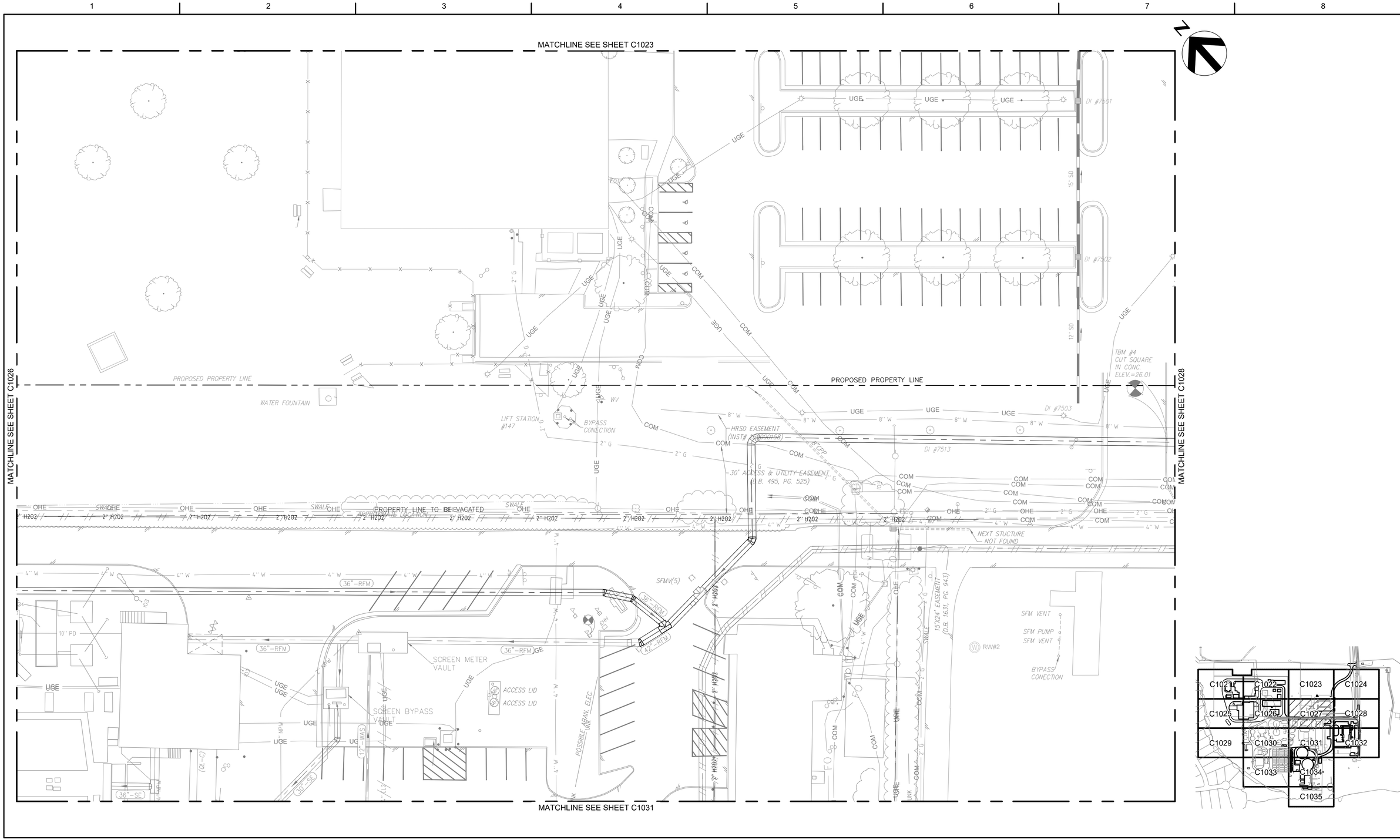
10/5/2021 6:50 AM



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10/5/2021 6:50 AM

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DRAWN BY	A. MUELLER
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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

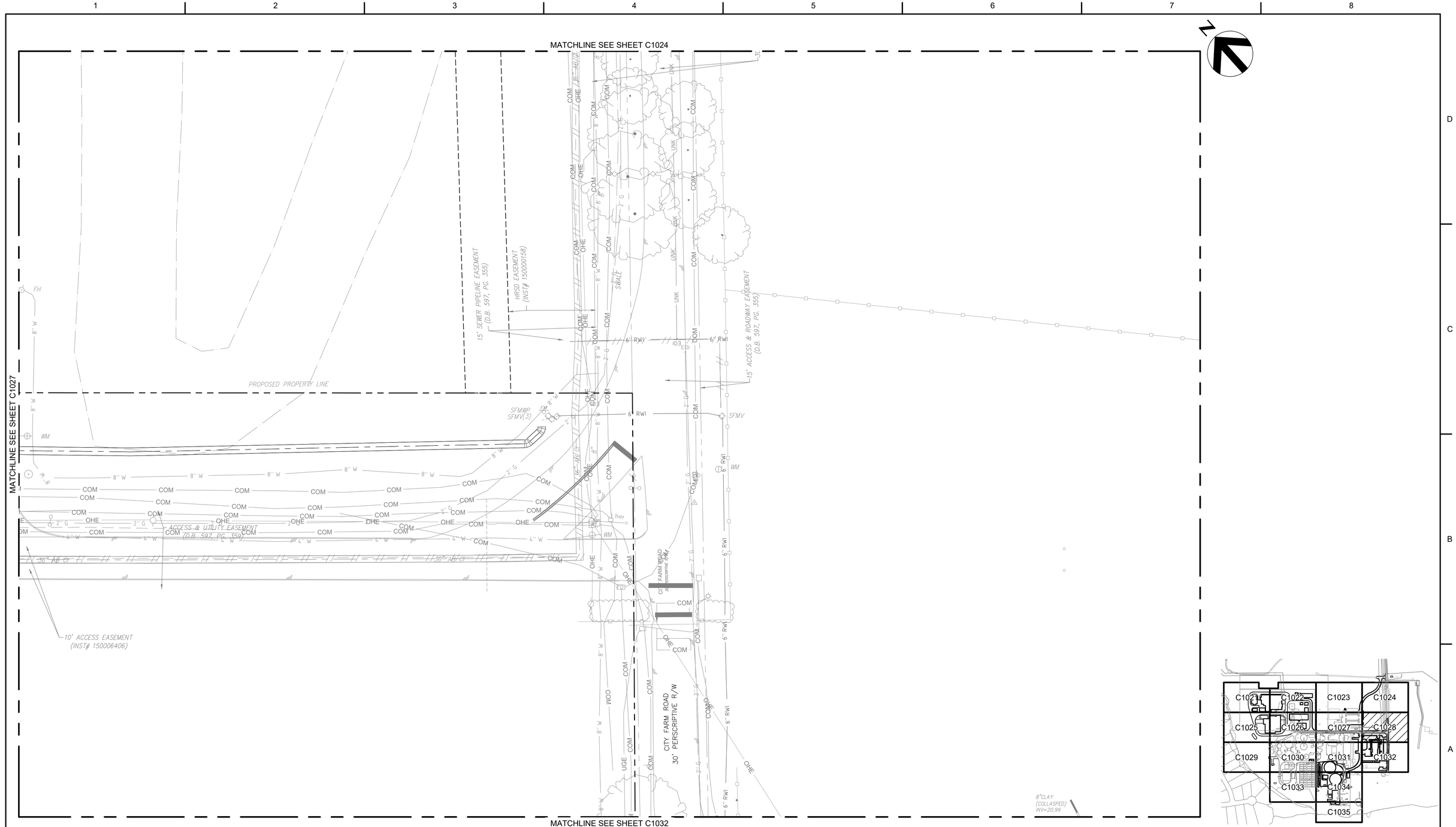
SUBSURFACE DEMOLITION PLAN 7

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1027



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PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 8

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1028

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10/5/2021 6:50 AM

MATCHLINE SEE SHEET C1025

MATCHLINE SEE SHEET C1030

NOW OR FORMERLY
THE LAINE TRUST
INST# 140014246
P.B. 13, PG. 25
PARCEL ID: 189000408
12 HORSE PEN RD

NOW OR FORMERLY
JOSE A. DeJESUS CINTRON &
ELIZABETH A. DeJESUS CINTRON
INST# 160015549
P.B. 13, PG. 25
PARCEL ID: 189000409
10 HORSE PEN RD

NOW OR FORMERLY
SCOT B. GERE &
ANNE-LISE GERE
INST# 080014082
P.B. 13, PG. 25
PARCEL ID: 189000410
8 HORSE PEN RD

NOW OR FORMERLY
RONALD K. WATROUS &
MICHELLE T. WATROUS
D.B. 2181, PG. 1573

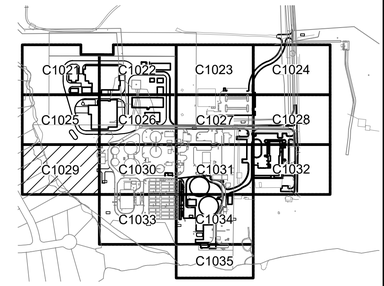
NOW OR FORMERLY
HAMPTON ROADS SANITATION DISTRICT
D.B. 495, PG. 525
PARCEL ID: 190000114
101 CITY FARM RD

PROPOSED OPEN SPACE EASEMENT LINE

PHOSPHOROUS
REMOVAL
FACILITY

UGE

EHE



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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 9

0 1" 2"

FILENAME P2-C1020.DWG
SCALE ----

DWG NO. **C1029**

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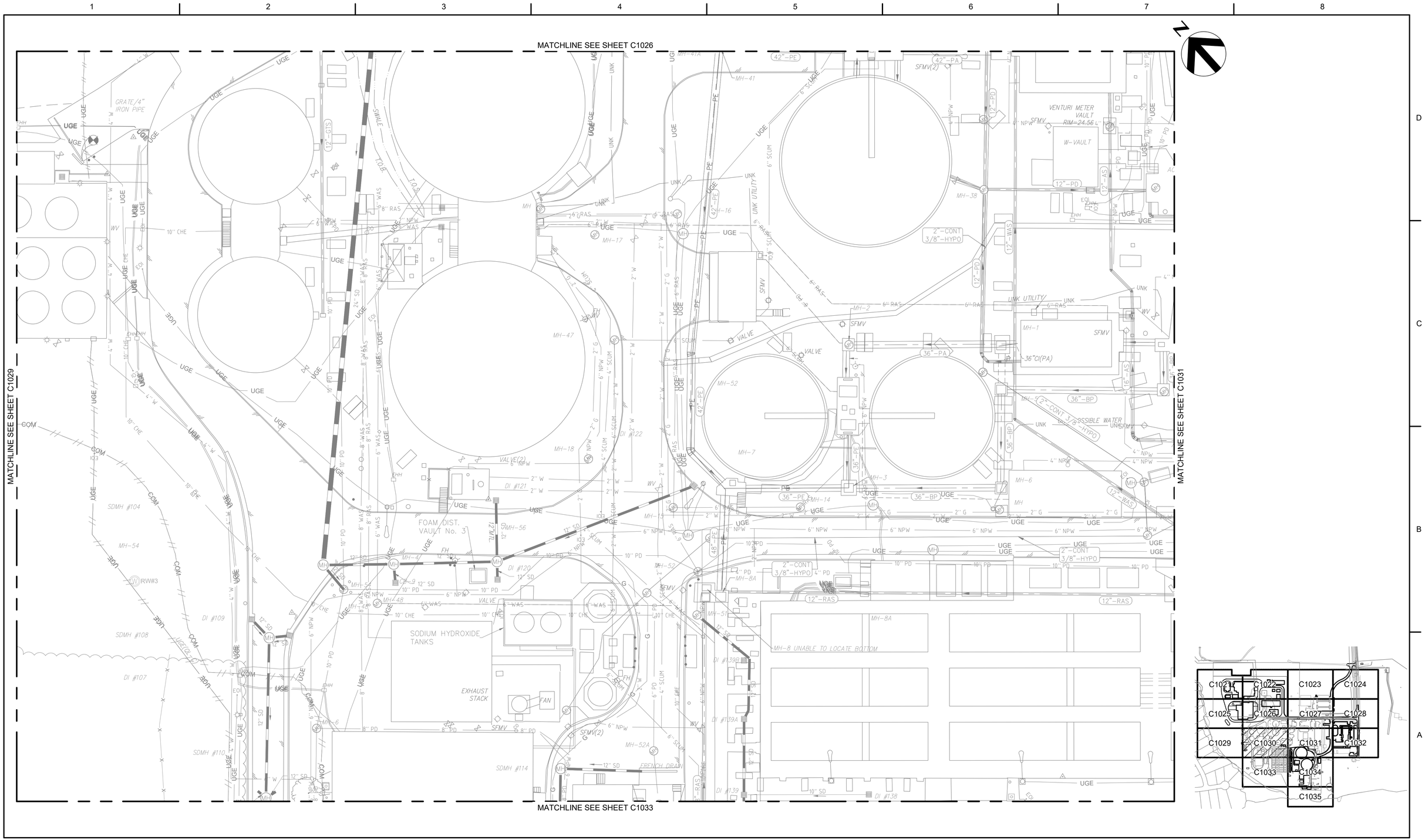
10/5/2021 6:51 AM



ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 10

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1030

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10/5/2021 6:51 AM

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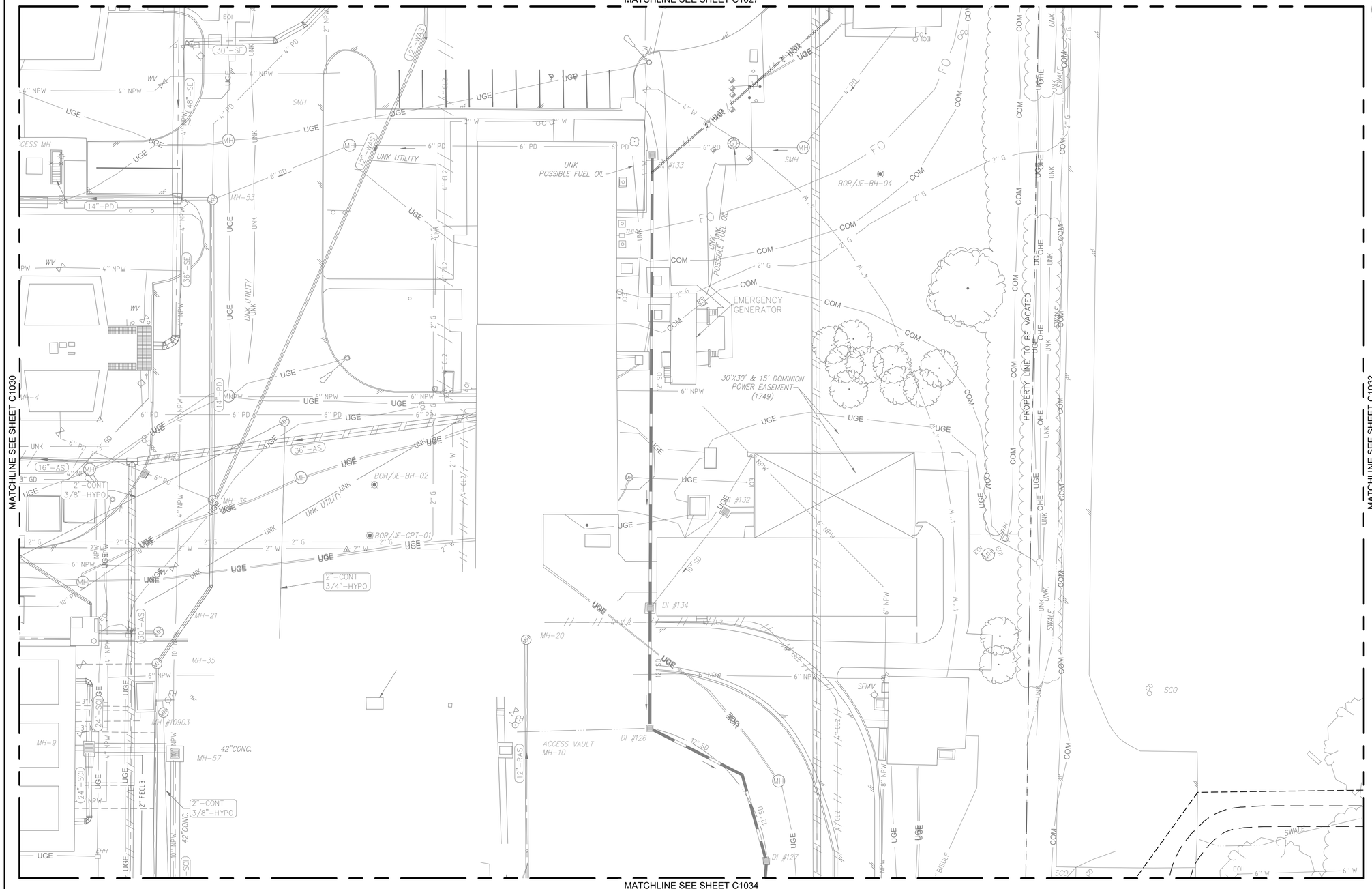
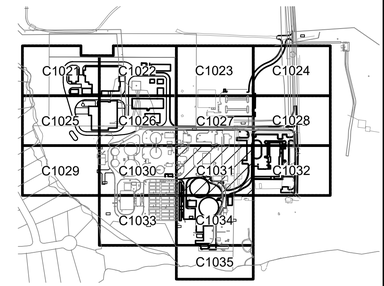
MATCHLINE SEE SHEET C1027
MATCHLINE SEE SHEET C1030
MATCHLINE SEE SHEET C1032
MATCHLINE SEE SHEET C1034





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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 11

0 1" 2"

FILENAME P2-C1020.DWG
SCALE ----

DWG NO. **C1031**

10/5/2021 6:51 AM

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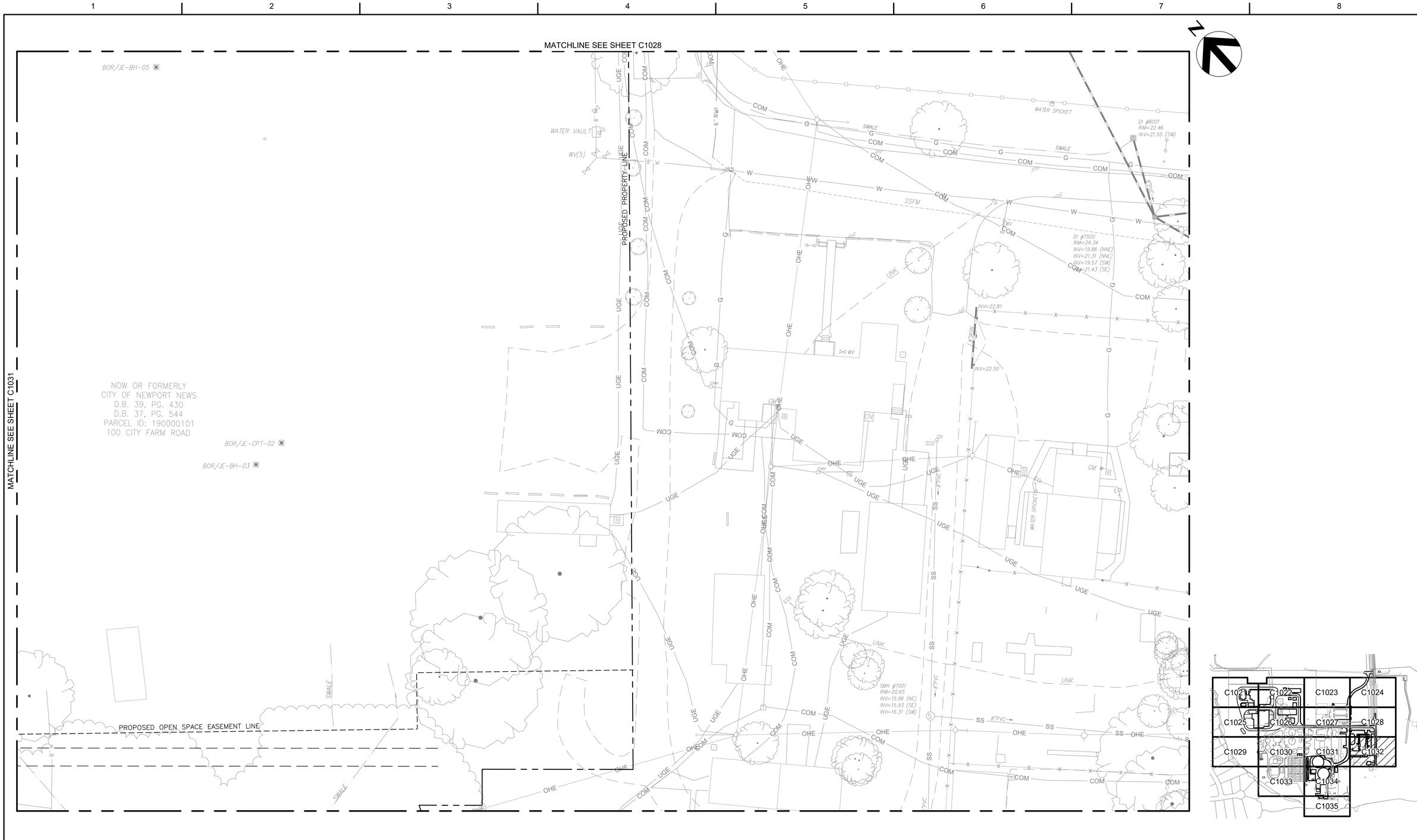

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 12

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1032

10/5/2021 6:51 AM

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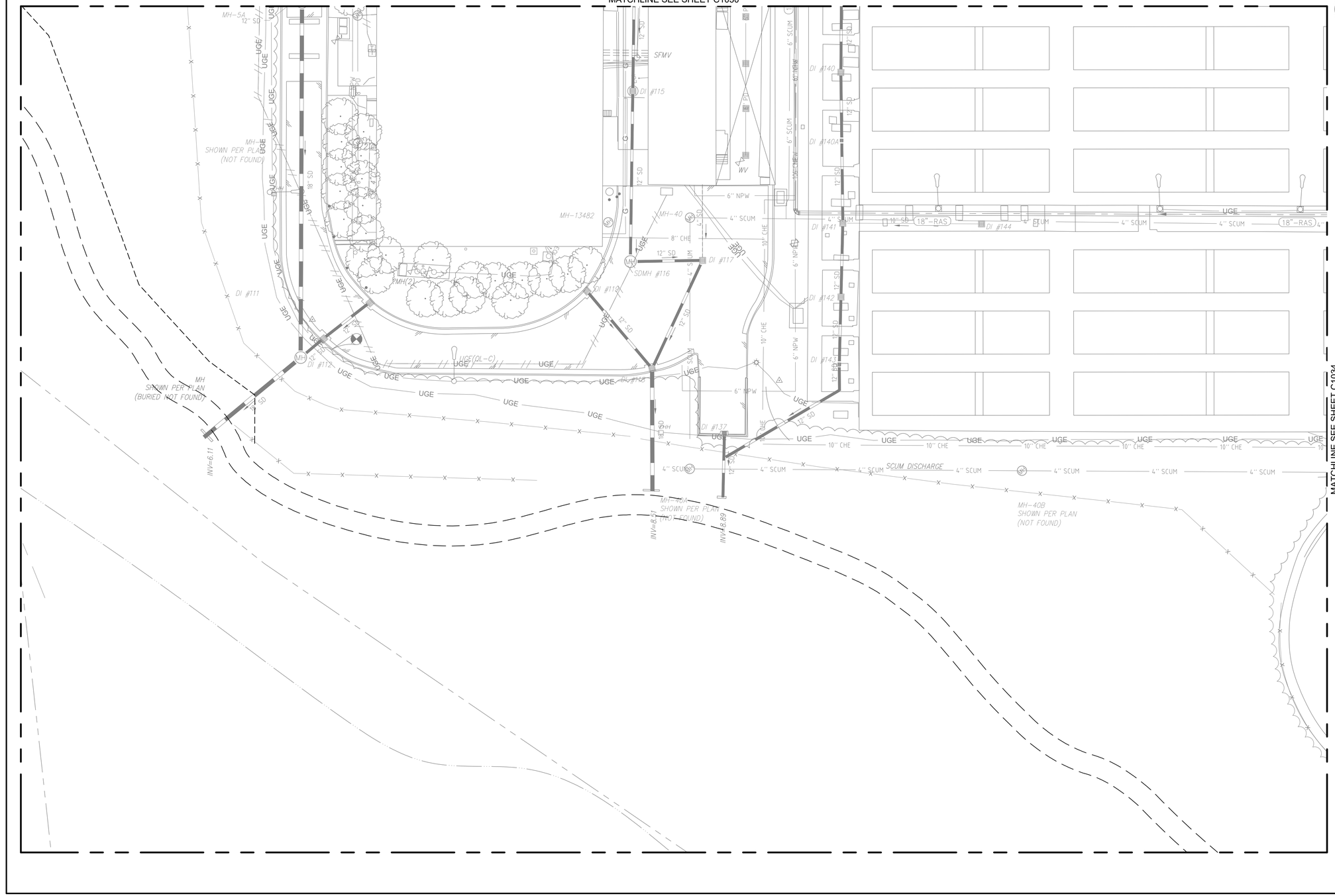
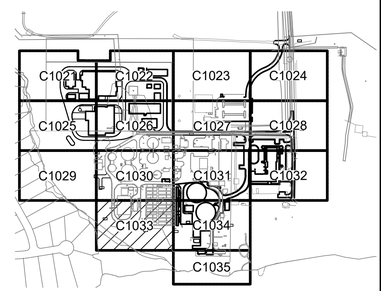
MATCHLINE SEE SHEET C1030

MATCHLINE SEE SHEET C1034





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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 13

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. **C1033**

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10/5/2021 6:51 AM

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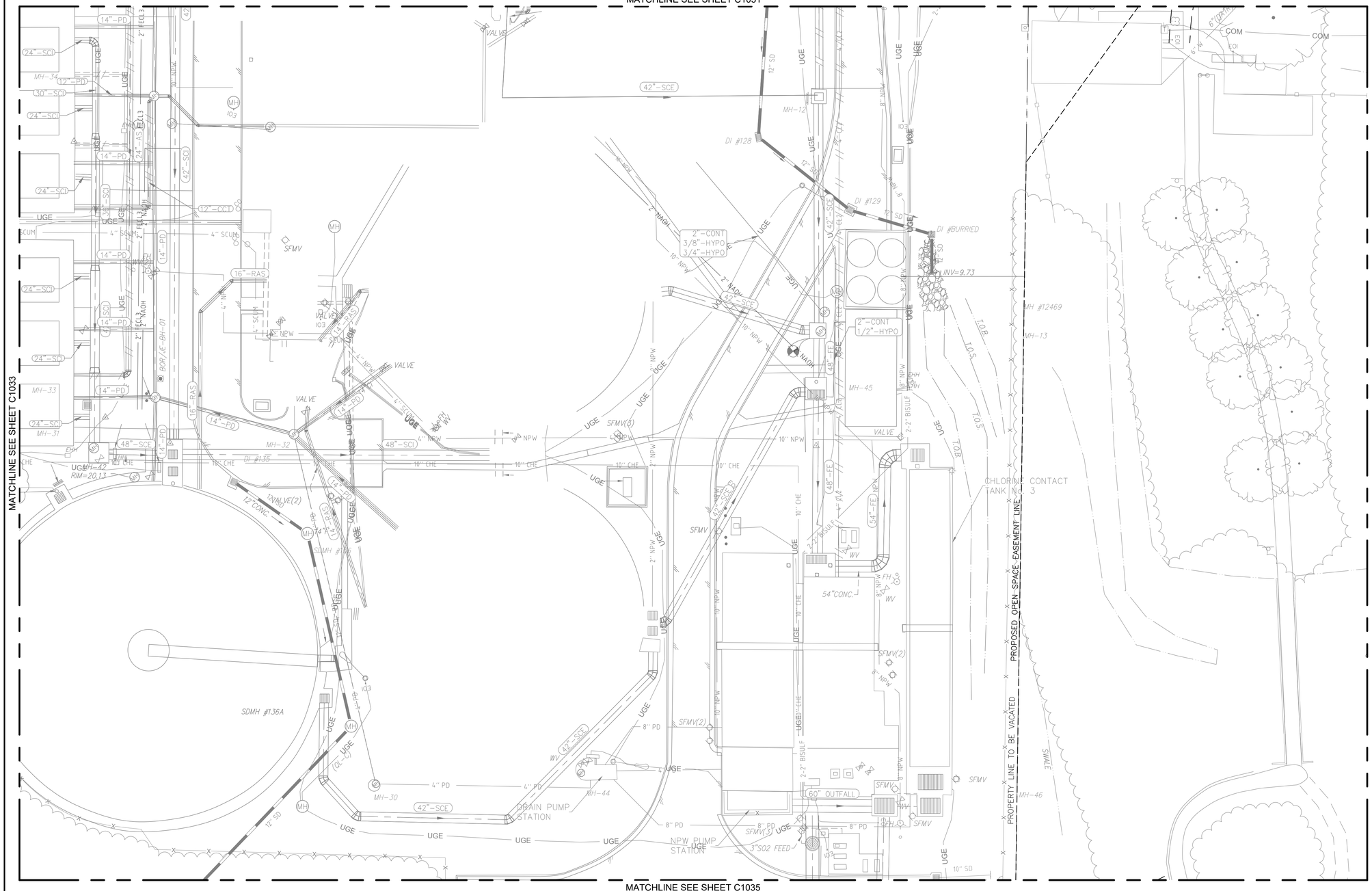
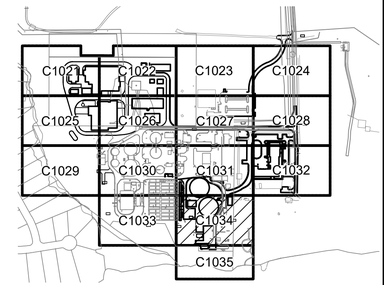
MATCHLINE SEE SHEET C1033

MATCHLINE SEE SHEET C1035





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ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	
DESIGNED BY	
CHECKED BY	---
DRAWN BY	
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SUBSURFACE DEMOLITION PLAN 14

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. **C1034**

of XXX

10/7/2021 8:41 AM

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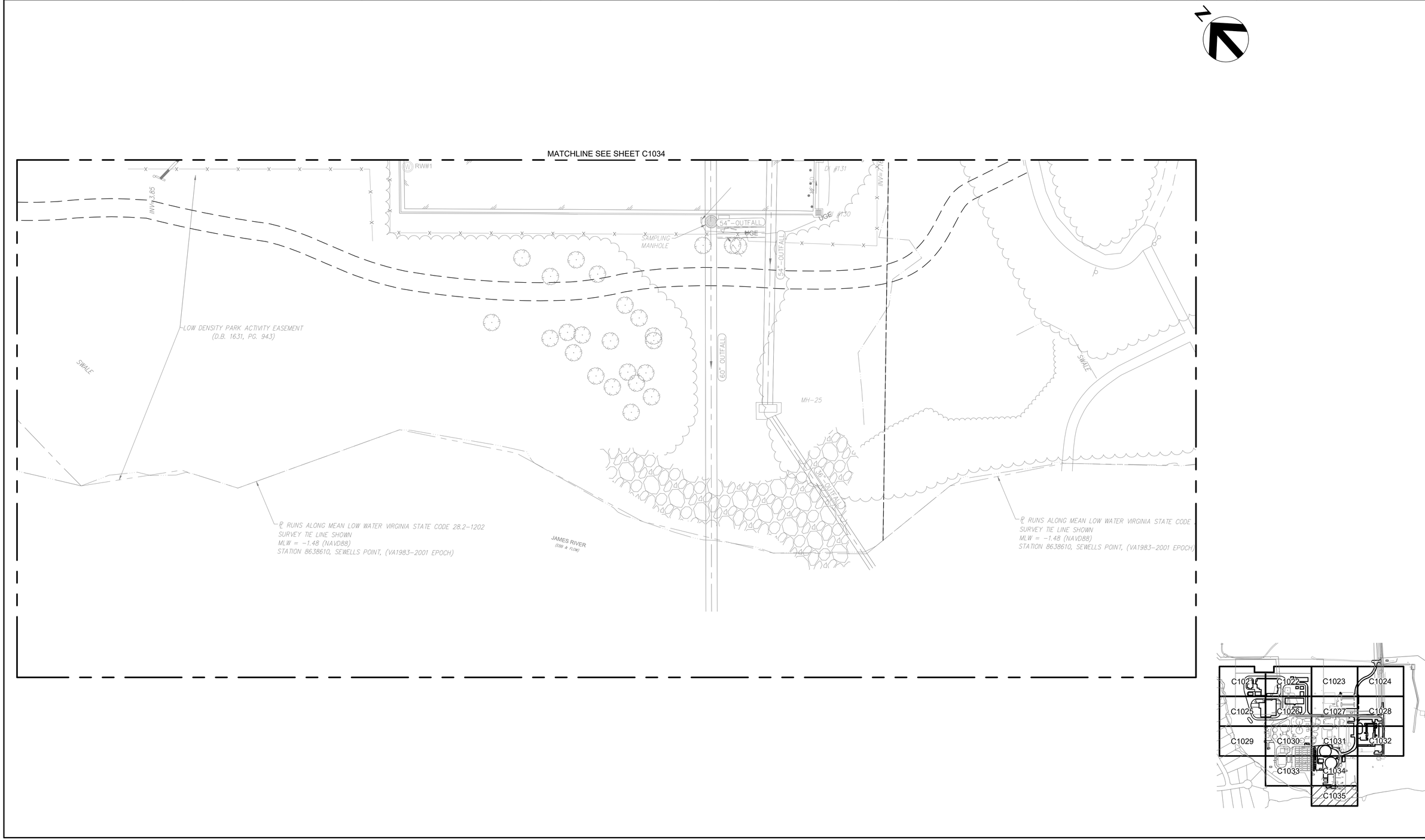

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10/5/2021 6:51 AM

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

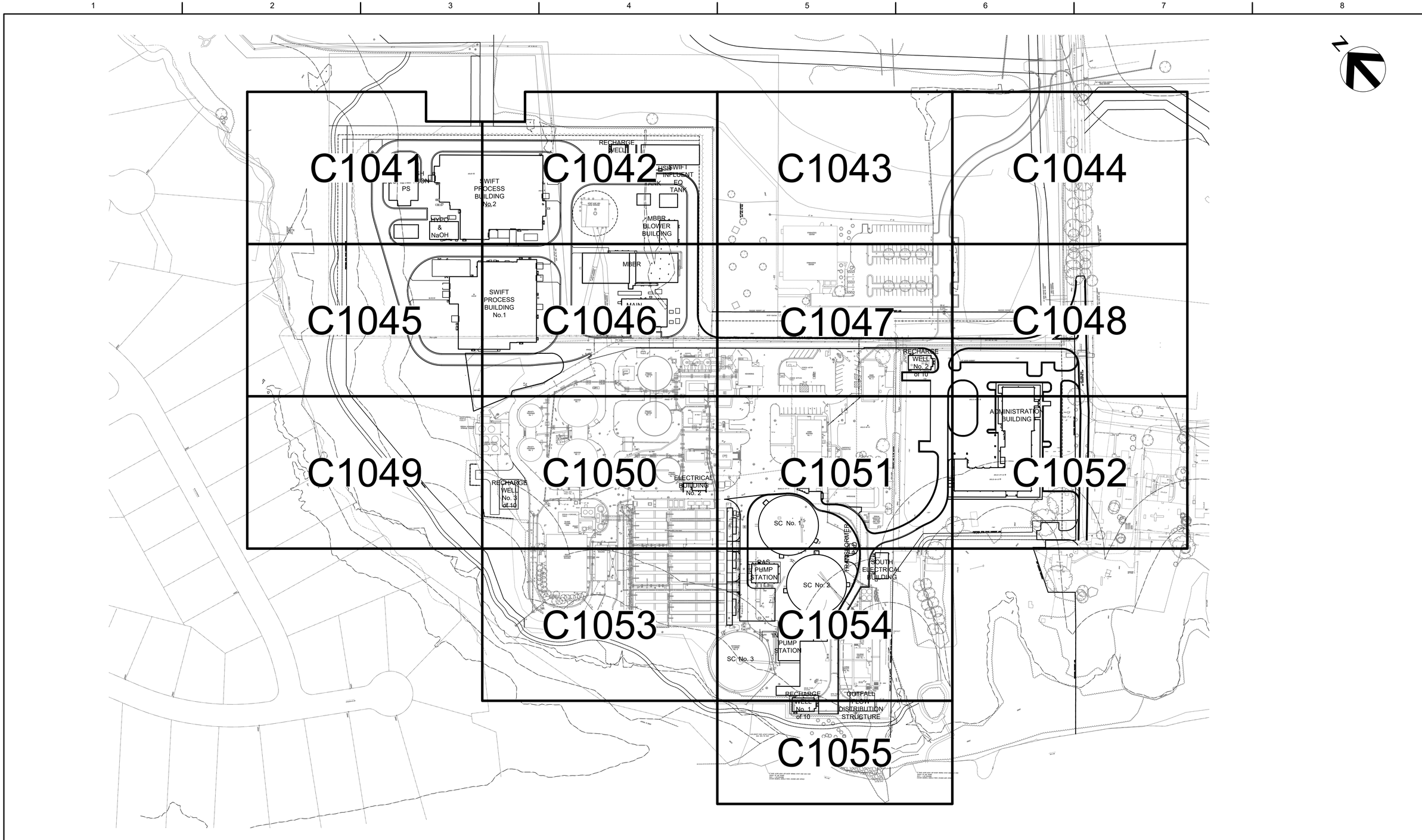
SUBSURFACE DEMOLITION PLAN 15

0 1" 2"

FILENAME P2-C1020.DWG

SCALE ----

DWG NO. C1035



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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE OVERALL KEY PLAN

0 1" 2"

FILENAME P2-02C-KEYS.DWG

SCALE ----

DWG NO. C1040

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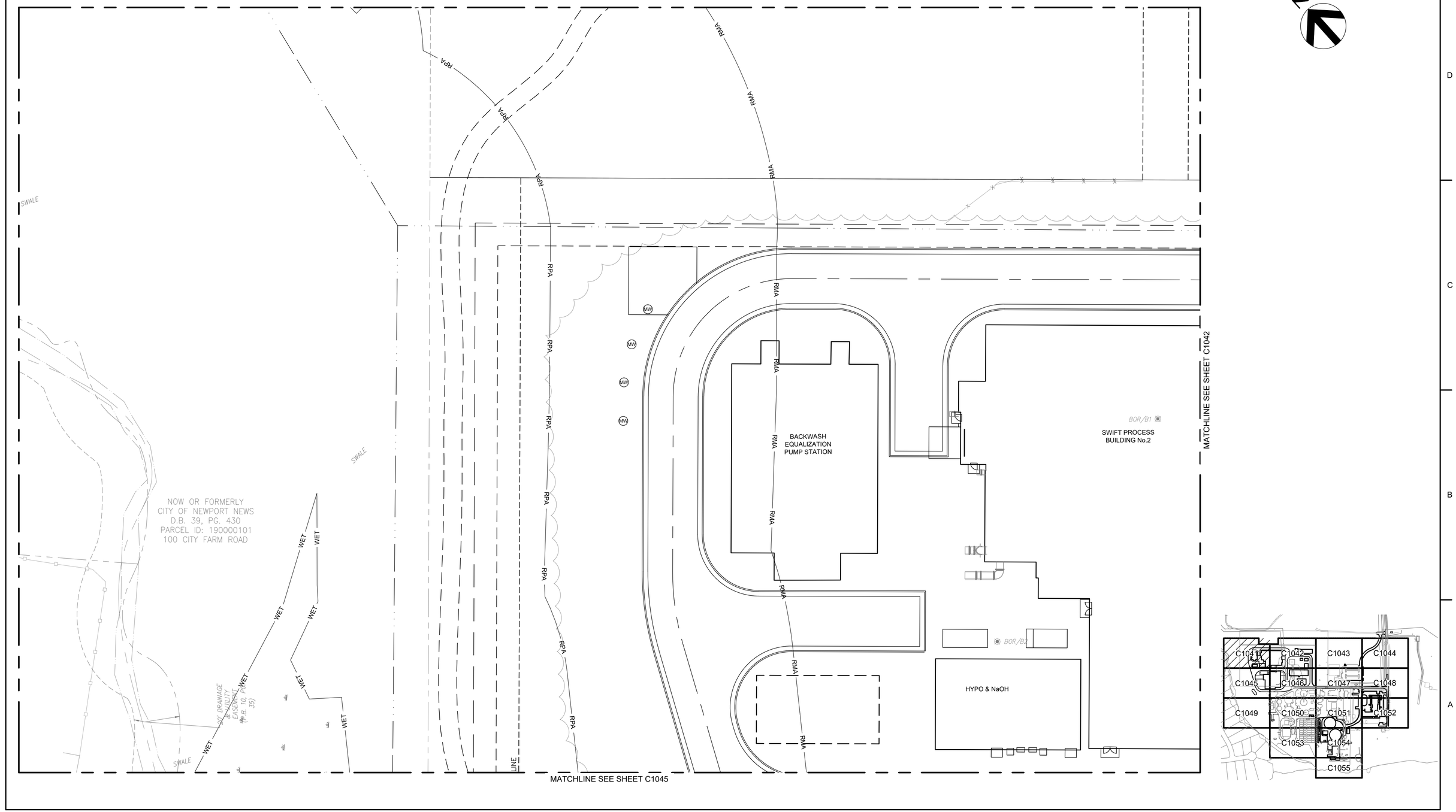
10/5/2021 7:09 AM



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JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 1

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. C1041

10/5/2021 6:46 AM

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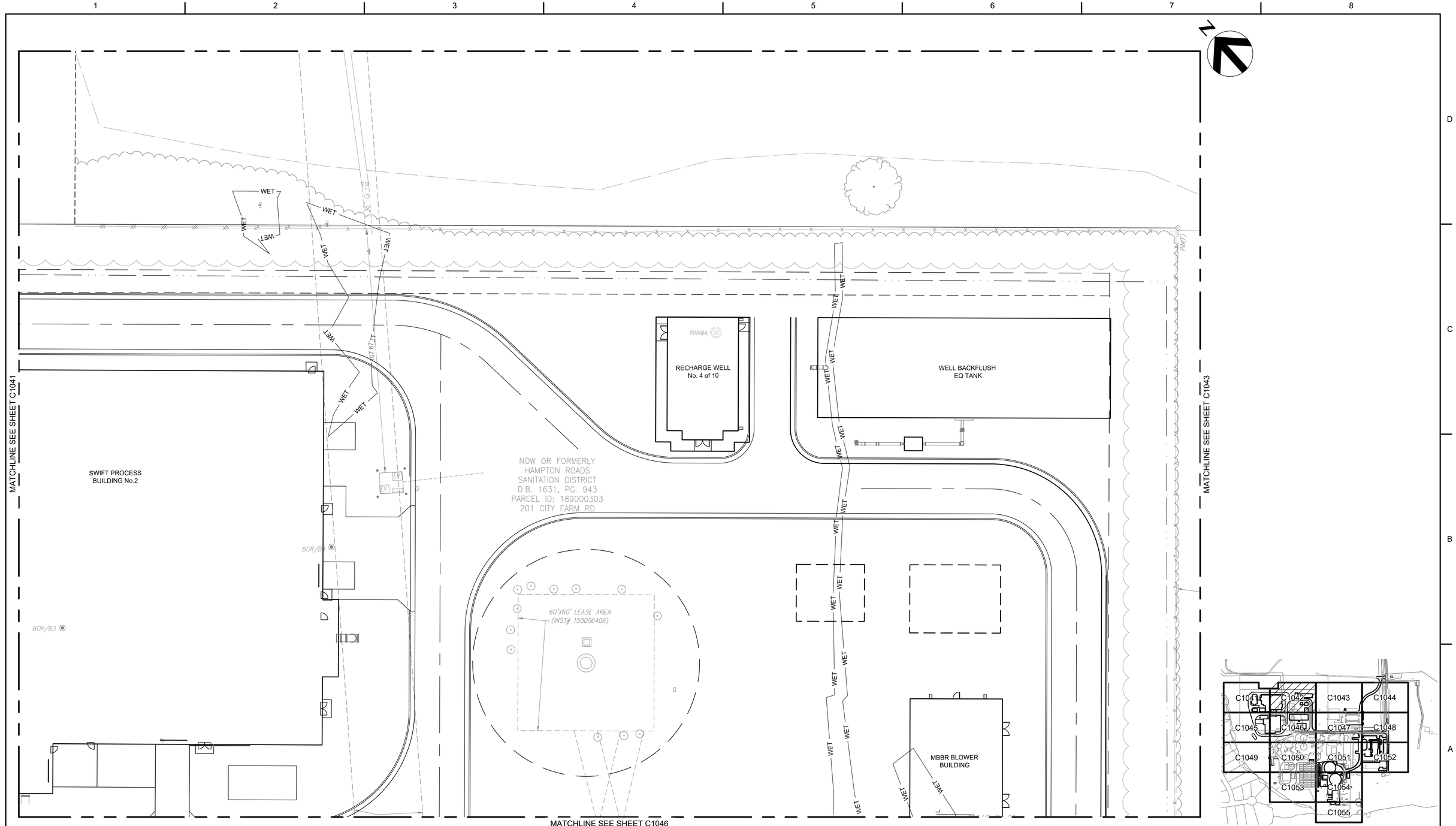

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JR SWIFT FACILITY (GN016360) AND
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WORK PACKAGE 2

CIVIL SITE PLAN 2

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. C1042

10/5/2021 6:46 AM

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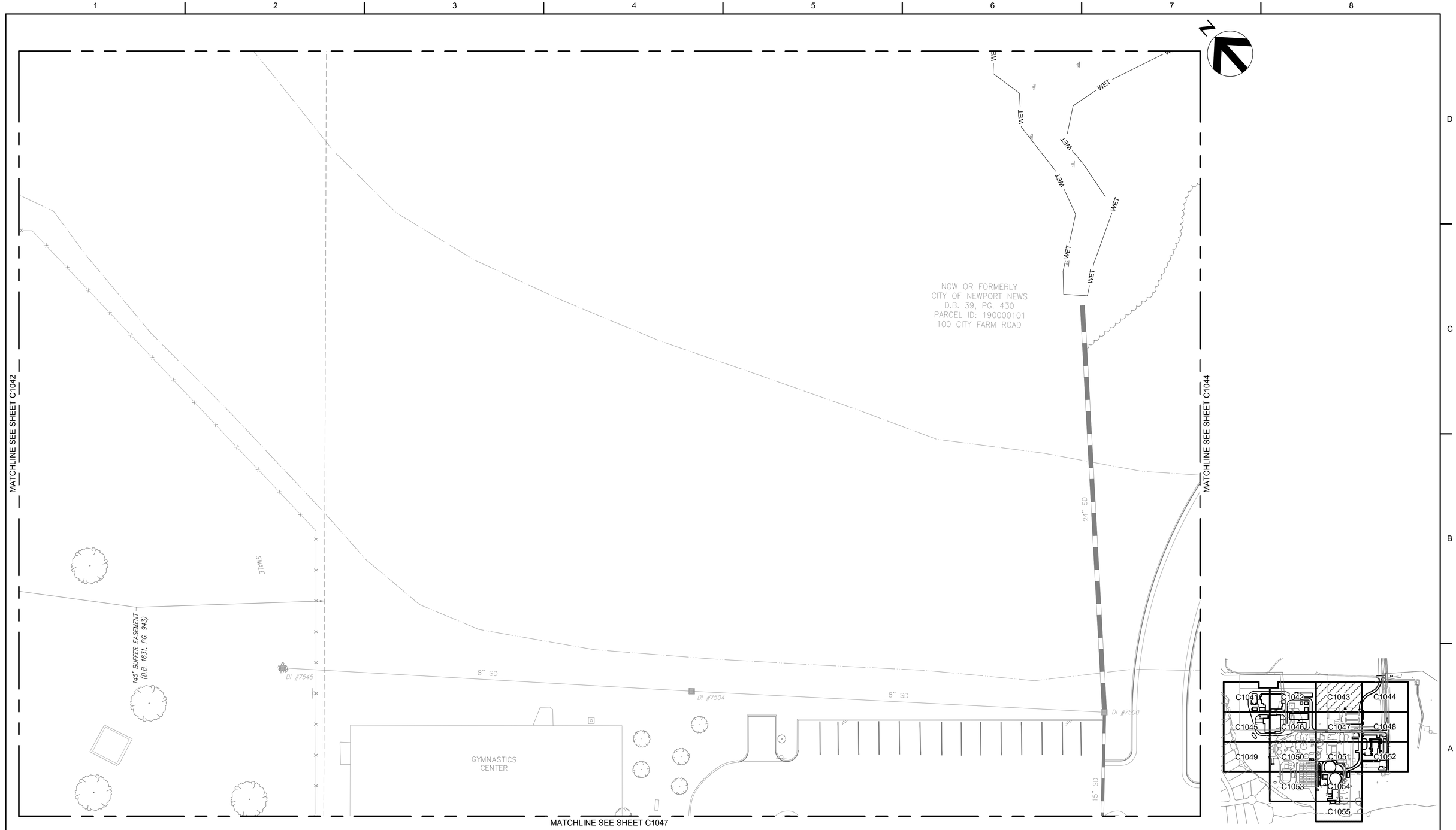

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 3

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. **C1043**

10/5/2021 6:46 AM

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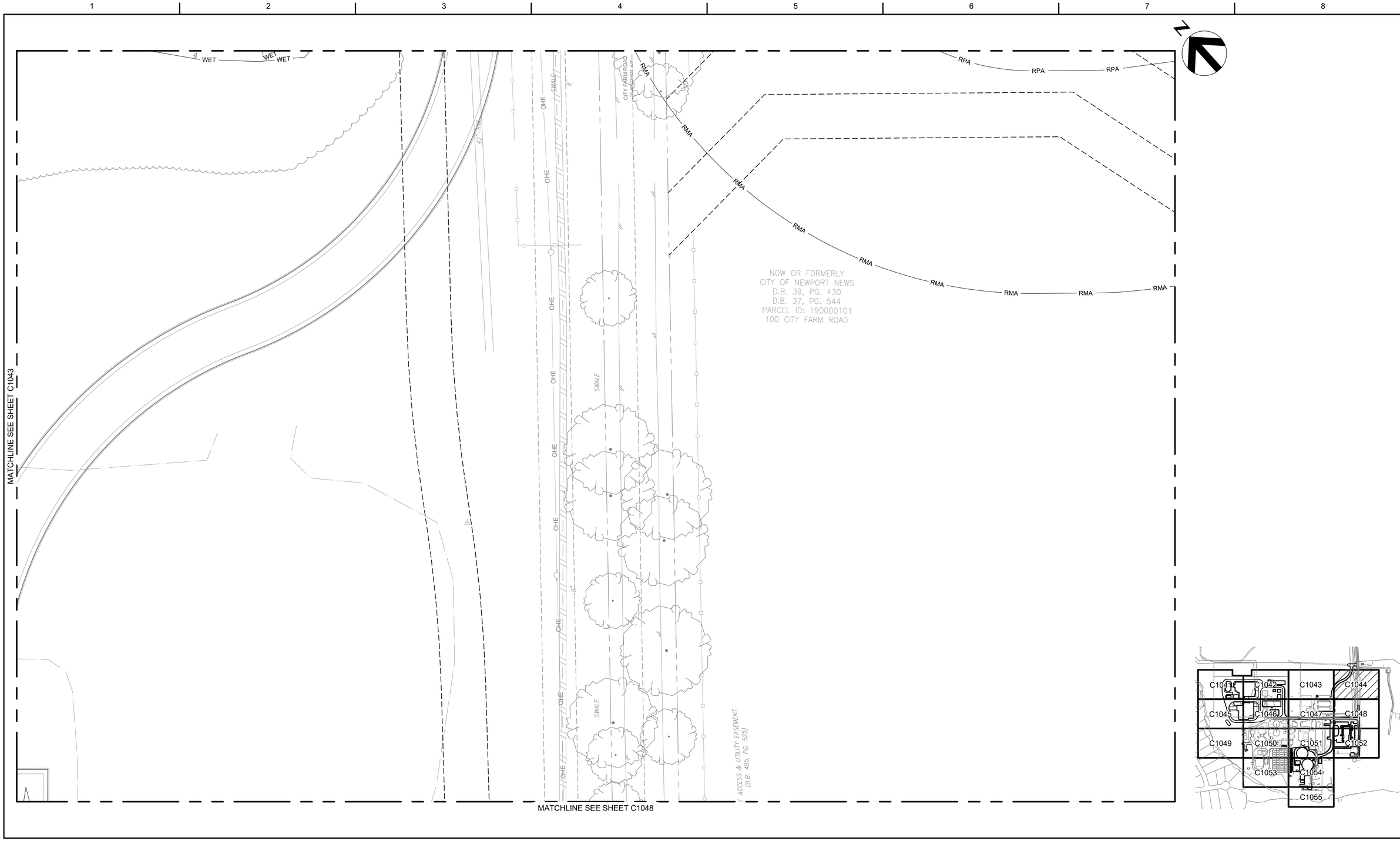

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10/5/2021 6:46 AM

HDR
US-A
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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

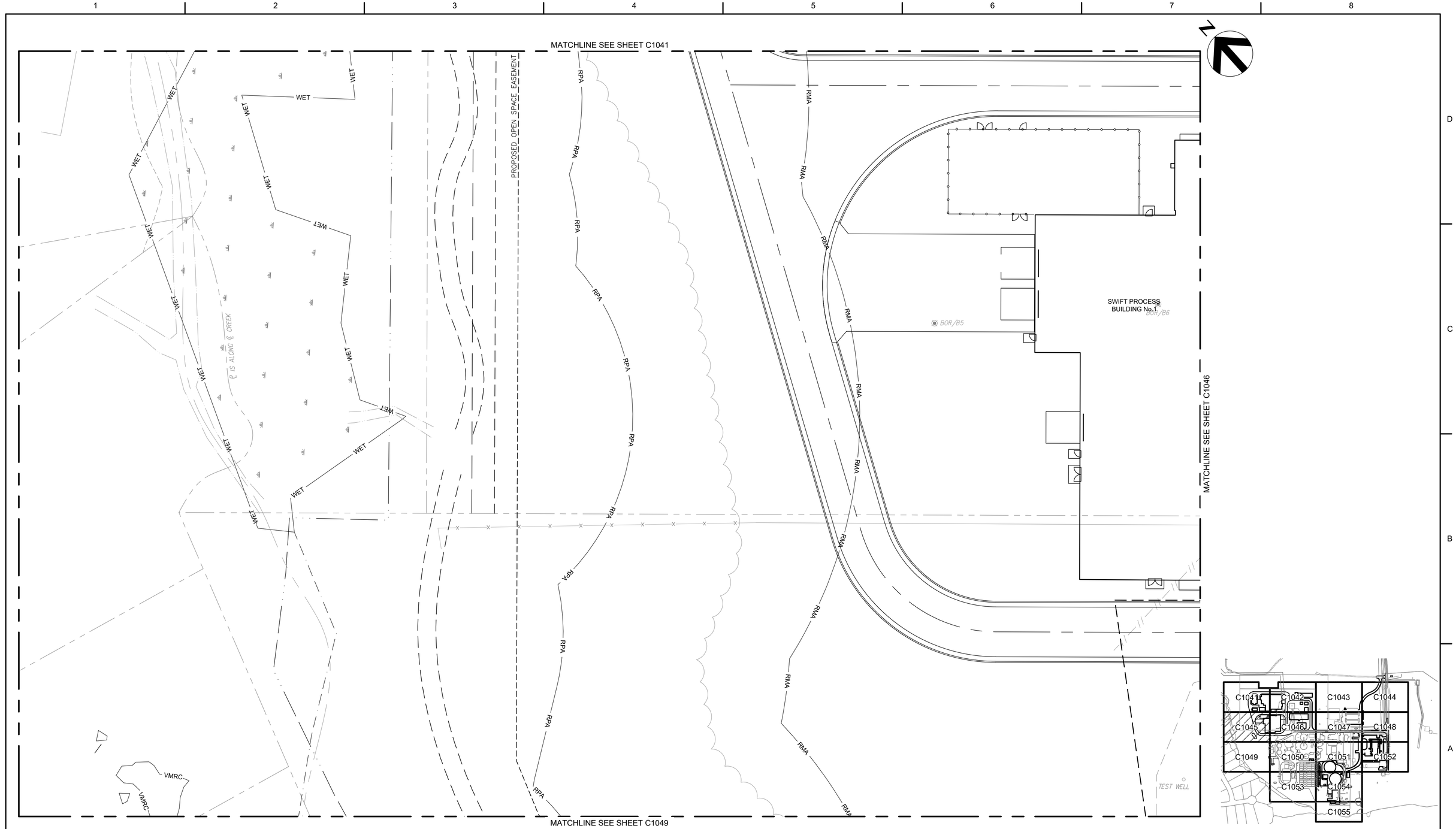
CIVIL SITE PLAN 4

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. **C1044**



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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 5

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. **C1045**

C:\pwworking\east01\d2090835\P2-C1040.dwg, C1045 PLAN 5, 10/5/2021 6:46:36 AM, ANMUELLER

10/5/2021 6:46 AM

MATCHLINE SEE SHEET C1042

MATCHLINE SEE SHEET C1045

MATCHLINE SEE SHEET C1047

MATCHLINE SEE SHEET C1050

H202

ACH

SWIFT PROCESS BUILDING No.1

SWIFT INFLUENT EQ TANK

MBBR BUILDING

MAIN ELECTRICAL BUILDING

FUEL STORAGE

PRIMARY CLARIFIER NO. 4

ODOR CONTROL

SANITARY PIPELINE EASEMENT (O.B. 597, PG. 355)

10' UTILITY EASEMENT (INST# 150006406)

10' ACCESS EASEMENT (INST# 150006406)

BOR/JE-CPT-05

BOR/JE-BH-06

BOR/BT

WET

OHE

2" H202

T.O.B.

SFMV(3)

SD CO#100

SD CO#101

10" SD

DI #102

DI #103

18" SD

24"(OVERHEAD) PIPE

8"PIPE

WV

FH

MH

MH-43

MH-37

SFMV(2)

48"(OVERHEAD)PIPE

36"(OVERHEAD)PIPE

18"(OVERHEAD)PIPE

EHH

ACCESS MH

BOTTOM = 38.75

C1041 C1042 C1043 C1044
C1045 C1046 C1047 C1048
C1049 C1050 C1051 C1052
C1053 C1054 C1055

10/5/2021 6:46 AM

C:\pw\working\east01\d0092835\P2-C1040.dwg, C1046 PLAN 6, 10/5/2021 6:46:44 AM, ANMUELLER

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

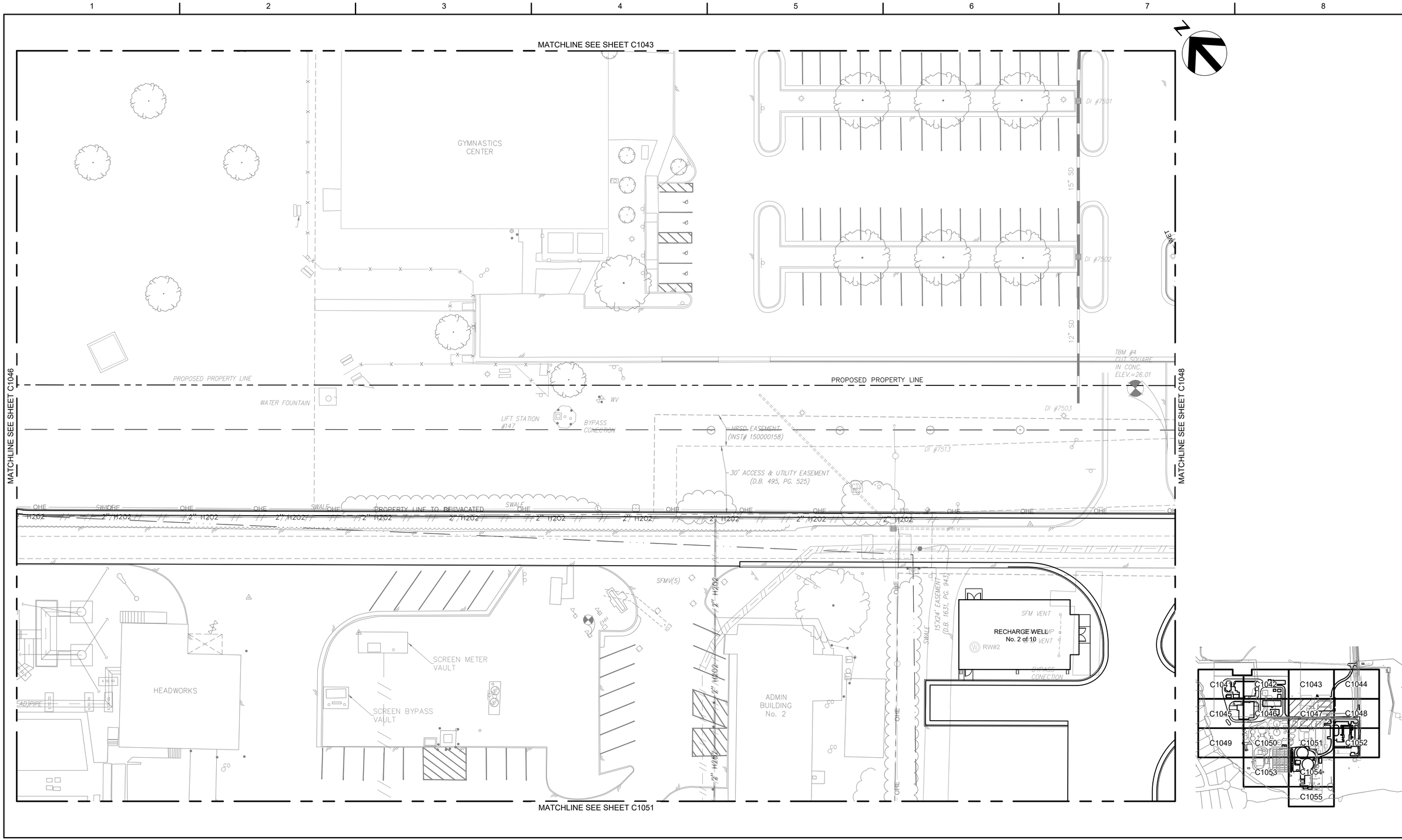
CIVIL SITE PLAN 6

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. **C1046**



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Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 7

0 1" 2"

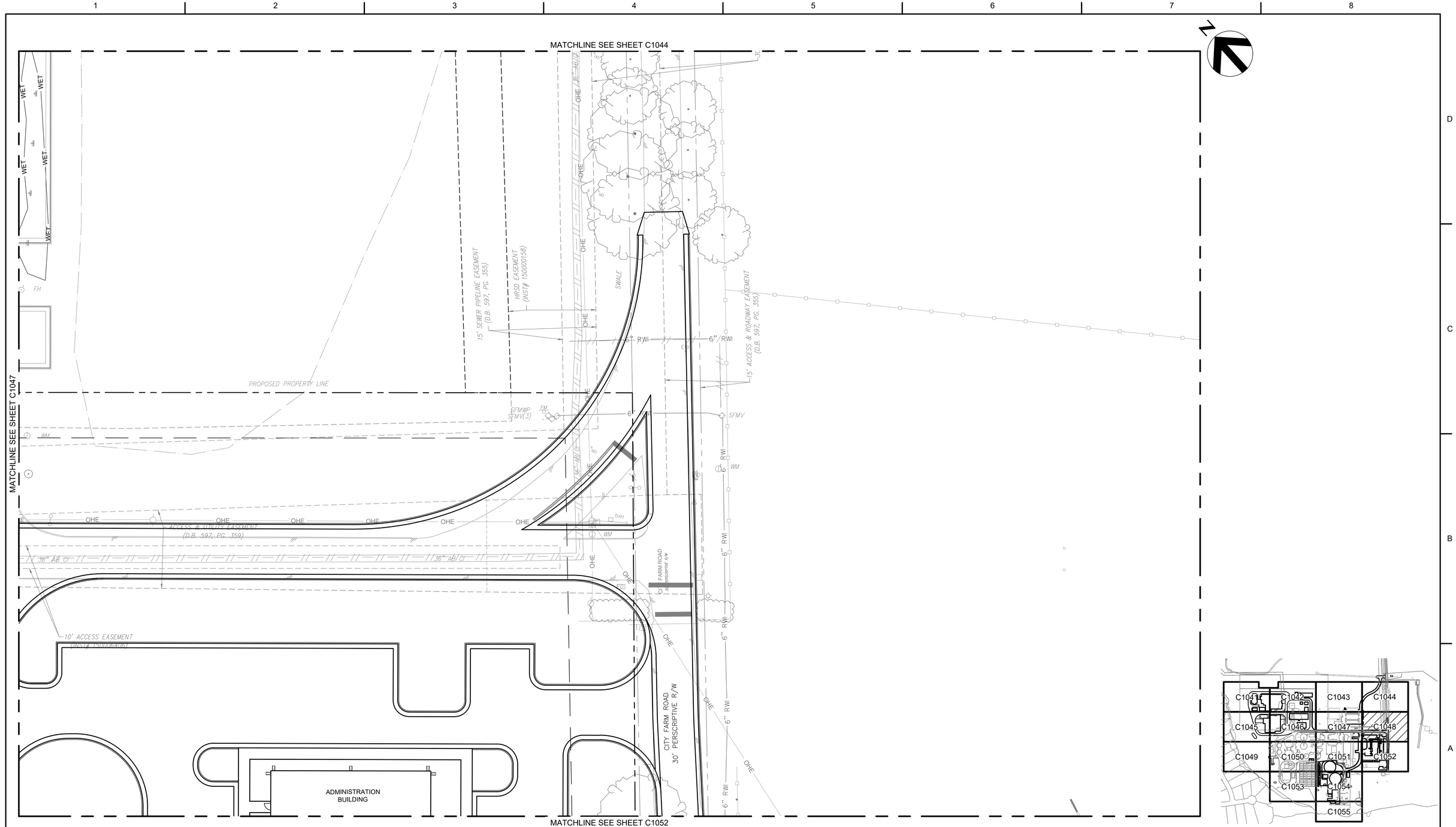
FILENAME P2-C1040.DWG

SCALE ----

DWG NO. C1047

C:\pwworking\east01\d2090835\P2-C1040.dwg, C1047 PLAN 7, 10/5/2021 6:46:49 AM, ANMUELLER

10/5/2021 6:46 AM



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 8

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. **C1048**

10/5/2021 6:46 AM

C:\pw\work\ng\east01\c2090835\P2-C1040.dwg, C1048 PLAN 8, 10/5/2021 6:46:54 AM, ANMUELLER

MATCHLINE SEE SHEET C1045

MATCHLINE SEE SHEET C1050

NOW OR FORMERLY
THE LAINE TRUST
INST# 140014246
P.B. 13, PG. 25
PARCEL ID: 189000408
12 HORSE PEN RD

NOW OR FORMERLY
JOSE A. DeJESUS CINTRON &
ELIZABETH A. DeJESUS CINTRON
INST# 160015549
P.B. 13, PG. 25
PARCEL ID: 189000409
10 HORSE PEN RD

NOW OR FORMERLY
SCOT B. GERE &
ANNE-LISE GERE
INST# 080014082
P.B. 13, PG. 25
PARCEL ID: 189000410
8 HORSE PEN RD

NOW OR FORMERLY
RONALD K. WATROUS &
MICHELLE T. WATROUS
D.B. 2181, PG. 1573

NOW OR FORMERLY
HAMPTON ROADS SANITATION DISTRICT
D.B. 495, PG. 525
PARCEL ID: 190000114
101 CITY FARM RD

PHOSPHOROUS
REMOVAL
FACILITY

SODIUM HYDROXIDE
STORAGE FACILITY

EHA

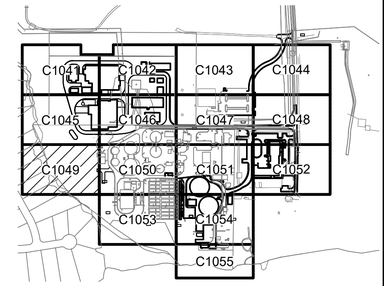
PROPOSED OPEN SPACE EASEMENT LINE

VMRC

WET

RPA

RMA



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

**PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING**

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

**CIVIL SITE
PLAN 9**

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. **C1049**

10/5/2021 6:47 AM

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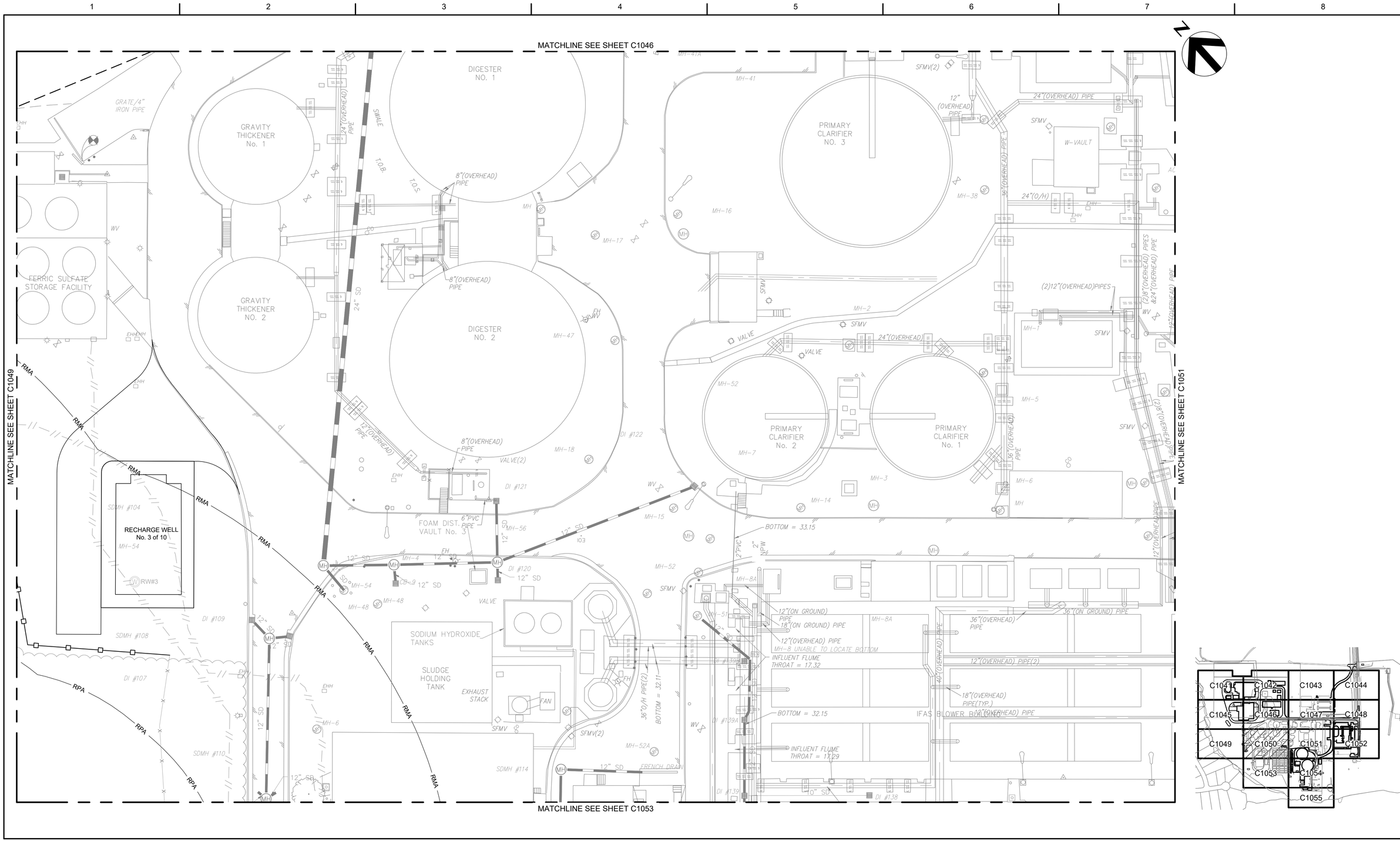

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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Virginia Beach, VA 23462
757.222.1500

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 110

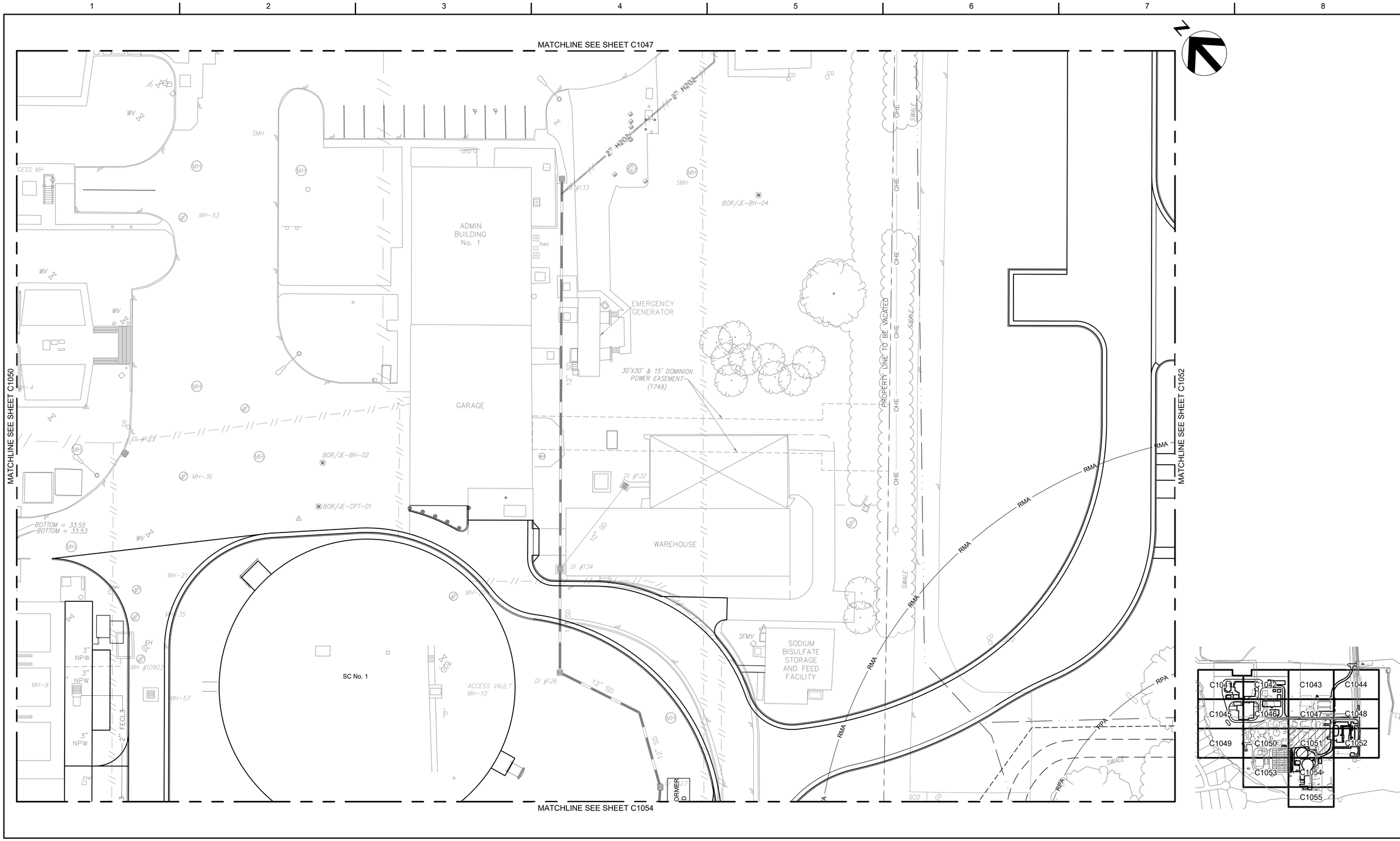
0 1" 2"

FILENAME P2-C1040.DWG
SCALE 1" = 20'

DWG NO. C1050
of XXX

C:\pwworking\east01\d2090835\P2-C1040.dwg, C1050 PLAN 10, 10/8/2021 9:25:40 AM, ANMUELLER

10/8/2021 9:25 AM



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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Virginia Beach, VA 23462
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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

CIVIL SITE PLAN 11

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. C1051

10/5/2021 6:47 AM

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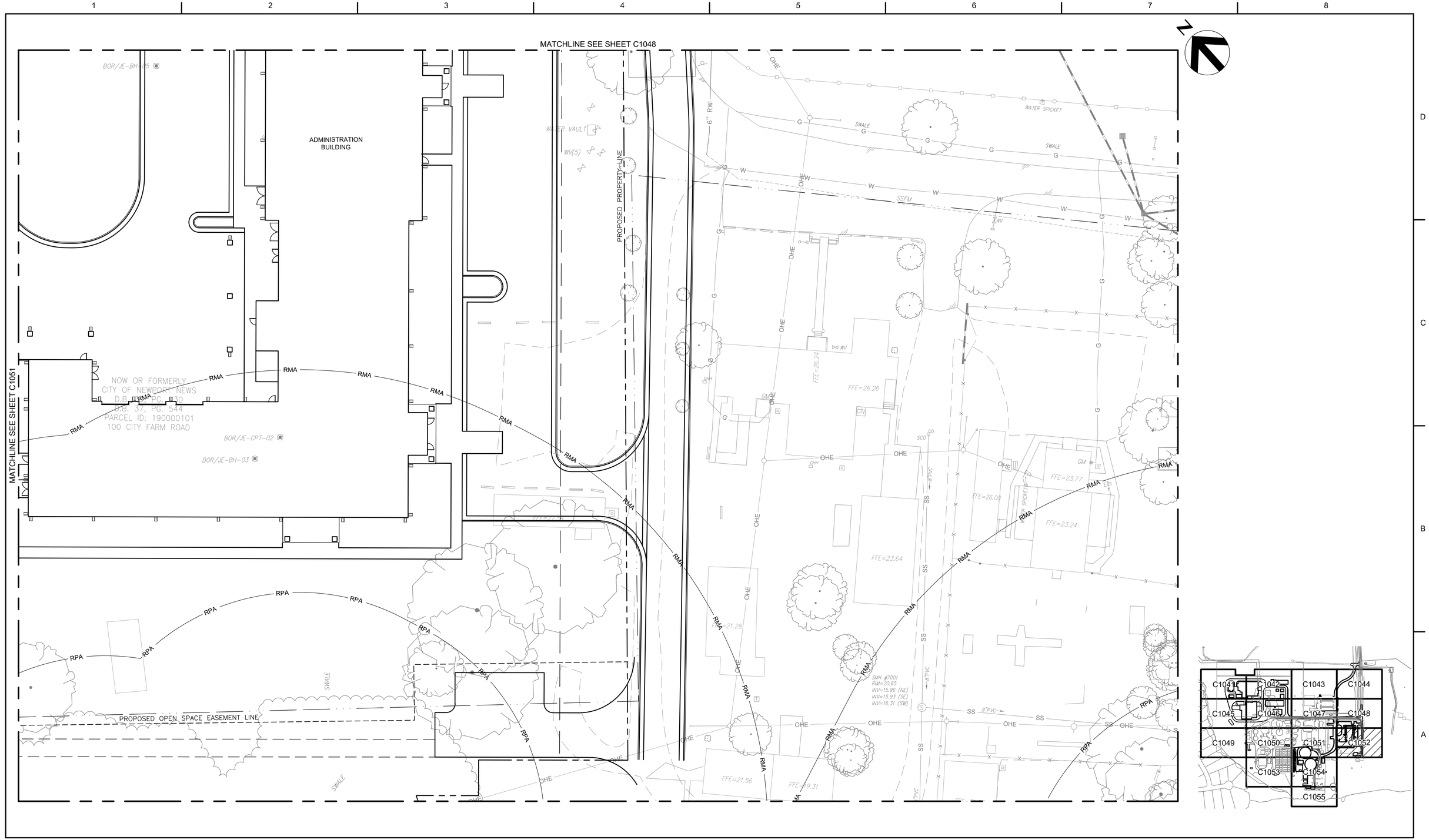

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US-A
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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 12

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. C1052

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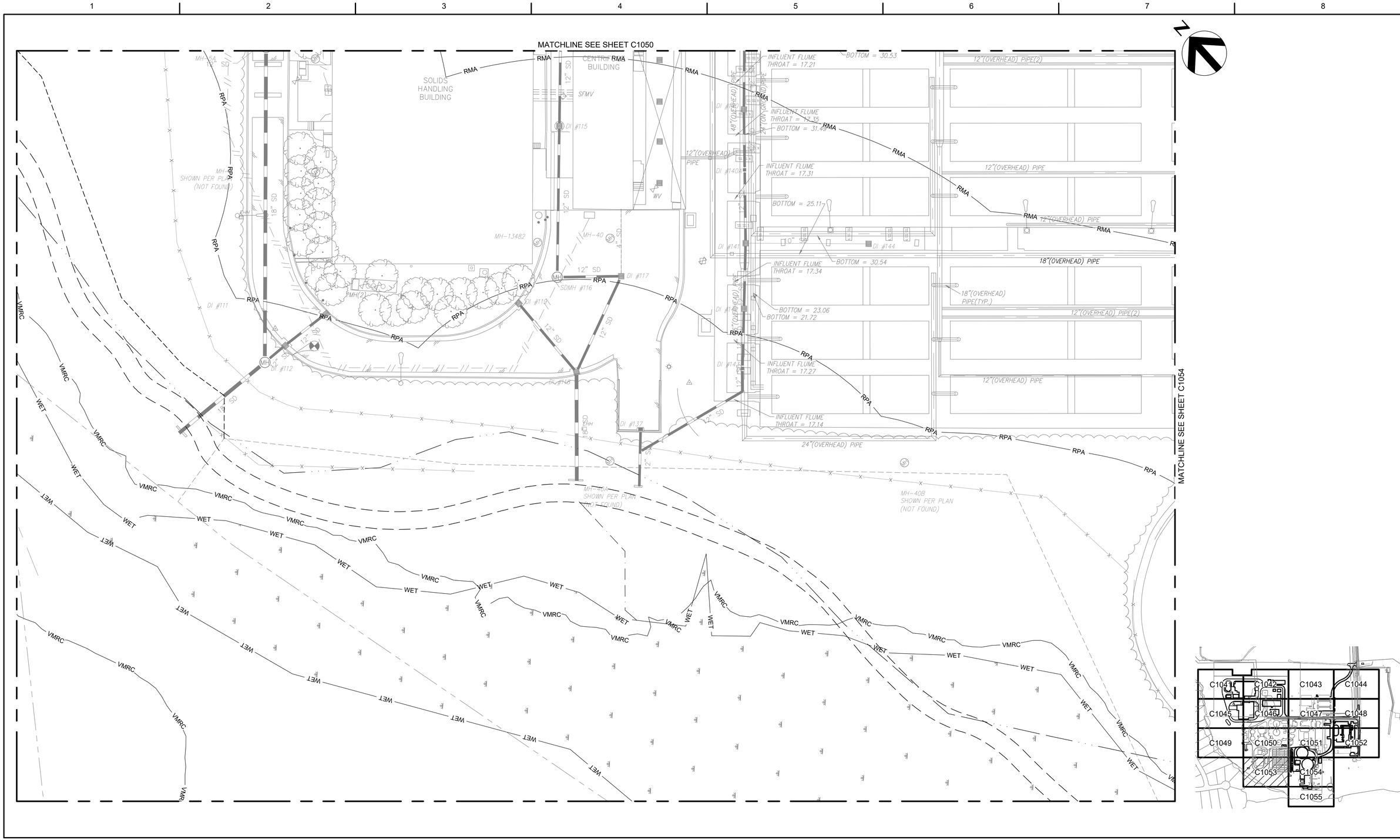
10/5/2021 6:47 AM



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10/5/2021 6:47 AM

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Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

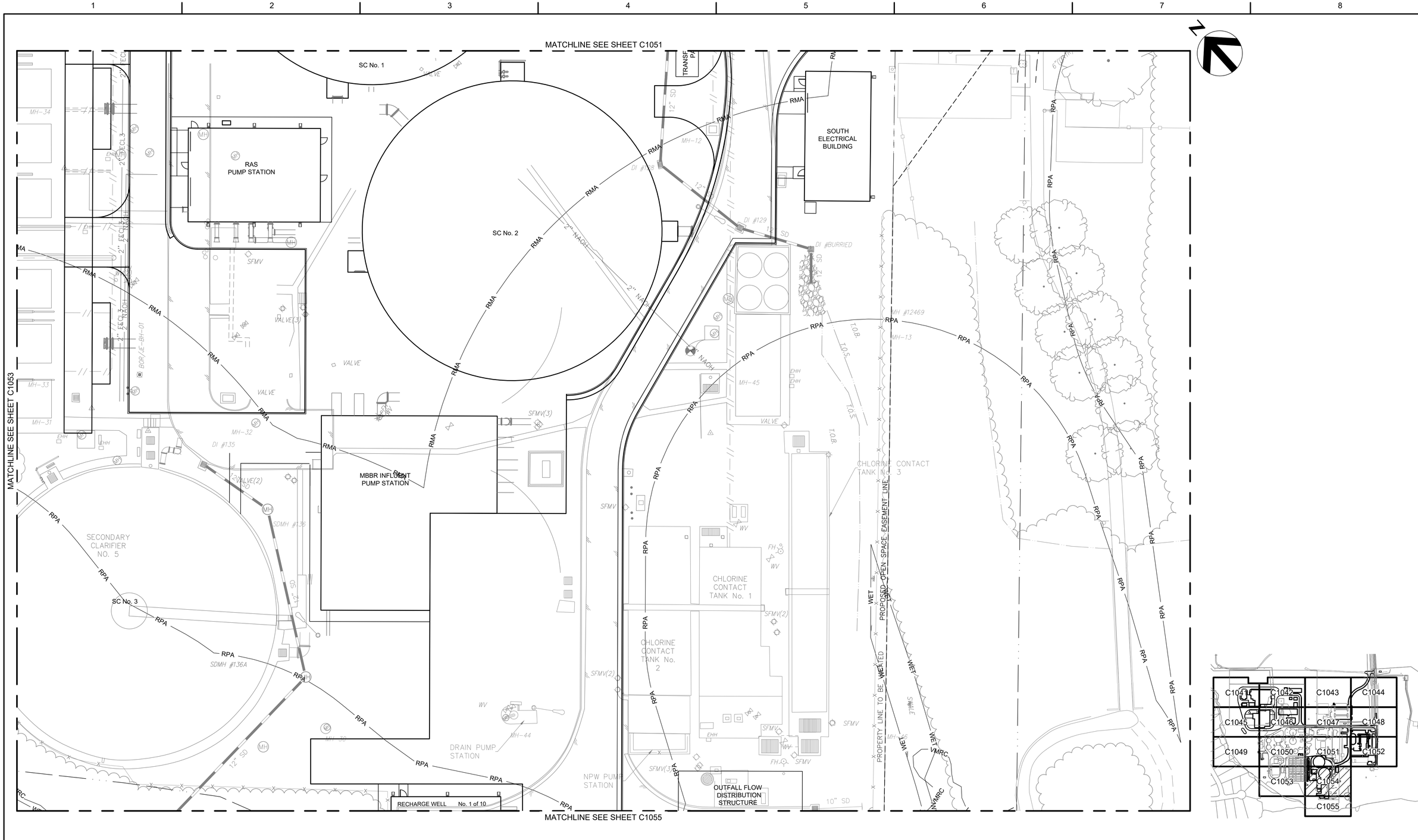
CIVIL SITE PLAN 13

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. C1053



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Virginia Beach, VA 23462
757.222.1500

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PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 14

0 1" 2"

FILENAME P2-C1040.DWG
SCALE ----

DWG NO. C1054

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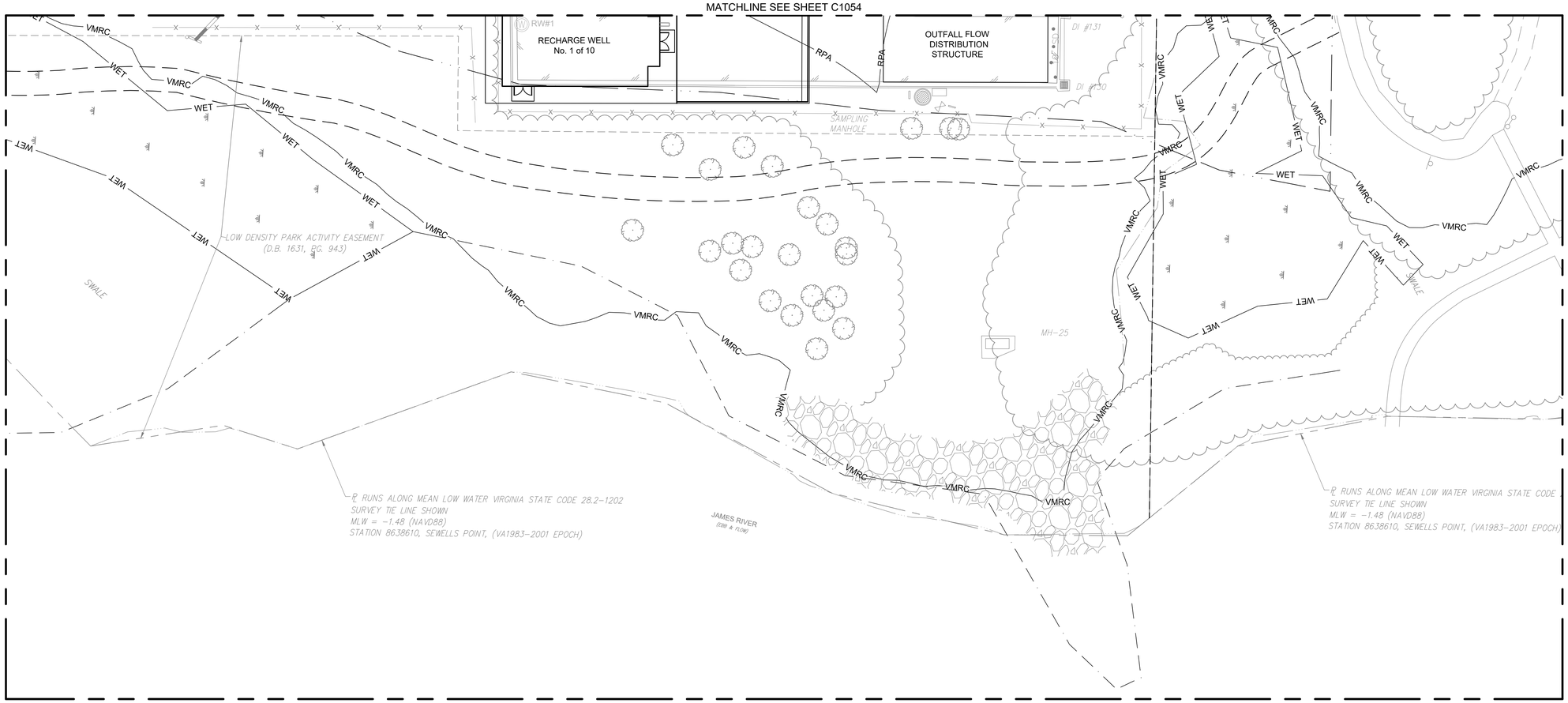
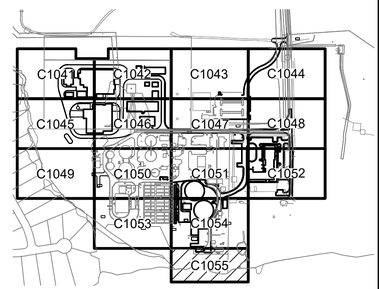
10/5/2021 6:47 AM





HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

CIVIL SITE PLAN 15

0 1" 2"

FILENAME P2-C1040.DWG

SCALE ----

DWG NO. **C1055**

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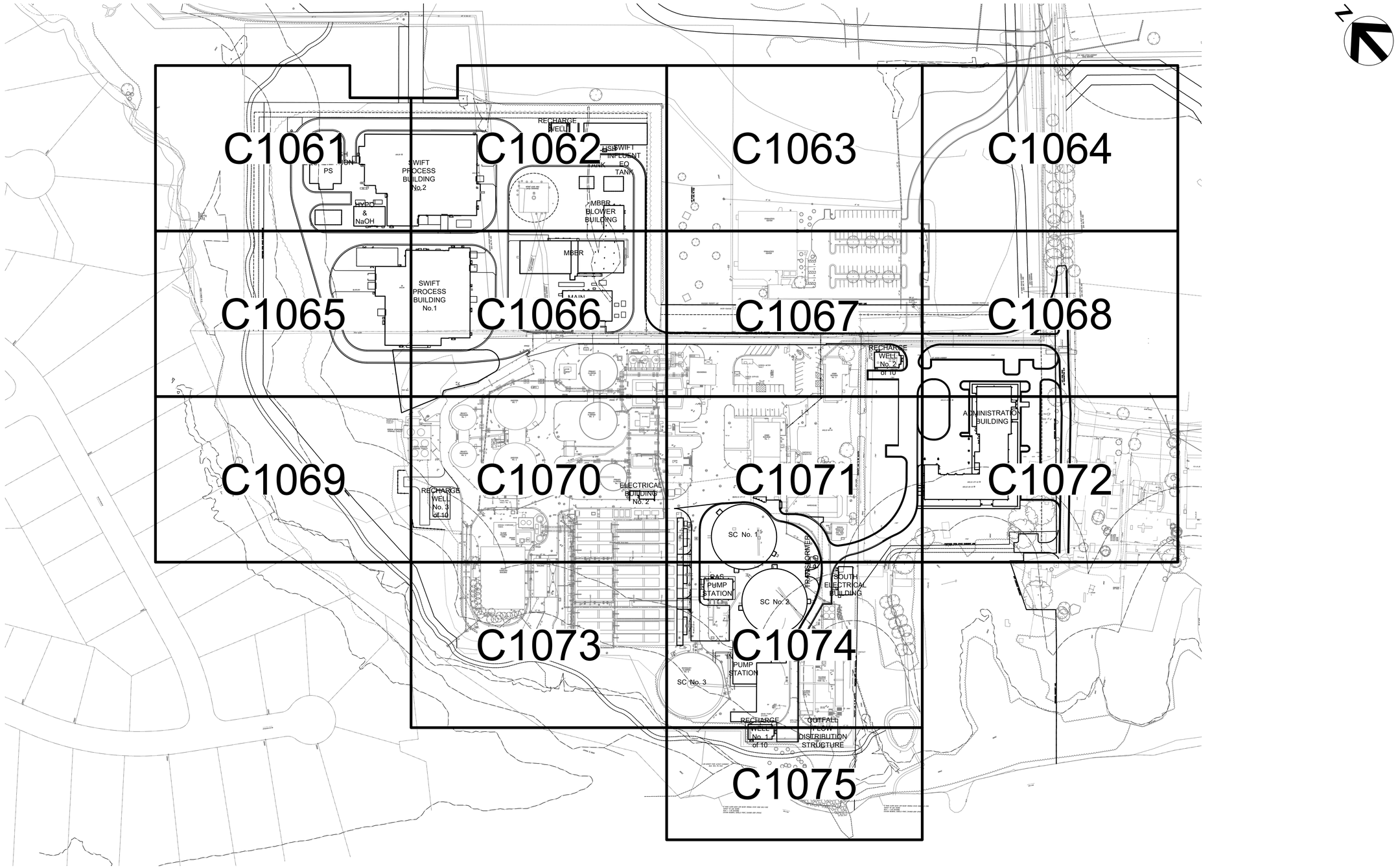
10/5/2021 6:47 AM



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10/5/2021 7:09 AM

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US-A
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Virginia Beach, VA 23462
757.222.1500

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PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE OVERALL KEY PLAN

0 1" 2"

FILENAME P2-02C-KEYS.DWG

SCALE ----

DWG NO. C1060

N

SWALE

NOW OR FORMERLY
CITY OF NEWPORT NEWS
D.B. 39, PG. 430
PARCEL ID: 190000101
100 CITY FARM ROAD

SWALE

SWALE

SWALE

20' DRAINAGE & UTILITY EASEMENT (M.B. 16, PG. 35)

WET WET WET WET WET WET WET WET WET

RPA RPA RPA RPA RPA RPA RPA RPA RPA

RMA RMA RMA RMA RMA RMA RMA RMA RMA

MW MW MW MW

24

23

BACKWASH
EQUALIZATION
PS

HYPO & NaOH

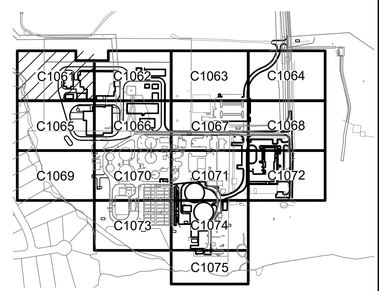
BOR/B1

BOR/A2

SWIFT
BUILD
(BAF,

MATCHLINE SEE SHEET C1062

MATCHLINE SEE SHEET C1065



HDR US-A
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Virginia Beach, VA 23462
757.222.1500

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	10/2021	30% DESIGN SUBMITTAL

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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

**PRELIMINARY
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CONSTRUCTION
OR
RECORDING**

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 1

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. **C1061**

10/5/2021 6:41 AM

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Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 2

0 1" 2"

FILENAME P2-C1060.DWG
SCALE ----

DWG NO. C1062

10/5/2021 6:41 AM

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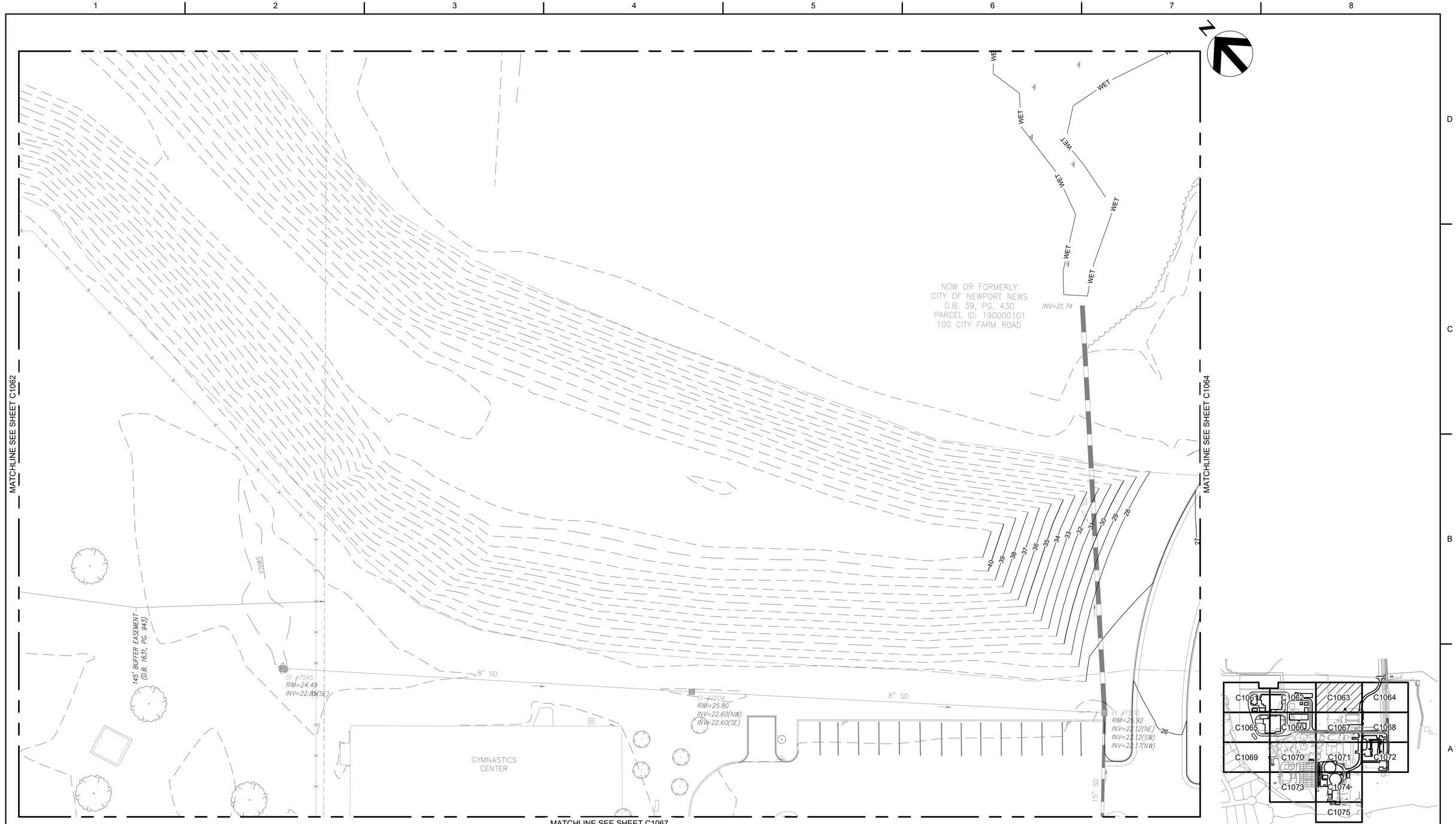

HDR US-A
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Virginia Beach, VA 23462
757.222.1500

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	10/2021	30% DESIGN SUBMITTAL

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DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 3

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. **C1063**

10/5/2021 6:42 AM

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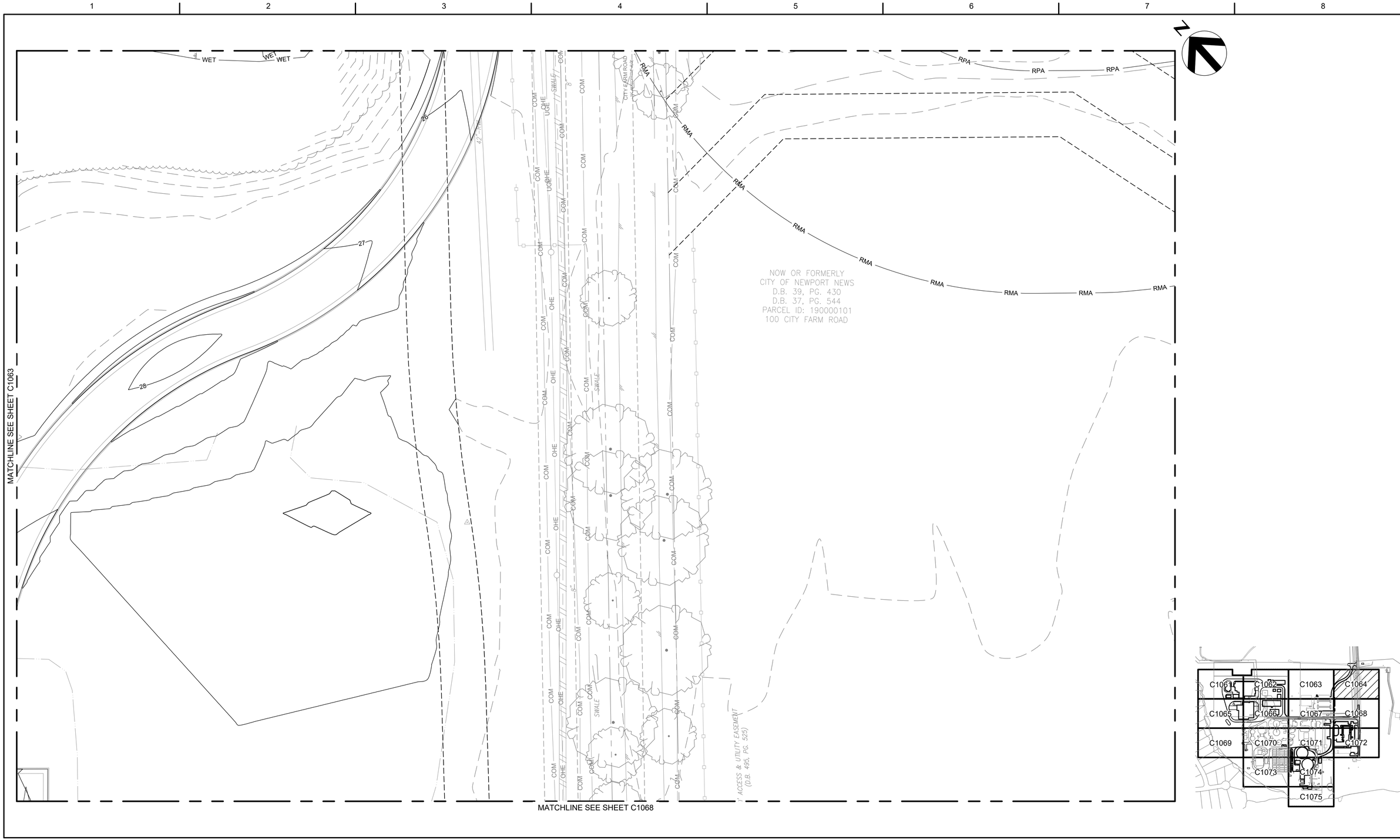

C:\pwworking\east01\d2090835\P2-C1060.dwg, C1064 PLAN 4, 10/5/2021 6:42:17 AM, ANMUELLER

10/5/2021 6:42 AM

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US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

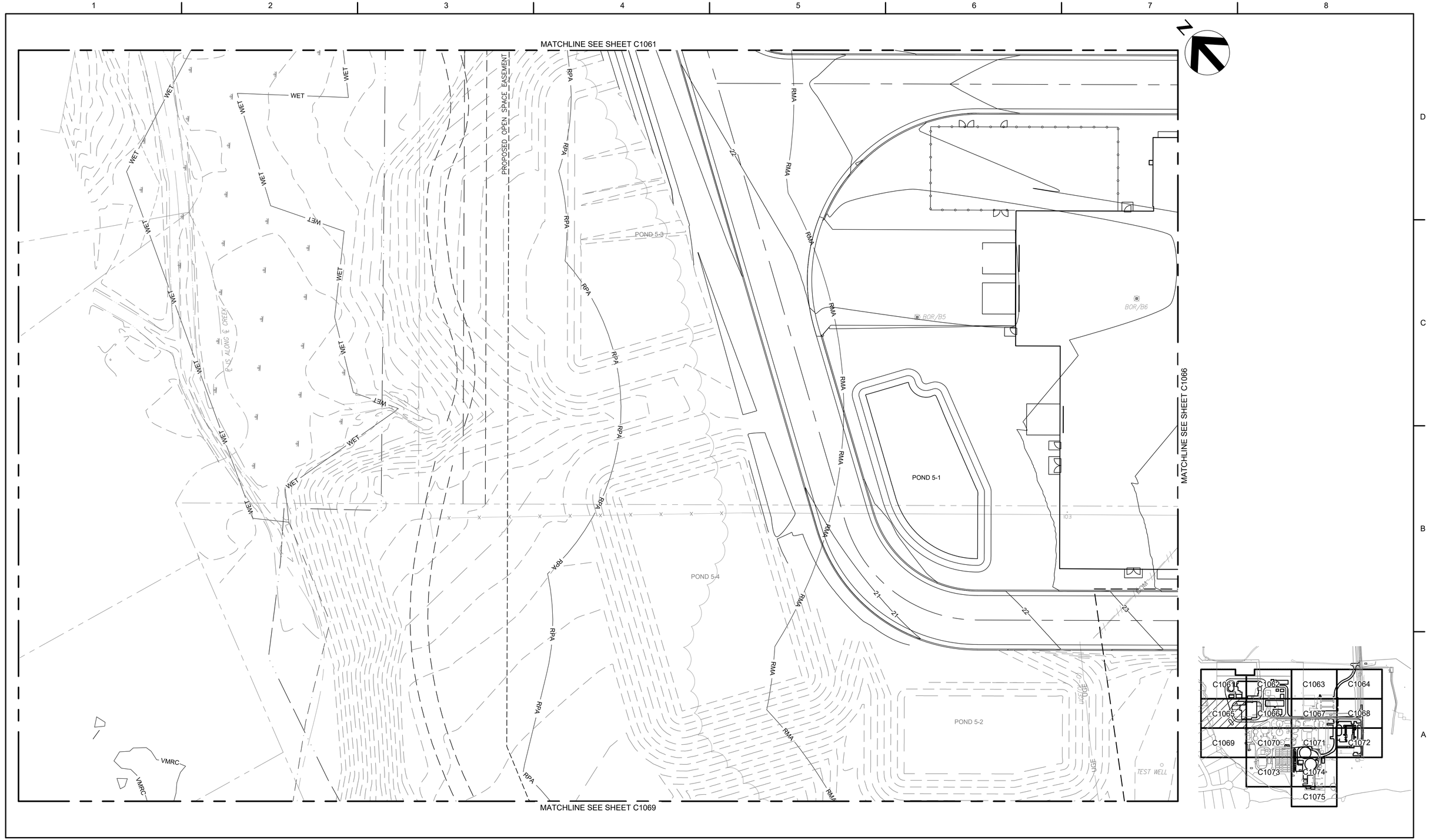
GRADING AND DRAINAGE PLAN 4

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1064



HDR
US-A
Ulliman Schutte – Alberici Joint Venture
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Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 5

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1065

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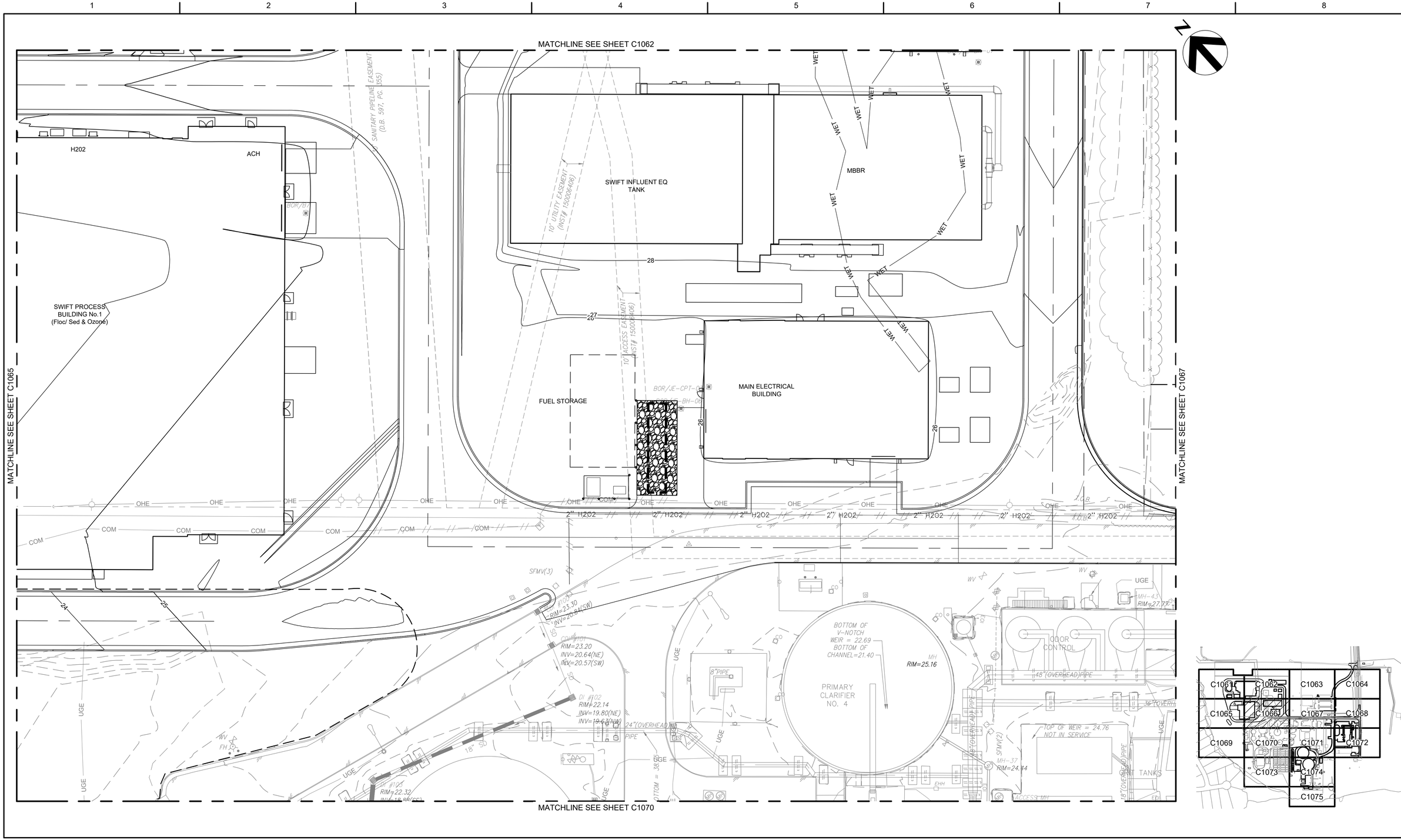
10/5/2021 6:42 AM



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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	10/2021	30% DESIGN SUBMITTAL

HDR
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 6

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1066

C:\pwworking\east01\d2090835\P2-C1060.dwg, C1066 PLAN 6, 10/5/2021 6:42:40 AM, ANMUELLER

10/5/2021 6:42 AM

MATCHLINE SEE SHEET C1063

MATCHLINE SEE SHEET C1066

MATCHLINE SEE SHEET C1068

MATCHLINE SEE SHEET C1071

GYMNASTICS CENTER

PROPOSED PROPERTY LINE

WATER FOUNTAIN

LIFT STATION #147

BYPASS CONNECTION

HRSD EASEMENT (INST# 150000158)

30' ACCESS & UTILITY EASEMENT (D.B. 495, PG. 525)

PROPERTY LINE TO BE VACATED

DI #7501
RIM=24.67
INV=22.25(NE)
INV=22.27(SW)

DI #7502
RIM=24.74
INV=22.42(NE)
INV=22.54(SW)

DI #7503
RIM=25.12
INV=22.57(NE)

DI #7513
RIM=24.00
INV=22.10(N)
INV=21.95(SE)

15" SD

12" SD

TBM #4
CUT SQUARE
IN CONC.
ELEV.=26.01

NEXT STRUCTURE NOT FOUND

HEADWORKS

SCREEN METER VAULT

SCREEN BYPASS VAULT

ACCESS LID

ACCESS LID

TOP OF WEIR = 26.85

ADMIN BUILDING No. 2

15'X24' EASEMENT (D.B. 1631, Pg. 943)

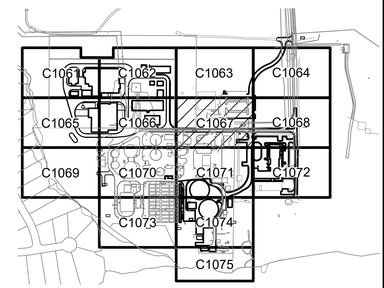
SFM VENT

RECHARGE WELL No. 2 of 10

RW#2

BYPASS CONECTION

SFMV(5)



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 7

FILENAME P2-C1060.DWG
SCALE ----

DWG NO. C1067

10/5/2021 6:42 AM

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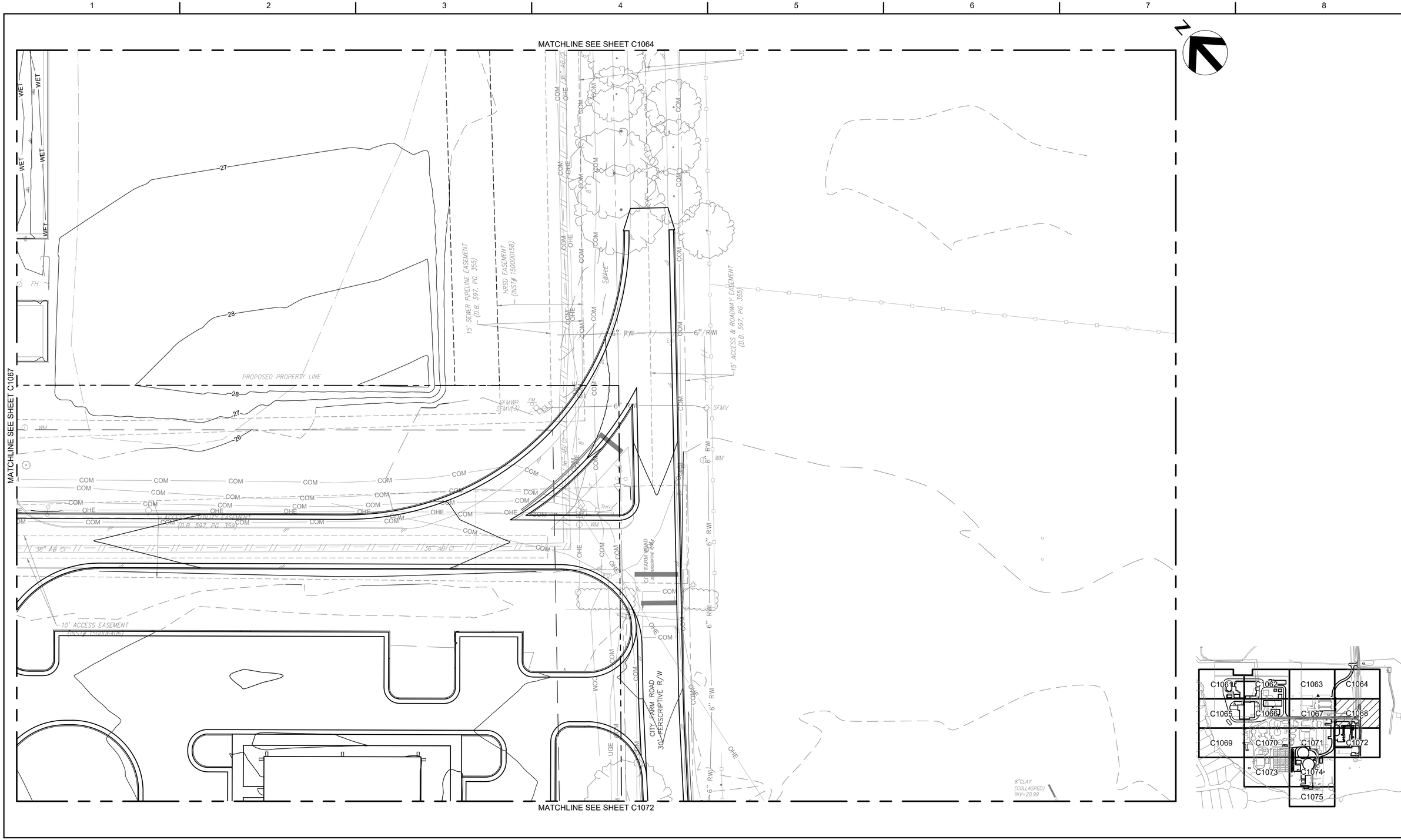

C:\pwworking\east01\d2090835\P2-C1060.dwg, C1068 PLAN 8, 10/5/2021 6:43:00 AM, ANMUELLER

10/5/2021 6:43 AM

HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
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DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

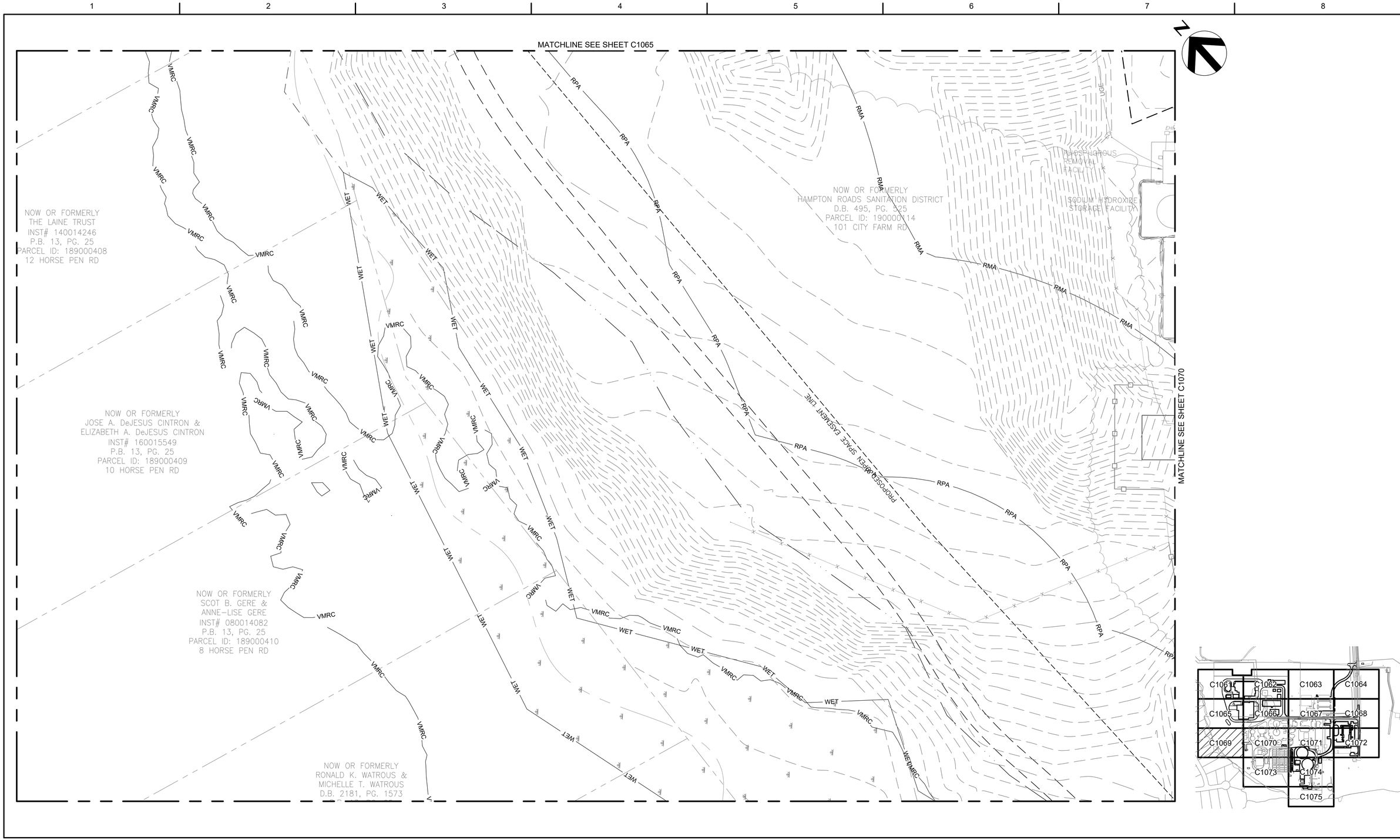
GRADING AND DRAINAGE PLAN 8

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1068



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 9

0 1" 2"

FILENAME P2-C1060.DWG
SCALE ----

DWG NO. C1069

C:\pwworking\east01\d2090835\P2-C1060.dwg, C1069 PLAN 9, 10/5/2021 6:43:09 AM, ANMUELLER

10/5/2021 6:43 AM

MATCHLINE SEE SHEET C1066

MATCHLINE SEE SHEET C1069

MATCHLINE SEE SHEET C1071

MATCHLINE SEE SHEET C1073

GRAVITY THICKENER No. 1

GRAVITY THICKENER NO. 2

DIGESTER NO. 1

DIGESTER NO. 2

PRIMARY CLARIFIER NO. 3

PRIMARY CLARIFIER No. 2

PRIMARY CLARIFIER No. 1

FERRIC SULFATE STORAGE FACILITY

RECHARGE WELL No. 3 of 10

FOAM DIST. VAULT No. 3

SODIUM HYDROXIDE TANKS

SLUDGE HOLDING TANK

EXHAUST STACK

W-VAULT

ELECTRICAL BUILDING No. 2

IFAS BLOWER BUILDING

GRATE/4" IRON PIPE INV=26.72

INV=18/81(SW)

RIM=23.16 BOTTOM=16.29 3.0' OF WATER

MH-41 RIM=23.18 BOTTOM=16.28 INV=20.48(NE) 3.0' OF WATER

SFMV(2)

RIM=27.26

12" (OVERHEAD) PIPE

24"(OVERHEAD) PIPE

VENTURI METER VAULT RIM=24.56

SFMV

24"(O/H)

8"(OVERHEAD) PIPE

MH RIM=23.11

MH-16 RIM=22.87

MH-17 RIM=22.92

BOTTOM OF V-NOTCH WEIR = 22.68 BOTTOM OF CHANNEL=21.41

MH-38 RIM=24.30 INV=5.08(NE) INV=5.78(SE) INV=4.95(SW) INV=5.20(NW)

(2)12"(OVERHEAD)PIPES

MH-2 RIM=25.52 BOTTOM=19.89 3.0' OF WATER 24"(OVERHEAD)

MH-1 RIM=27.23 BOTTOM=19.65 3.4' OF WATER 36"CI(PA)

VALVE

MH-52 RIM=18.68 INV=11.16(NW) INV=14.58(SW) INV=16.48(SE) INV=10.25(NNE) INV=9.59(ENE) INV=9.68(ESE)

BOTTOM OF V-NOTCH WEIR = 22.53 BOTTOM OF CHANNEL=21.26

BOTTOM OF V-NOTCH WEIR = 22.49 BOTTOM OF CHANNEL=21.20

MH-5 RIM=26.87

MH-7 RIM=25.39 BOTTOM=11.99

MH-3 RIM=24.62 BOTTOM=17.97

MH-14 RIM=20.44

DI #122 RIM=18.16 INV=15.26(NW)

DI #121 RIM=20.39 INV=15.23(SW)

MH-18 RIM=22.35

6"PVC FOAM DIST. PIPE

MH-56 RIM=19.22 (BURIED)

MH-15 RIM=18.93

BOTTOM = 33.15

MH-4 RIM=20.53 (BURIED)

MH-54 RIM=19.18 (BURIED)

DI #120 RIM=18.58 INV=14.86(NE)

MH-52

MH-8A

MH-48 RIM=19.86 BOTTOM=12.66 FULL OF WATER

MH-51 RIM=19.60 INV=14.75(NE) INV=14.25(NW)

MH-8A RIM=22.25 BOTTOM=11.45

MH-8 UNABLE TO LOCATE BOTTOM

INFLUENT FLUME THROAT = 17.32

TOP OF WALL = 16.40

TOP OF WALL = 16.43

BOTTOM = 32.15

TOP OF WALL = 16.42

INFLUENT FLUME THROAT = 17.29

DI #139 RIM=20.28 FULL OF DIRT

DI #139A RIM=19.59 FULL OF DIRT

DI #138 RIM=17.60

MH-52A RIM=16.82

FRENCH DRAIN GRATE=16.77 INV=13.95(NW)

SDMH #114 RIM=17.89 INV=13.66(SE) INV=13.60(SW)

SDMH #104 RIM=21.64 INV=13.44(NE) INV=14.[illegible] INV=13.84(SW)

MH-54 RIM=20.29 INV=13.64(N) INV=13.89(NE) INV=10.91(SW) INV=10.89(SE)

RW#3

DI #103 RIM=20.41 INV=16.19(S)

SDMH #108 RIM=20.46 INV=14.14(N) INV=15.39(SE) INV=14.50(SW)

DI #107 RIM=20.11 INV=15.67(NW)

MH-6 RIM=18.52

SDMH #110 RIM=16.23 INV=11.55(N) STUB INV=11.93(E) STUB INV=10.38(NE) INV=9.73(SW)

12"(ON GROUND) PIPE

18"(ON GROUND) PIPE

12"(OVERHEAD) PIPE

36"(OVERHEAD) PIPE

36"(ON GROUND) PIPE

TOP OF FLOW = 17.54 MEASURED @ 9:30AM ON 12-17-19

12"(OVERHEAD) PIPE(2)

TOP OF WEIR

OUT OF SERVICE ON 12-17-19

TOP OF UPPER SIEVES = 13.14

18"(OVERHEAD) PIPE(TYP.)

TOP OF UPPER SIEVES = 14.39

TOP OF FLOW = 17.49 MEASURED @ 9:42AM ON 12-17-19

40"(OVERHEAD) PIPE

36"(O/H) PIPE(2)

C1061 C1062 C1063 C1064 C1065 C1066 C1067 C1068 C1069 C1070 C1071 C1072 C1073 C1074 C1075

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 10

0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1070

10/5/2021 6:43 AM

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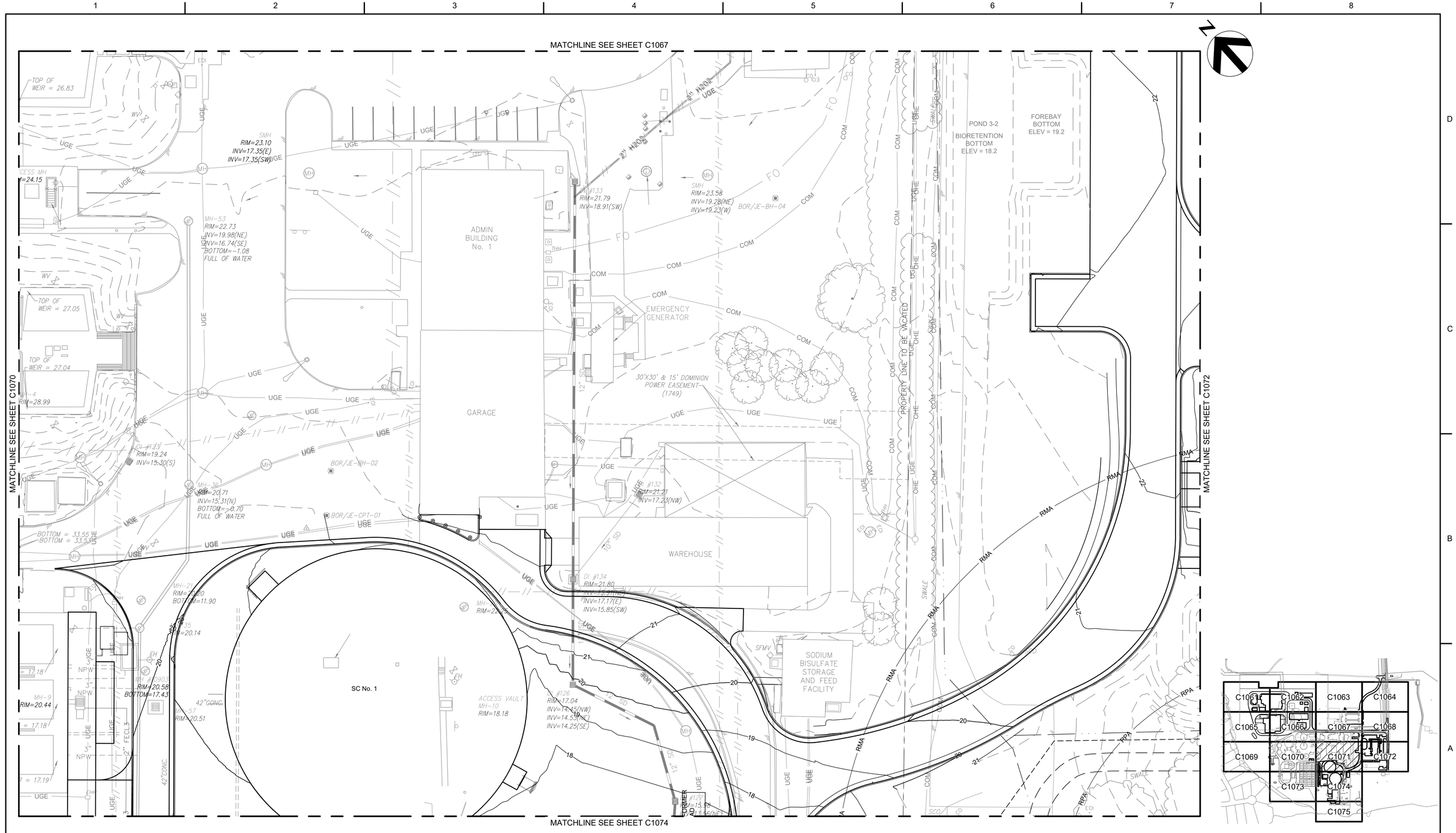

C:\pwworking\east\110209383\P2-C1060.dwg, C1071 PLAN 11, 10/5/2021 6:43:27 AM, ANMUELLER

10/5/2021 6:43 AM

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DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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HRSD

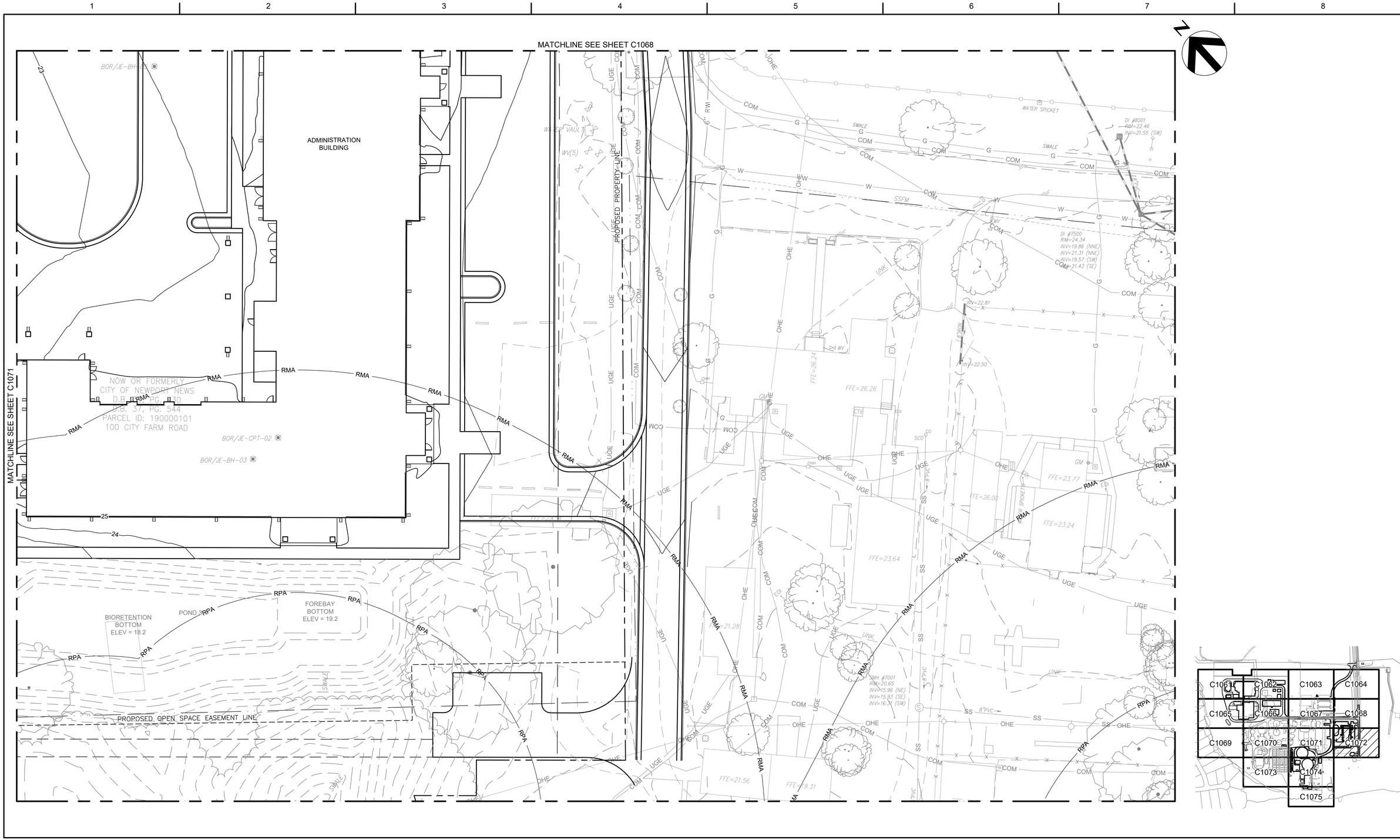
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 11

0 1" 2"

FILENAME	P2-C1060.DWG
SCALE	----

DWG NO. **C1071**



C:\pwworking\east01\d2090835\P2-C1060.dwg, C1072 PLAN 12, 10/5/2021 6:43:37 AM, ANMUELLER

10/5/2021 6:43 AM

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757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

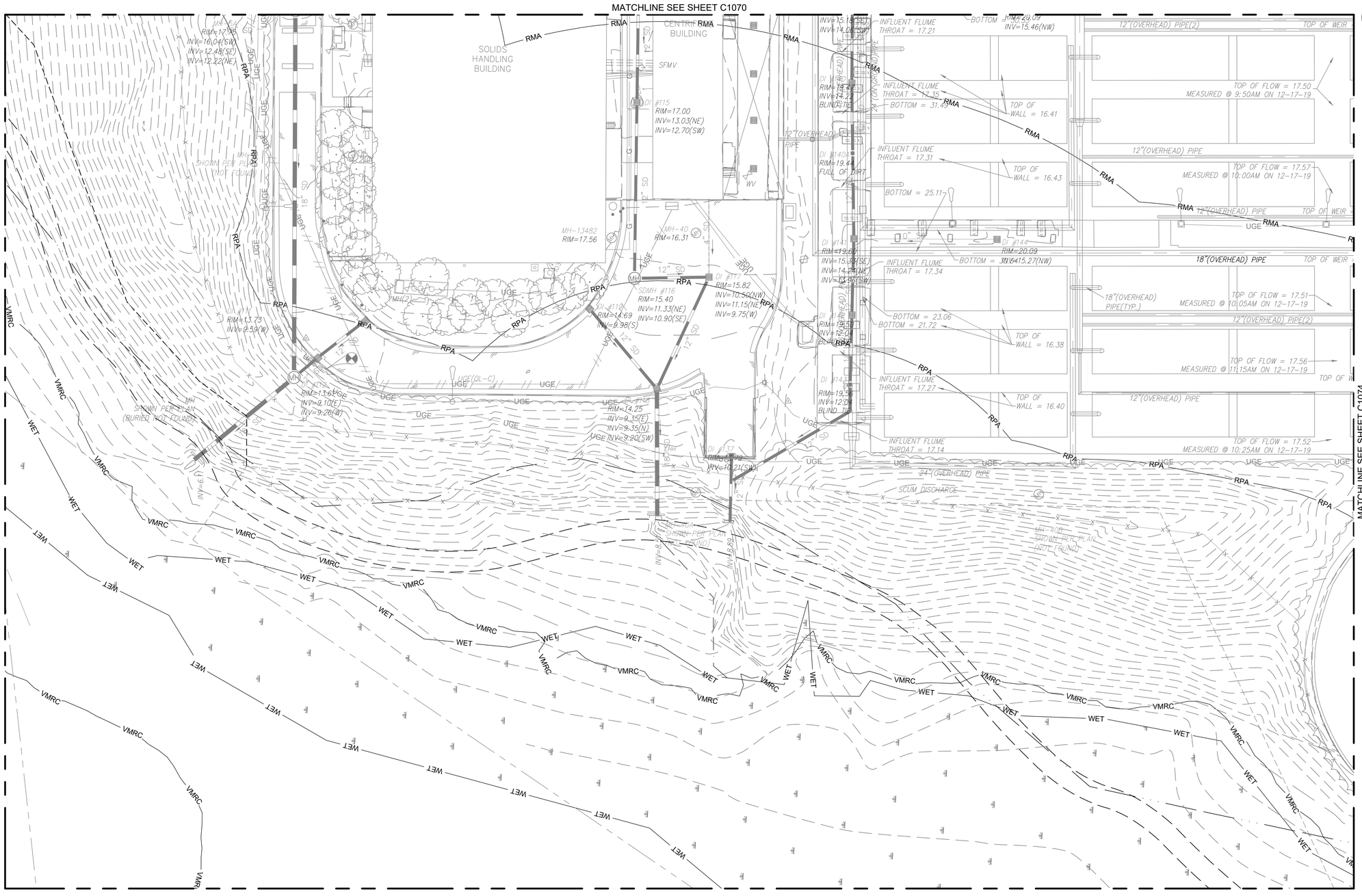
GRADING AND DRAINAGE PLAN 12

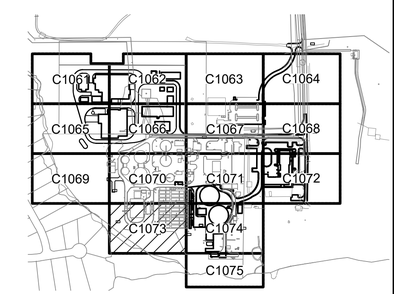
0 1" 2"

FILENAME P2-C1060.DWG

SCALE ----

DWG NO. C1072





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249 Central Park Ave., Ste 201
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757.222.1500

ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 13

0 1" 2"

FILENAME	P2-C1060.DWG
SCALE	----

DWG NO. C1073

10/5/2021 6:43 AM

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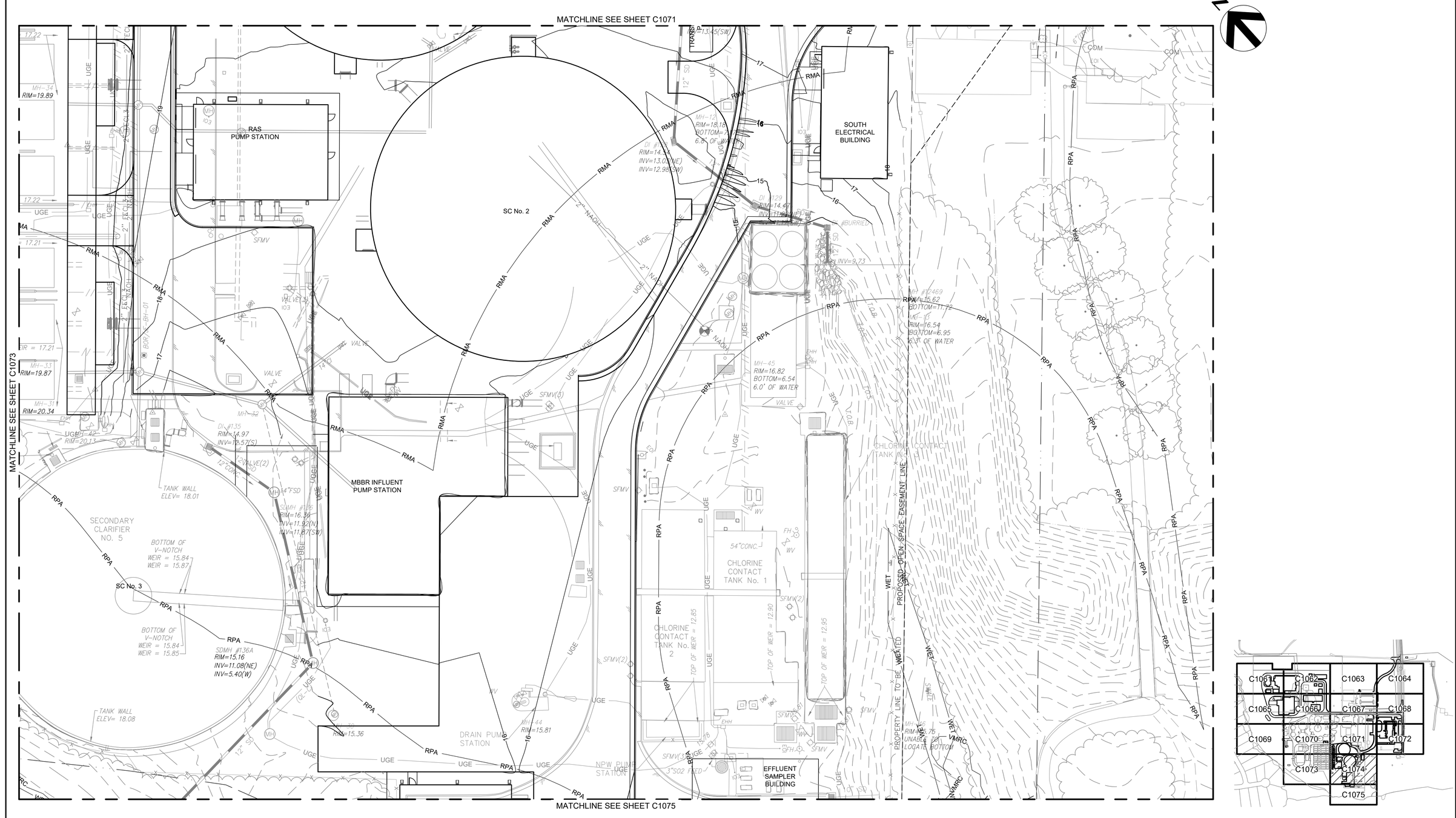

HDR
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Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 14

0 1" 2"

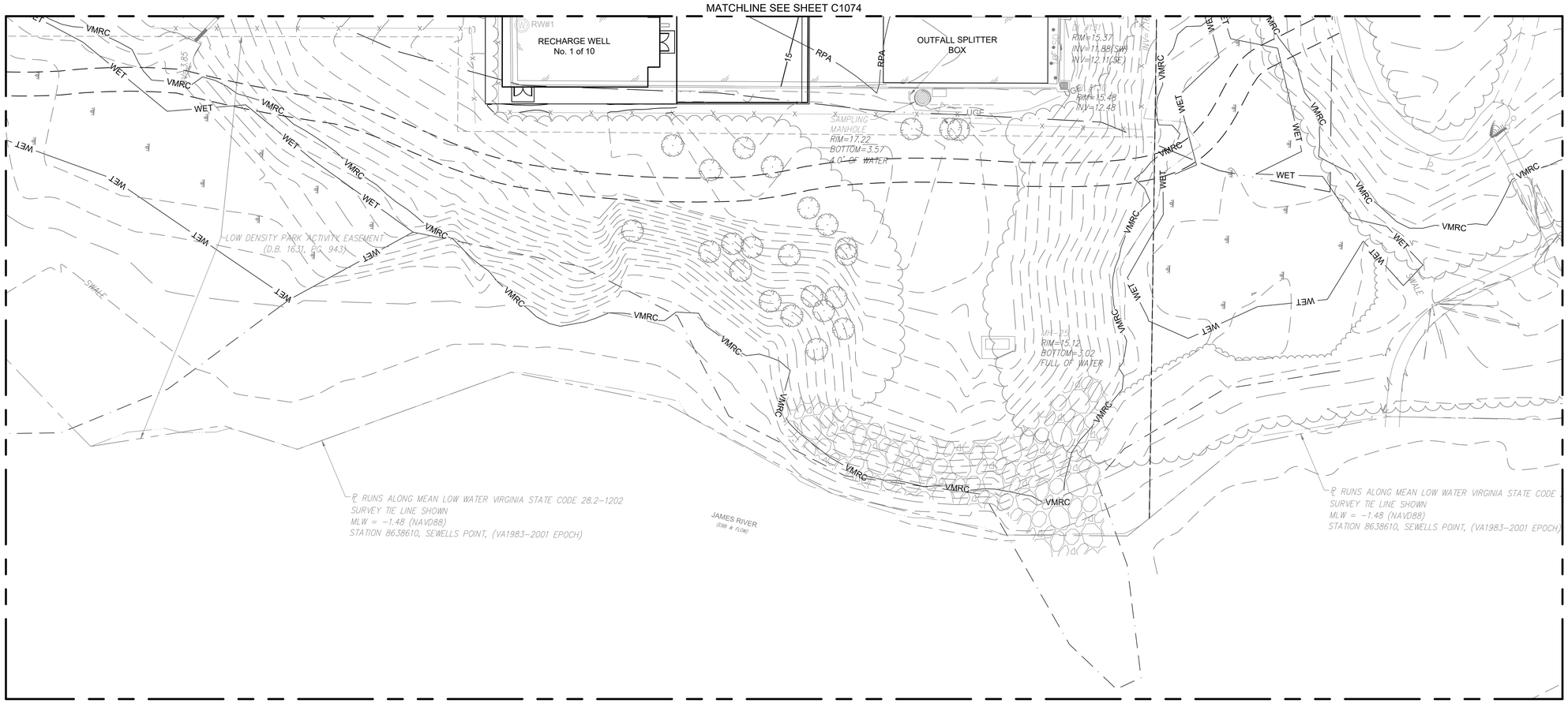
FILENAME P2-C1060.DWG

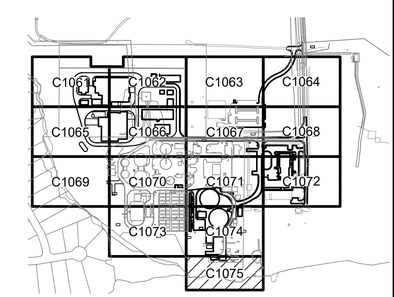
SCALE ----

DWG NO. C1074

C:\pwworking\east01\d2090835\P2-C1060.dwg, C1074 PLAN 14, 10/5/2021 6:43:54 AM, ANMUELLER

10/5/2021 6:43 AM





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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

GRADING AND DRAINAGE PLAN 15

0 1" 2"

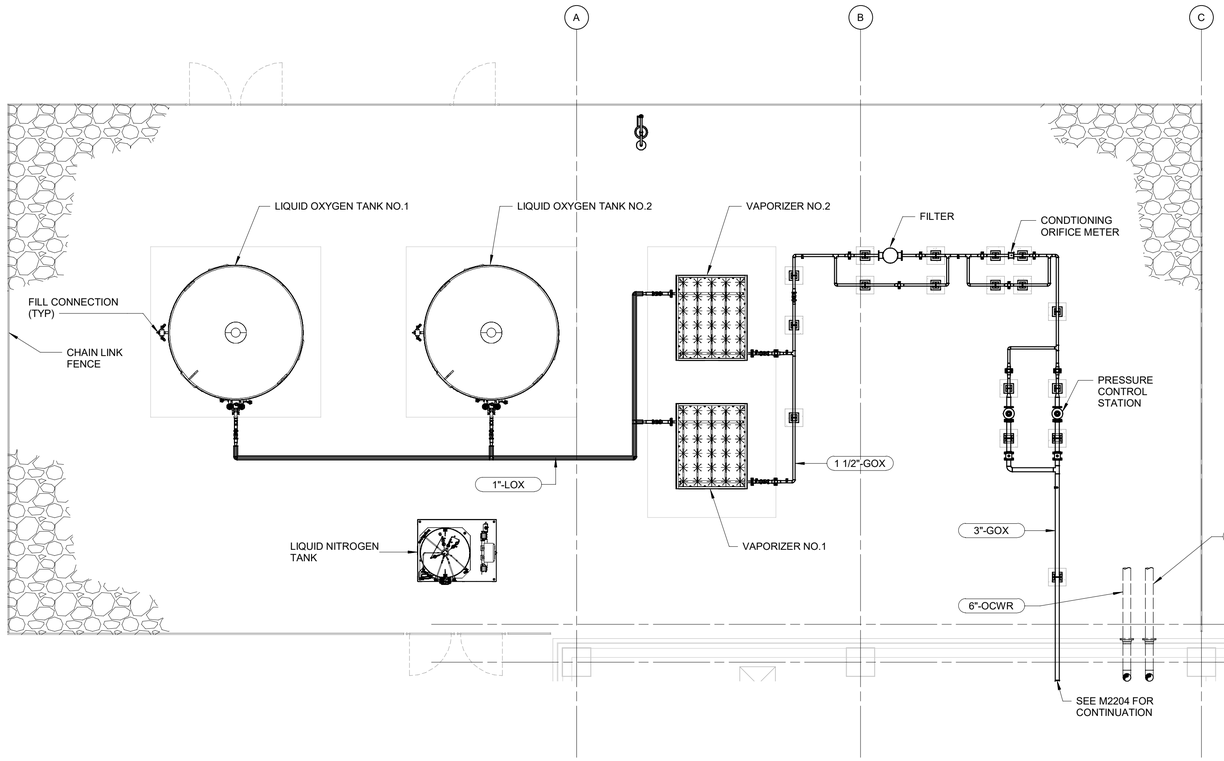
FILENAME P2-C1060.DWG

SCALE ----

DWG NO. **C1075**

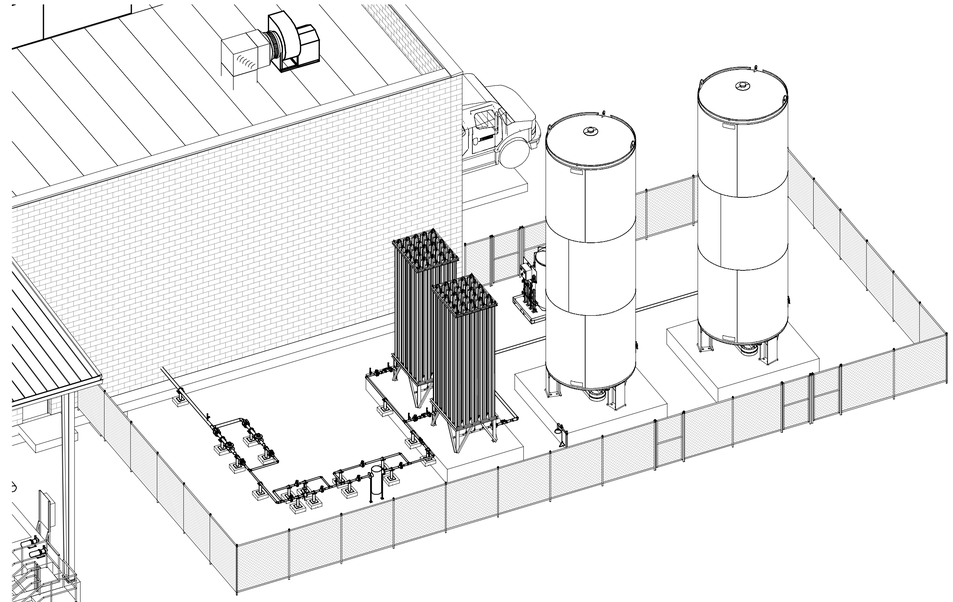
C:\pwworking\east01\d2090835\P2-C1060.dwg, C1075 PLAN 15, 10/5/2021 6:44:05 AM, ANMUELLER

10/5/2021 6:44 AM



LOX AREA PLAN

3/16" = 1'-0"



ISOMETRIC VIEW

GENERAL NOTES

1. --

KEY NOTES

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	X. XXXXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

LIQUID OXYGEN SYSTEM PLAN

0 1" 2"

FILENAME	10292462-2200-SPB1-M.rvt
SCALE	3/16" = 1'-0"

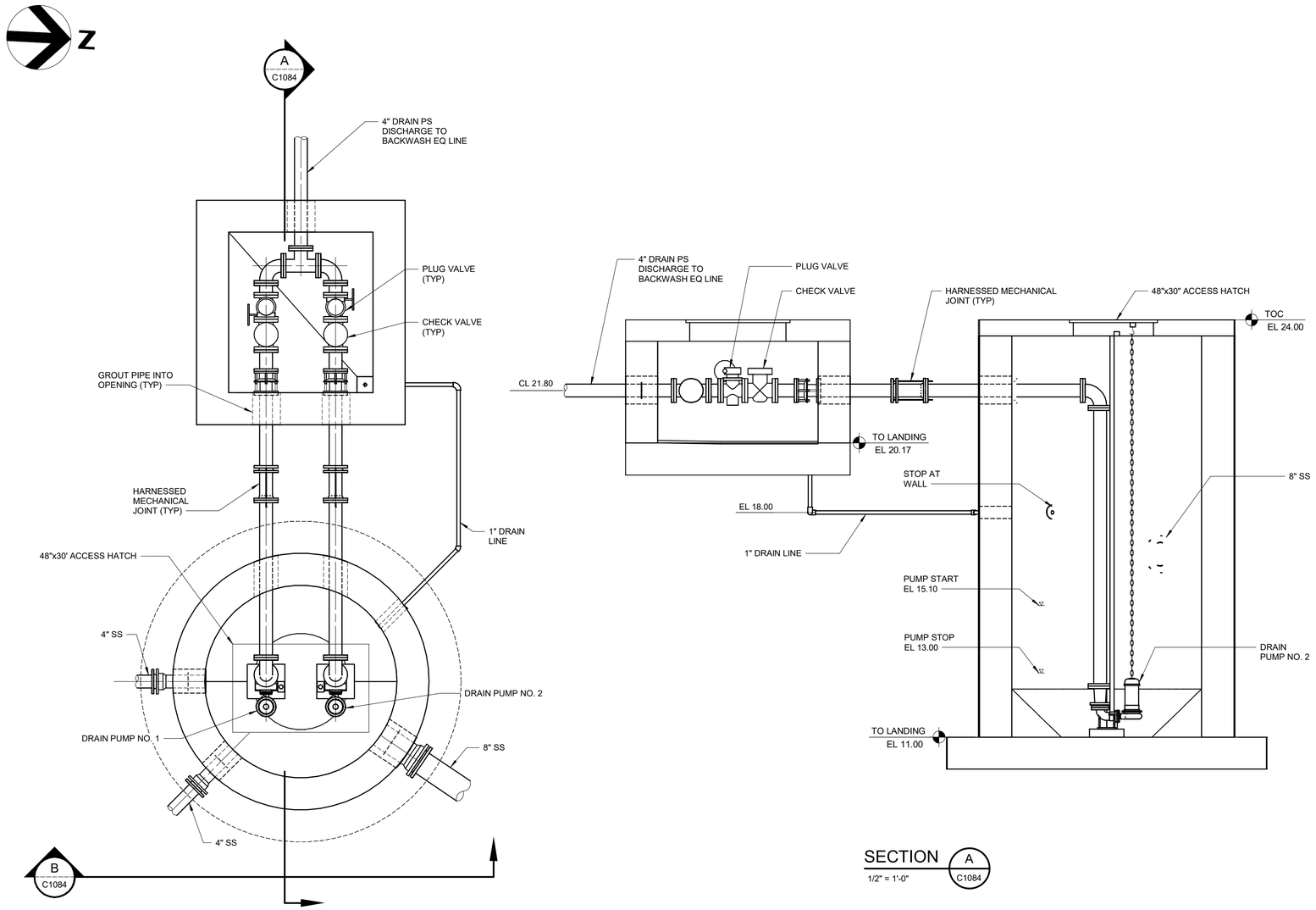
DWG NO. **C1081**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-M.rvt
10/6/2021 3:04:21 AM

GENERAL NOTES

1. --

KEY NOTES (#)



SECTIONAL PLAN
1/2" = 1'-0"

SECTION A C1084
1/2" = 1'-0"

SECTION B C1084
1/2" = 1'-0"

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	X. XXXXXX
PROJECT NUMBER	10292462

US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

DRAINAGE PUMP STATION PLAN AND SECTIONS

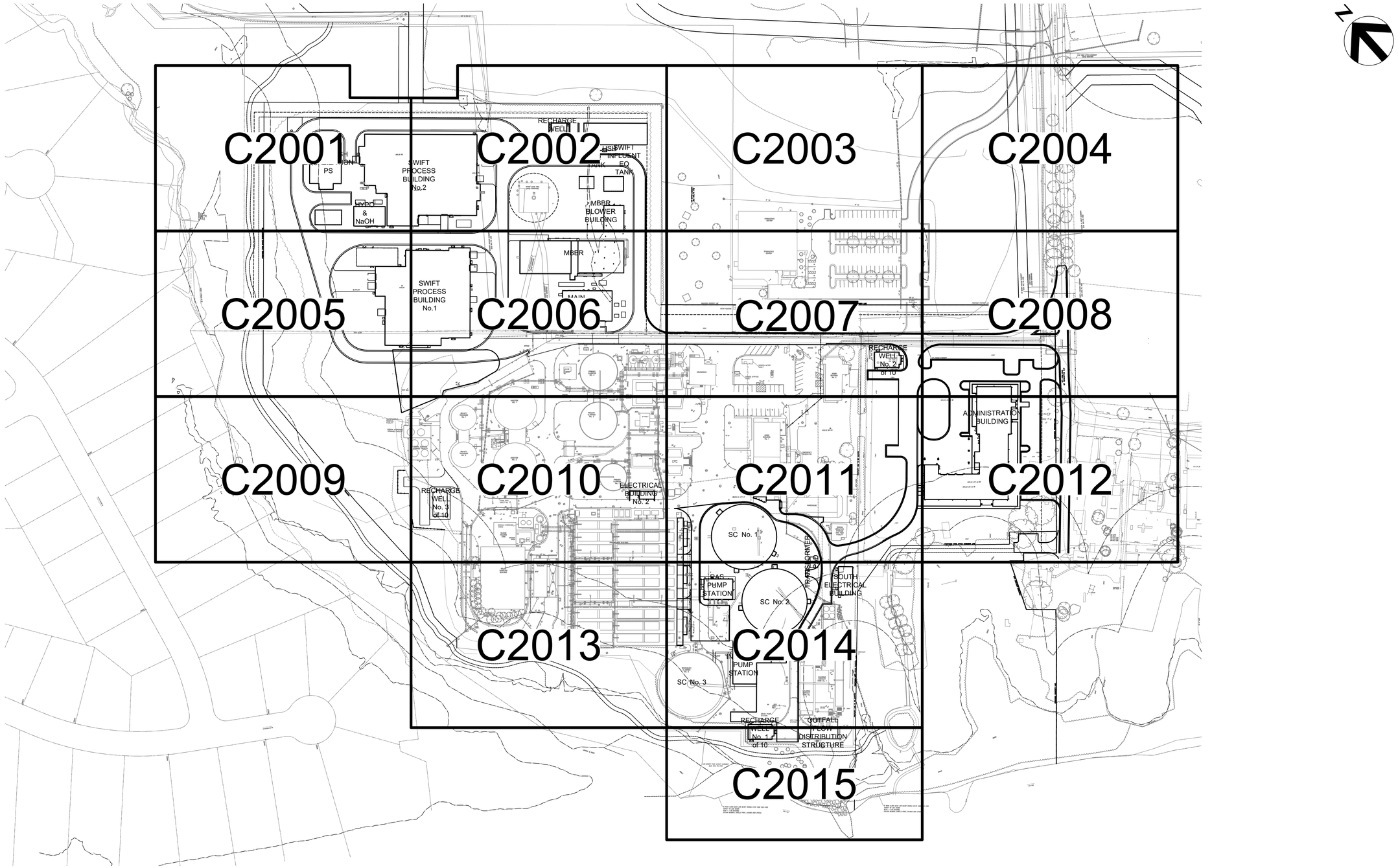
0 1" 2"

FILENAME 10292462-2100-DPS-M.rvt

SCALE 1/2" = 1'-0"

DWG NO. C1084

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2100-DPS-M.rvt
10/6/2021 1:09:24 AM



C:\pwworking\east01\d2090835\P2-02C-Keys.dwg, C2000 OVERALL KEY PLAN, 10/5/2021 7:09:25 AM, ANMUELLER

10/5/2021 7:09 AM

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

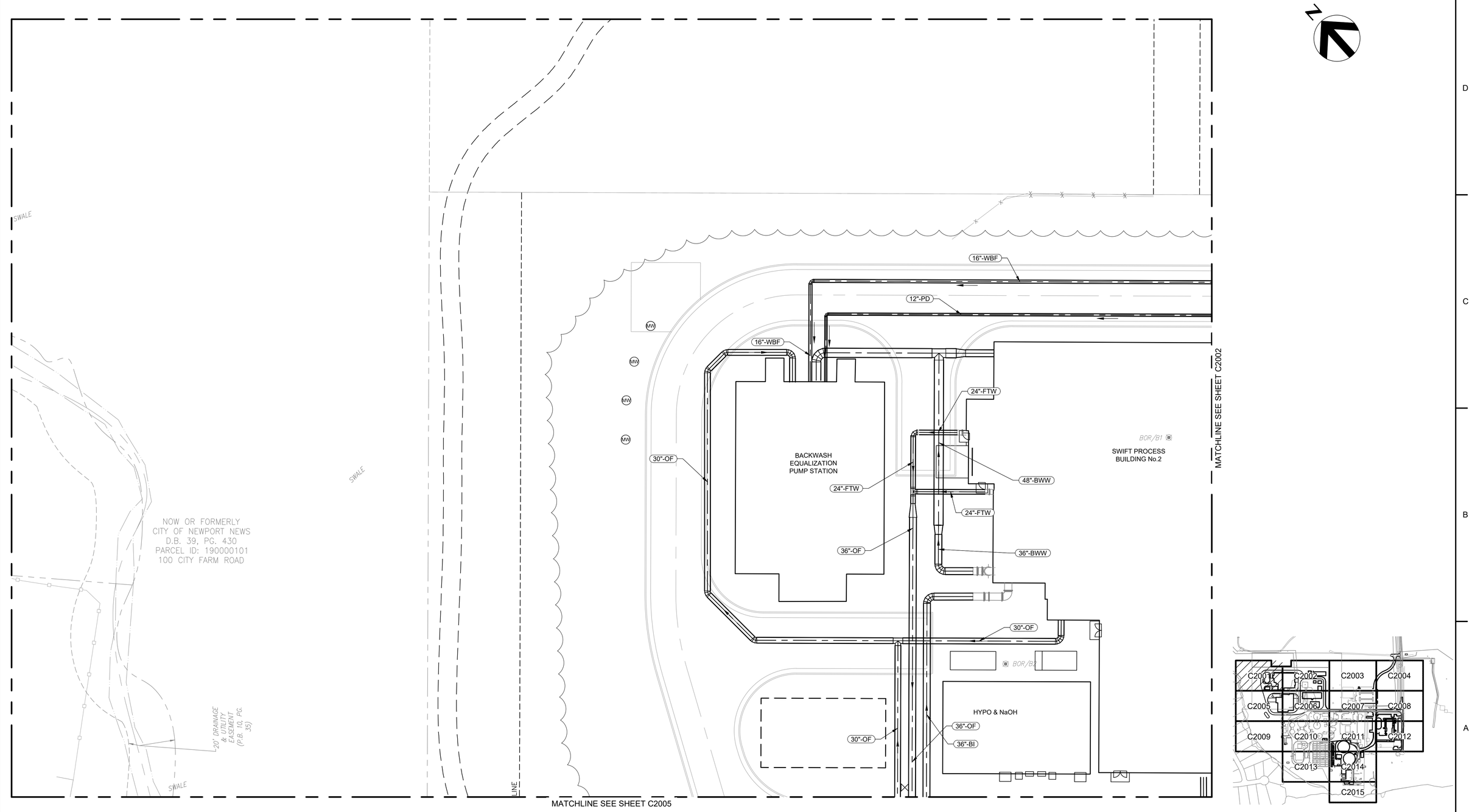
YARD PIPING OVERALL KEY PLAN

0 1" 2"

FILENAME P2-02C-KEYS.DWG

SCALE ----

DWG NO. C2000



C:\pwworking\east01\d2090835\P2-C2000.dwg, C2001 PLAN 1, 10/5/2021 6:38:30 AM, ANMUELLER

10/5/2021 6:38 AM

HDR
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PROJECT ENGINEER	D. SISSON
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 1

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2001

##

HDR
US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 2

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. **C2002**

##

10/5/2021 6:38 AM
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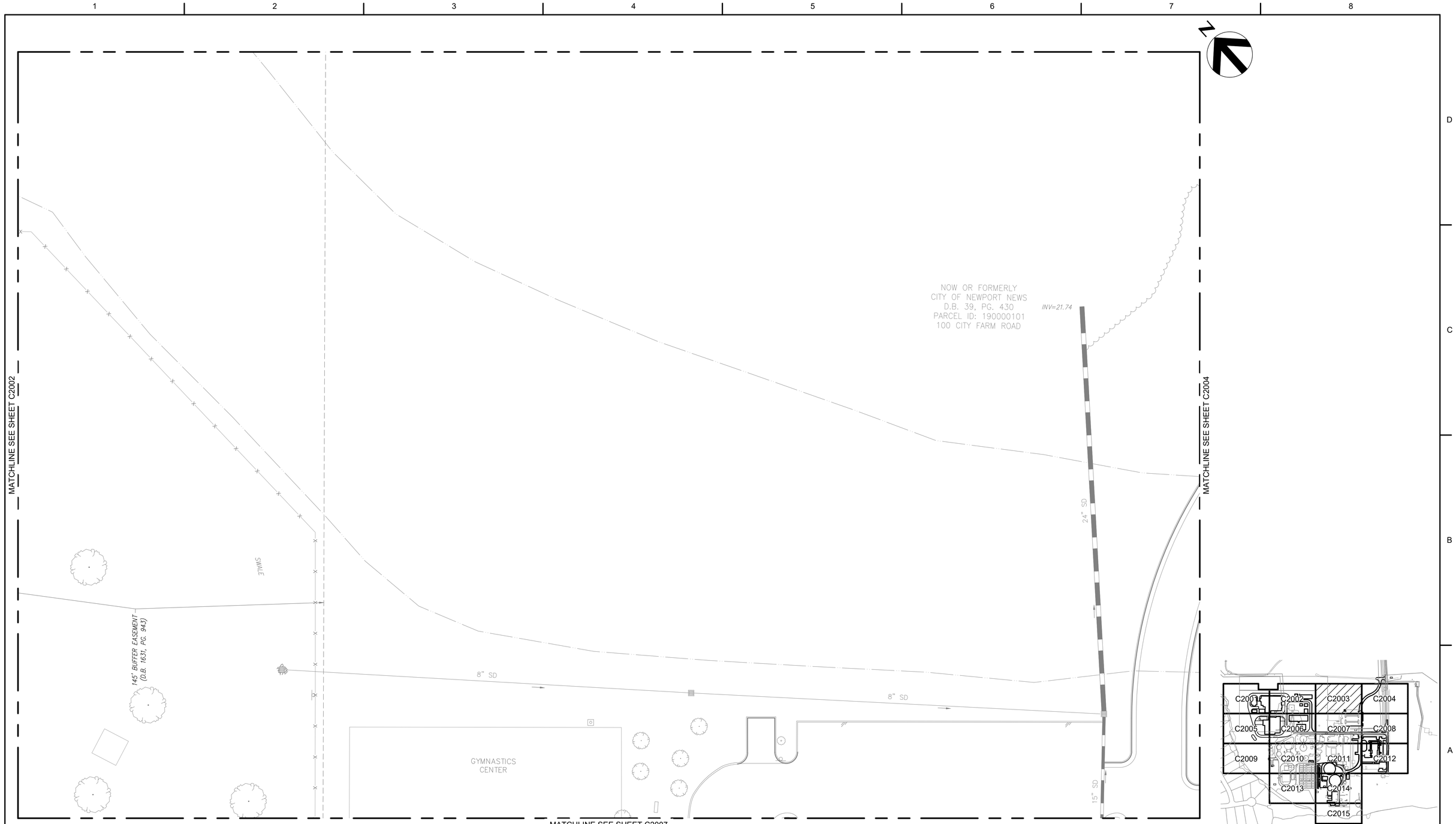

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 3

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2003

##

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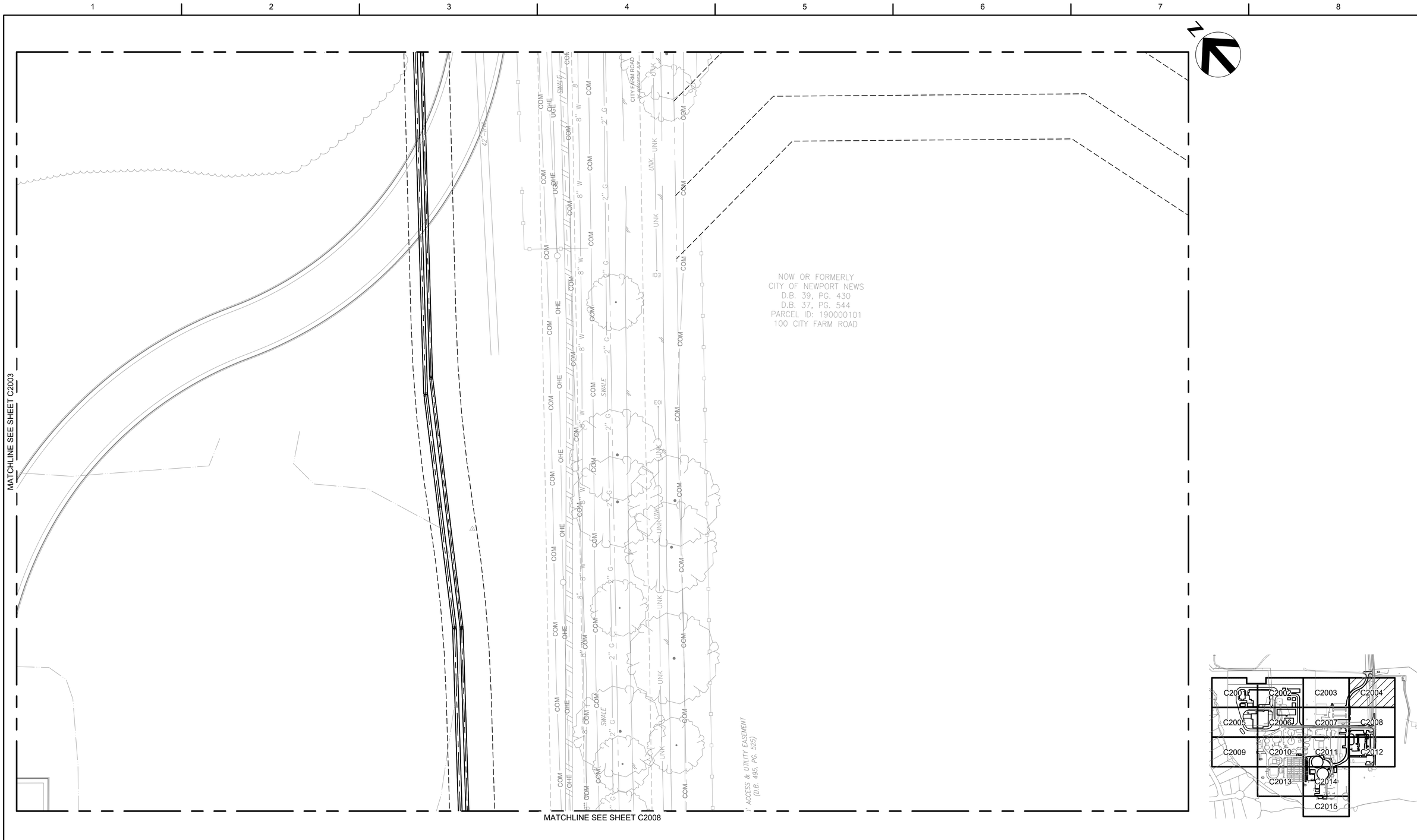
10/5/2021 6:38 AM



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10/5/2021 6:38 AM

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	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 4

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. **C2004**
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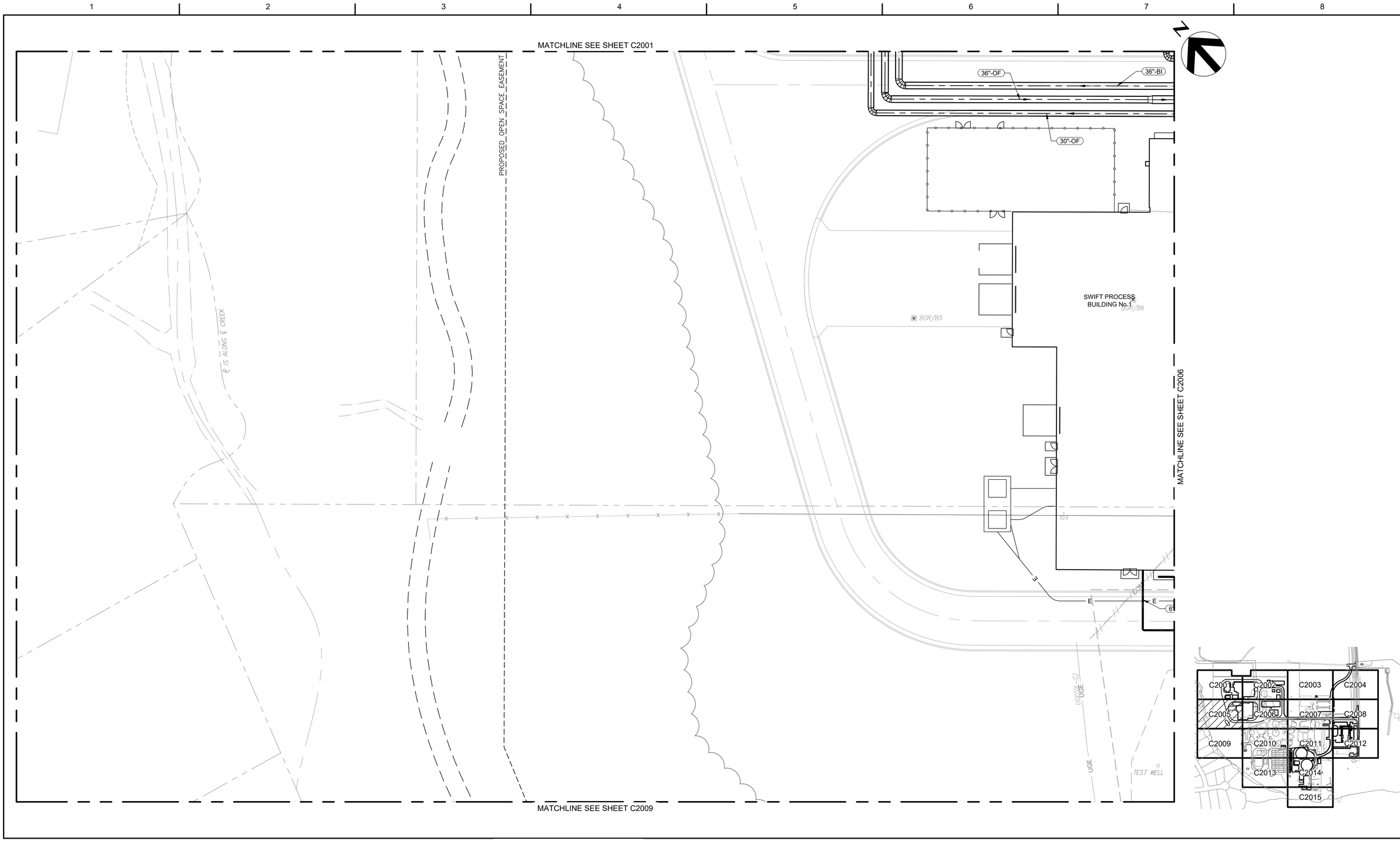

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 5

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2005

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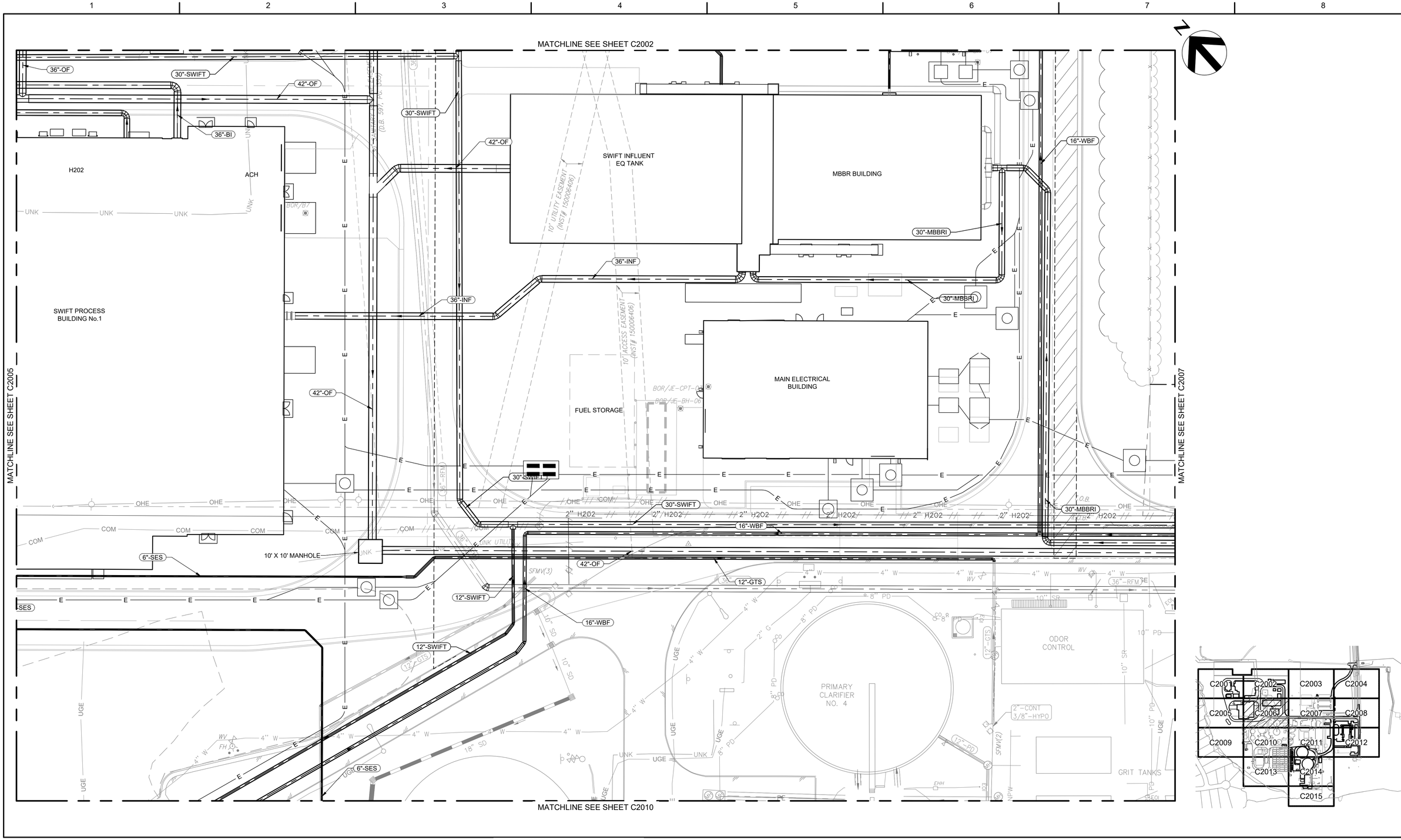
10/5/2021 6:39 AM



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 6

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. C2006
##

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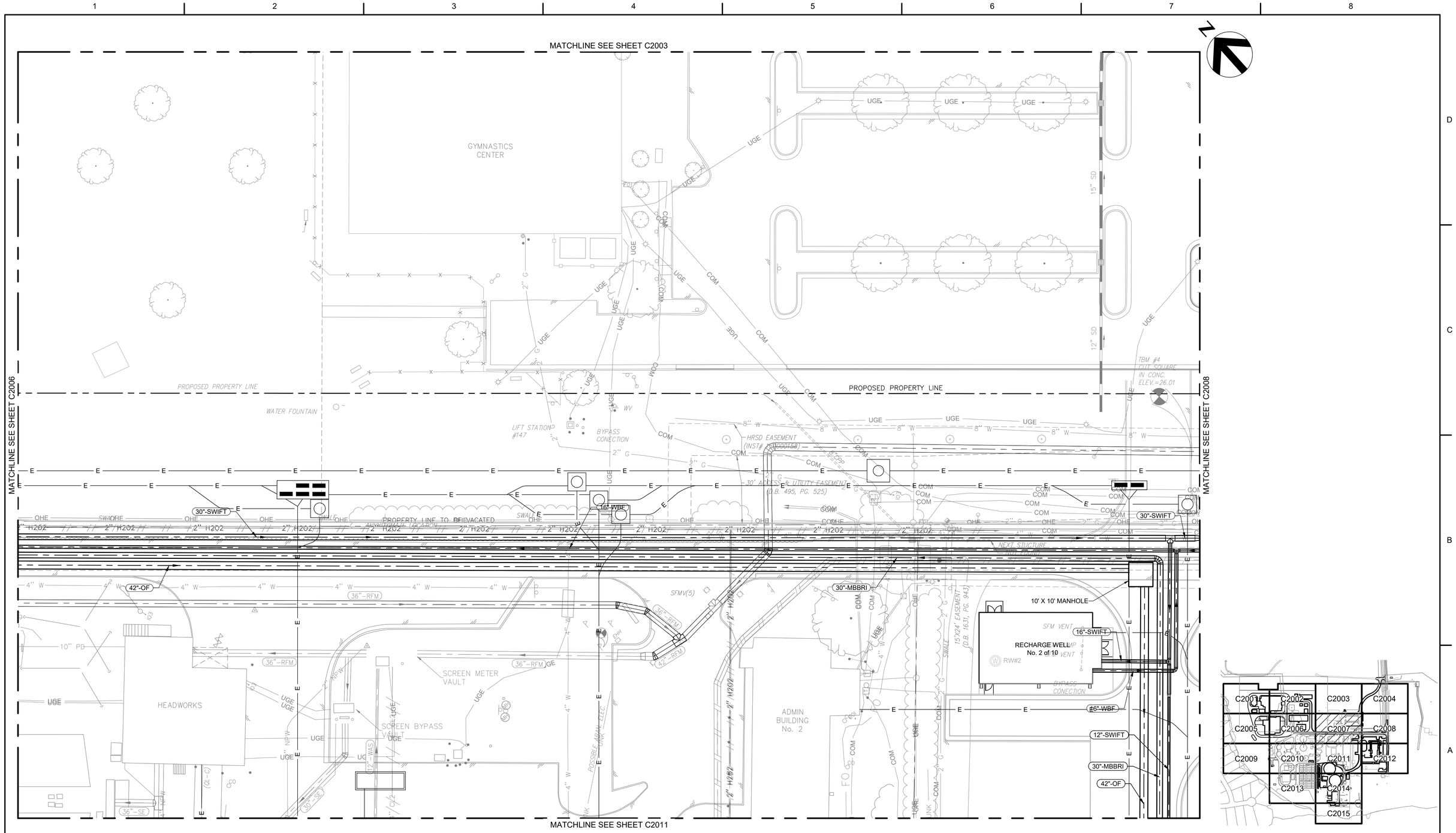
10/5/2021 6:39 AM



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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 7

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. C2007
##

10/5/2021 6:39 AM

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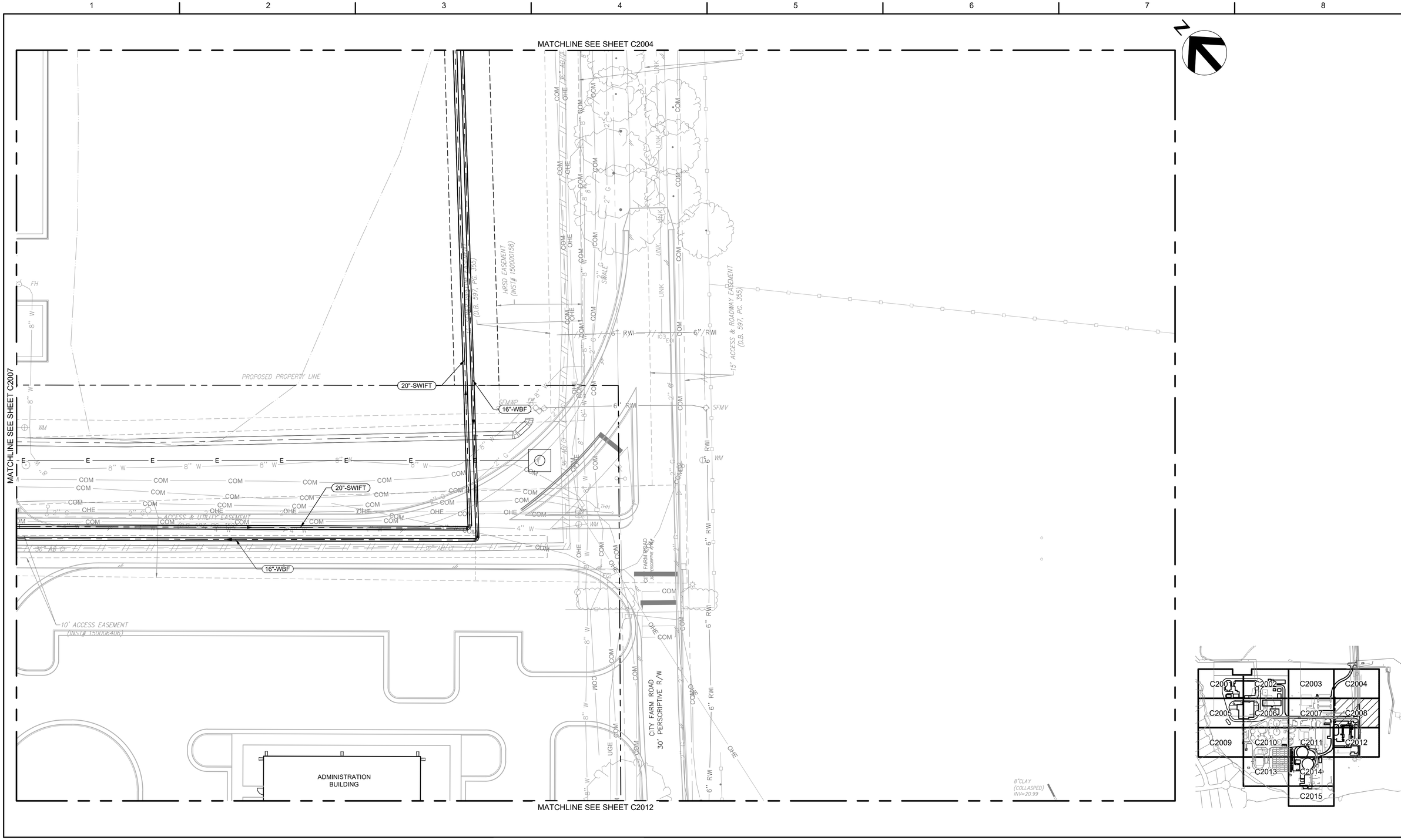

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US-A
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 8

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. C2008
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C:\pwworking\east01\d0290835\P2-C2000.dwg, C2008 PLAN 8, 10/5/2021 6:39:19 AM, ANMUELLER
10/5/2021 6:39 AM

MATCHLINE SEE SHEET C2005

NOW OR FORMERLY
THE LAINE TRUST
INST# 140014246
P.B. 13, PG. 25
PARCEL ID: 189000408
12 HORSE PEN RD

NOW OR FORMERLY
JOSE A. DeJESUS CINTRON &
ELIZABETH A. DeJESUS CINTRON
INST# 160015549
P.B. 13, PG. 25
PARCEL ID: 189000409
10 HORSE PEN RD

NOW OR FORMERLY
SCOT B. GERE &
ANNE-LISE GERE
INST# 080014082
P.B. 13, PG. 25
PARCEL ID: 189000410
8 HORSE PEN RD

NOW OR FORMERLY
RONALD K. WATROUS &
MICHELLE T. WATROUS
D.B. 2181, PG. 1573

NOW OR FORMERLY
HAMPTON ROADS SANITATION DISTRICT
D.B. 495, PG. 525
PARCEL ID: 190000114
101 CITY FARM RD

PROPOSED OPEN SPACE EASEMENT LINE

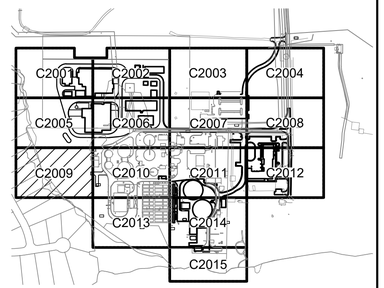
UGE

EHS

PHOSPHOROUS REMOVAL FACILITY

SODIUM HYDROXIDE STORAGE FACILITY

MATCHLINE SEE SHEET C2010



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PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 9

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. **C2009** ##

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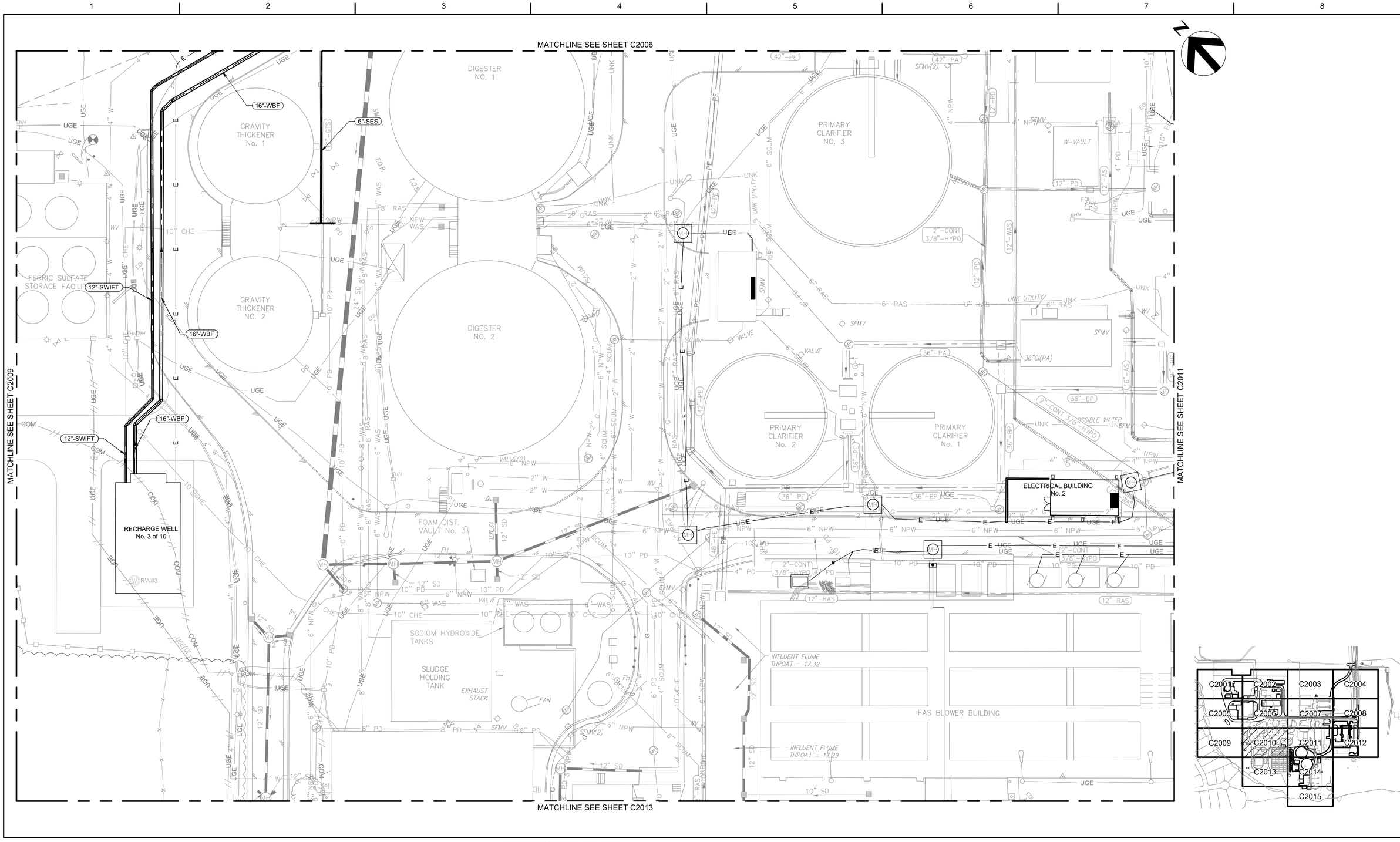
10/5/2021 6:39 AM



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757.222.1500

ISSUE	DATE	DESCRIPTION
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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 10

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2010

C:\pwworking\east01\d2090835\P2-C2000.dwg, C2010 PLAN 10, 10/6/2021 10:33:58 AM, ANMUELLER

10/6/2021 10:34 AM

MATCHLINE SEE SHEET C2007

MATCHLINE SEE SHEET C2010

MATCHLINE SEE SHEET C2012

MATCHLINE SEE SHEET C2014

ADMIN BUILDING No. 1

GARAGE

EMERGENCY GENERATOR

WAREHOUSE

SODIUM BISULFATE STORAGE AND FEED FACILITY

SC No. 1

30'X30' & 15' DOMINION POWER EASEMENT (1749)

PROPERTY LINE TO BE VACATED

10' X 10' MANHOLE

UNK POSSIBLE FUEL OIL

BOR/JE-BH-04

BOR/JE-BH-02

BOR/JE-CPT-01

42"-SCE (TEMP)

48"-SCI

42"-OF

30"-MBBRI

12"-SWIFT

C2001 C2002 C2003 C2004
C2005 C2006 C2007 C2008
C2009 C2010 C2011 C2012
C2013 C2014
C2015

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
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PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 11

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2011 ##

10/5/2021 6:39 AM

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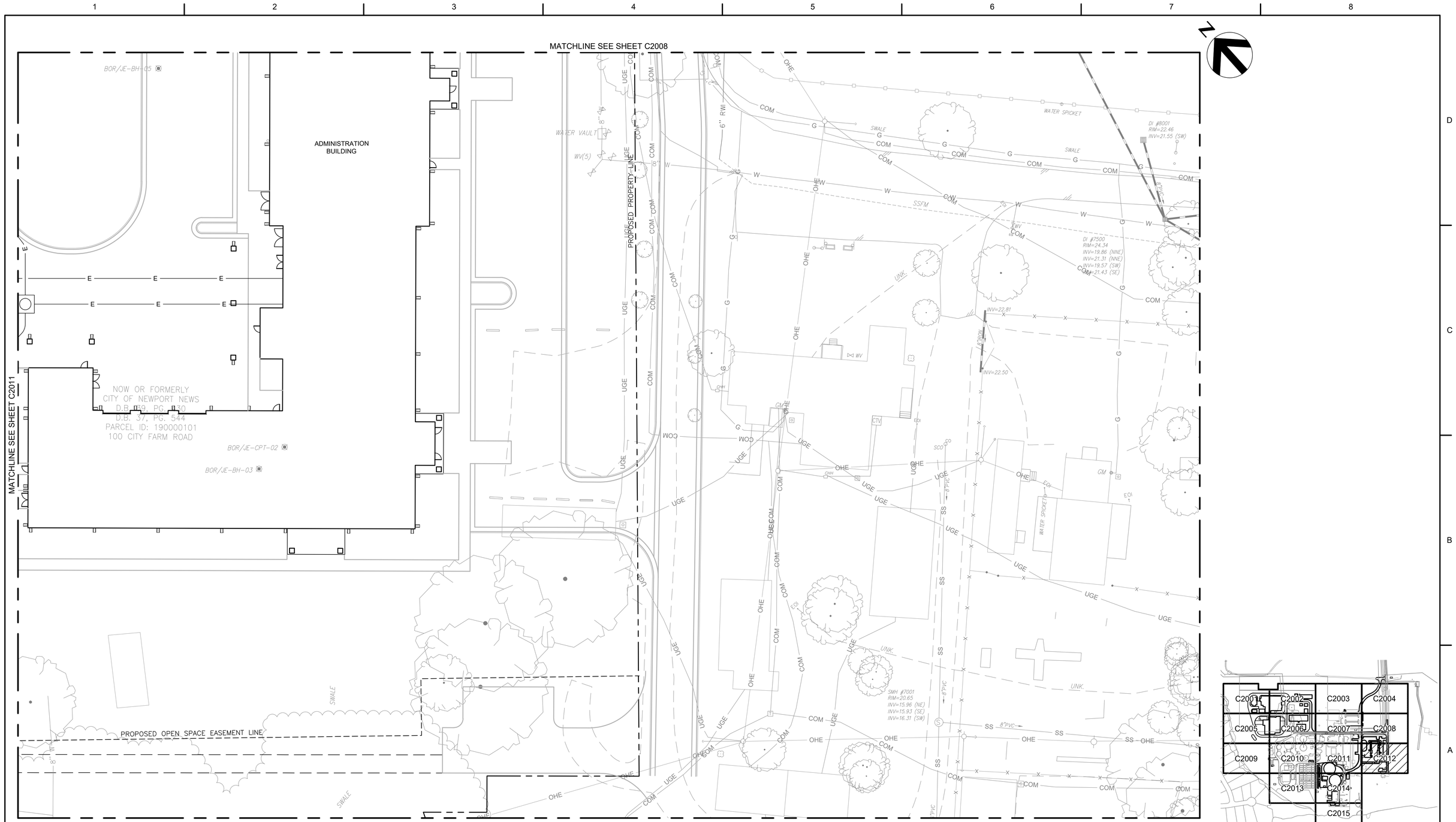

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	D. SISSON
DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 12

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. **C2012** ##

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10/5/2021 6:39 AM

MATCHLINE SEE SHEET C2010

MATCHLINE SEE SHEET C2014

SOLIDS HANDLING BUILDING

CENTRIFUGE BUILDING

INFLUENT FLUME THROAT = 17.21

INFLUENT FLUME THROAT = 17.35

INFLUENT FLUME THROAT = 17.31

INFLUENT FLUME THROAT = 17.34

INFLUENT FLUME THROAT = 17.27

INFLUENT FLUME THROAT = 17.14

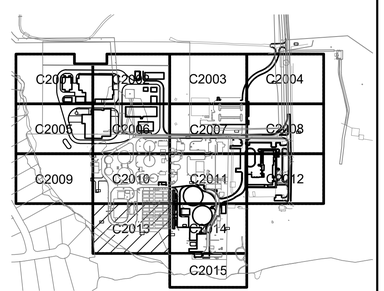
SCUM DISCHARGE

MH SHOWN PER PLAN (BURIED NOT FOUND)

INV=6.11

INV=8.51

INV=8.89



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DESIGNED BY	B. REBIK
CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 13

0 1" 2"

FILENAME P2-C2000.DWG

SCALE ----

DWG NO. C2013 ##

10/5/2021 6:39 AM

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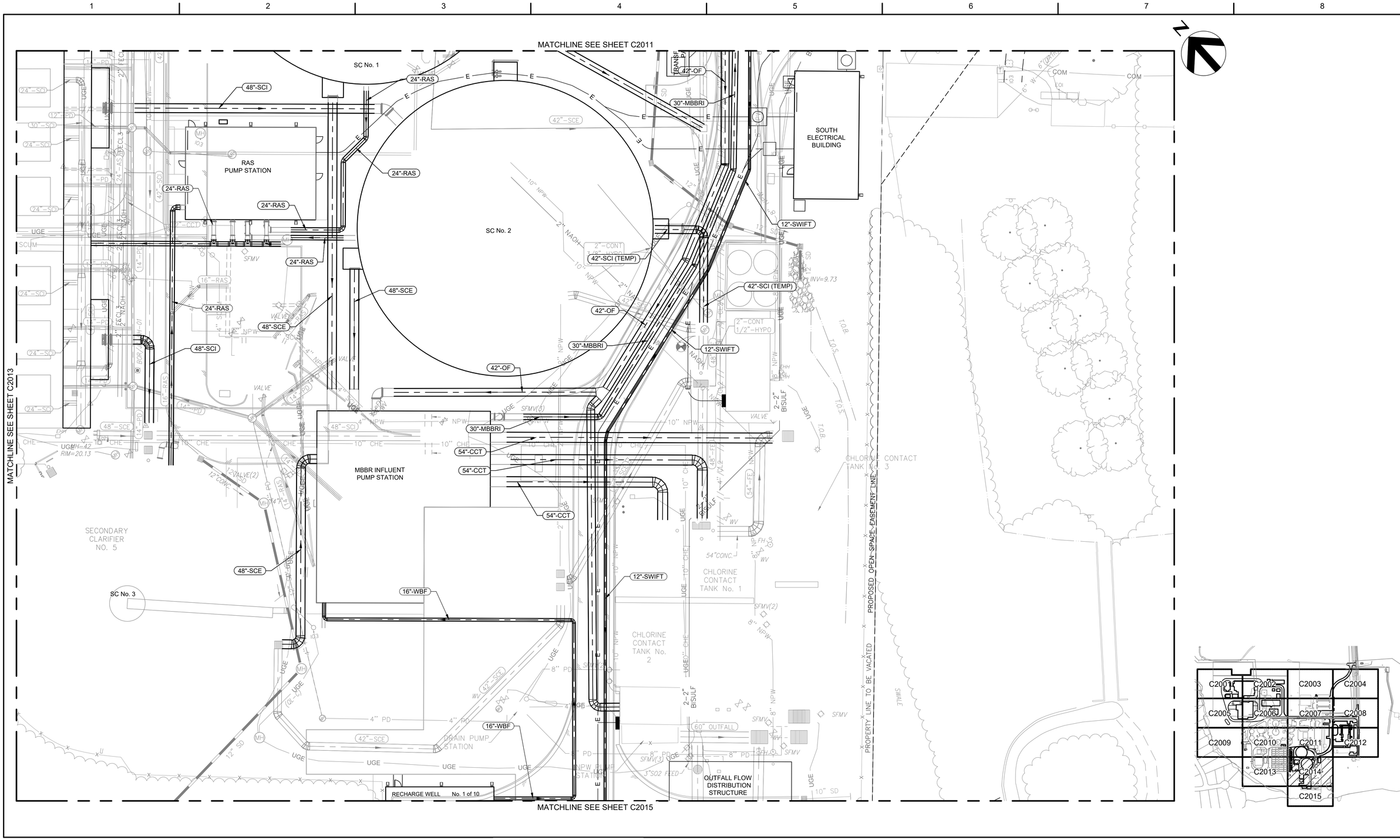

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CHECKED BY	C. COWGILL
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PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

YARD PIPING PLAN 14

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. C2014
##

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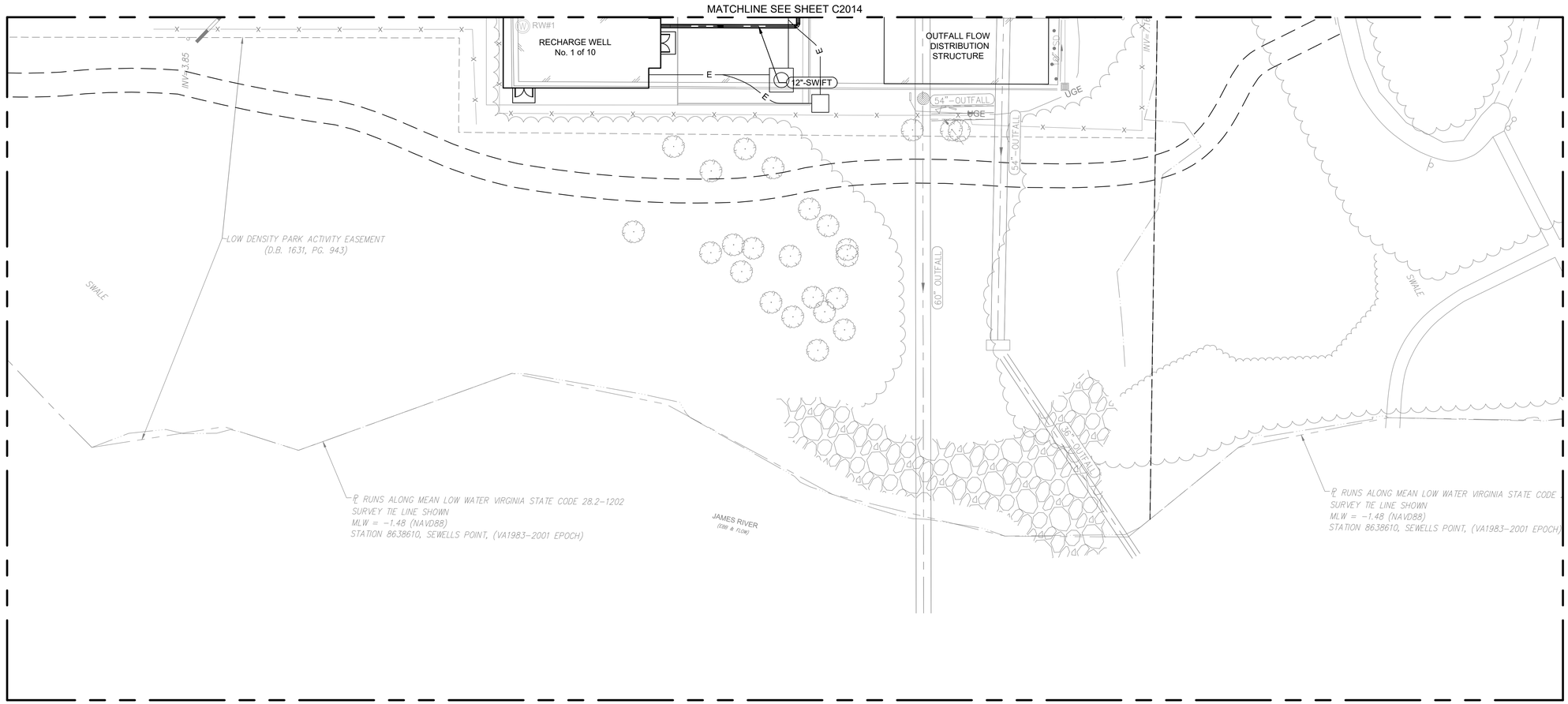
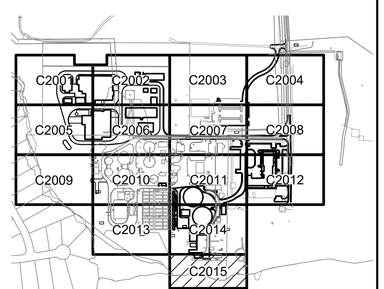
10/5/2021 6:40 AM





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CHECKED BY	C. COWGILL
DRAWN BY	A. MUELLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

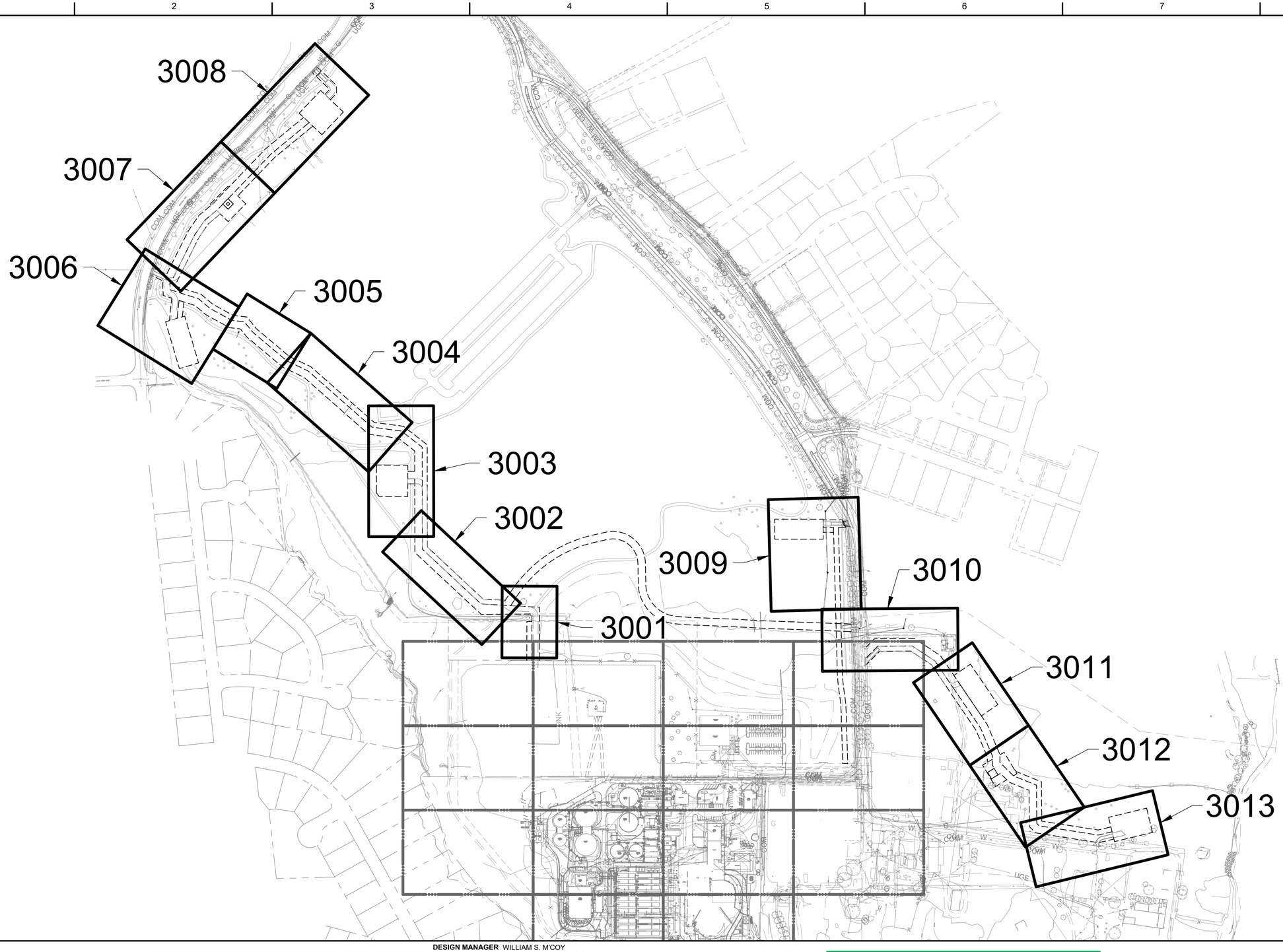
YARD PIPING PLAN 15

0 1" 2"

FILENAME P2-C2000.DWG
SCALE ----

DWG NO. C2015
##

C:\pwworking\east01\d0908383\P2-C2000.dwg C2015 PLAN 15, 10/5/2021 6:40:07 AM, ANMUELLER
10/5/2021 6:40 AM



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION OVERALL KEY PLAN

0 1" 2"

FILENAME C3000.DWG
SCALE 1" = 200'

DWG NO. C3000

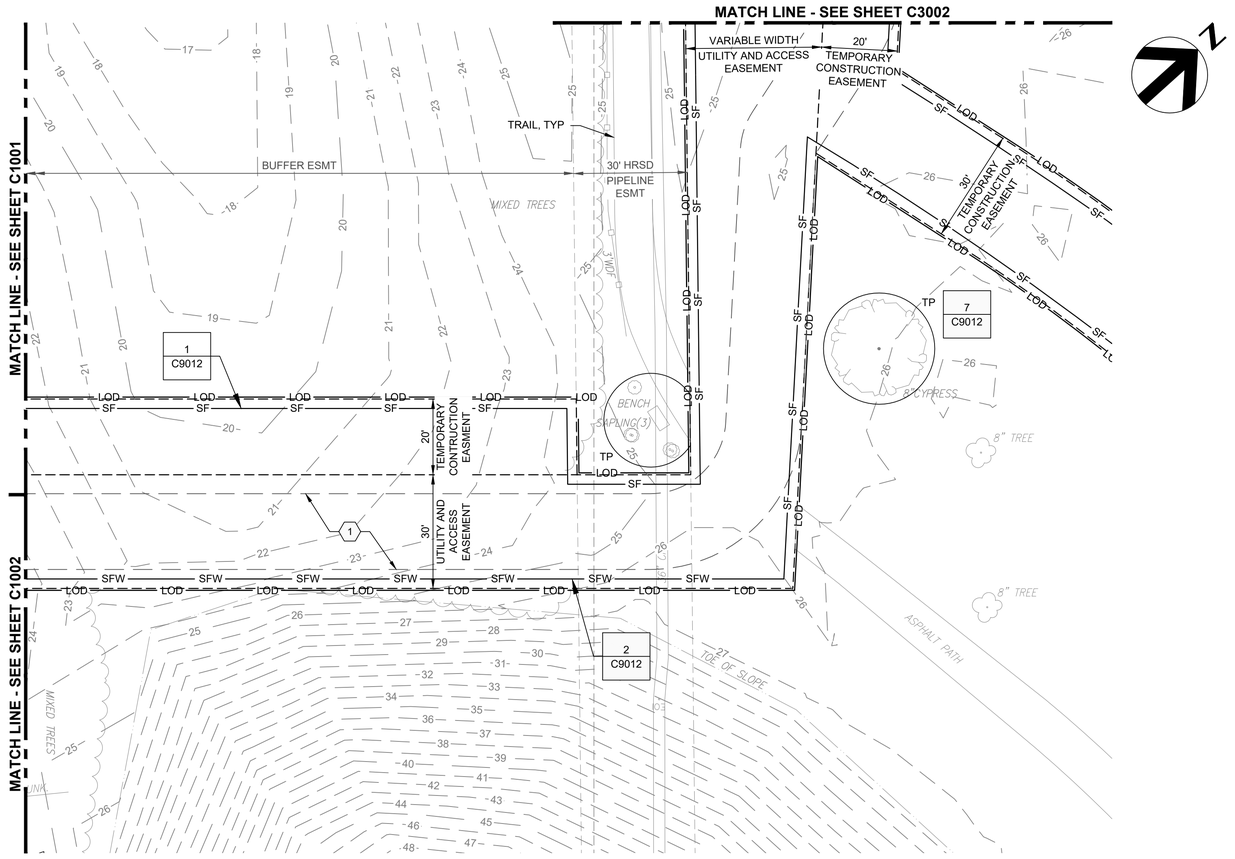
10/4/2021 2:48 PM

GENERAL NOTES

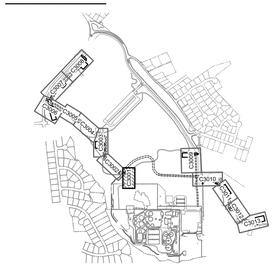
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES ⬡

1. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 8 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 8 FOR WELL INSTALLATION CONSTRUCTION



KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 1

0 1" 2"

FILENAME C3001.DWG
SCALE 1" = 20'

DWG NO. **C3001**

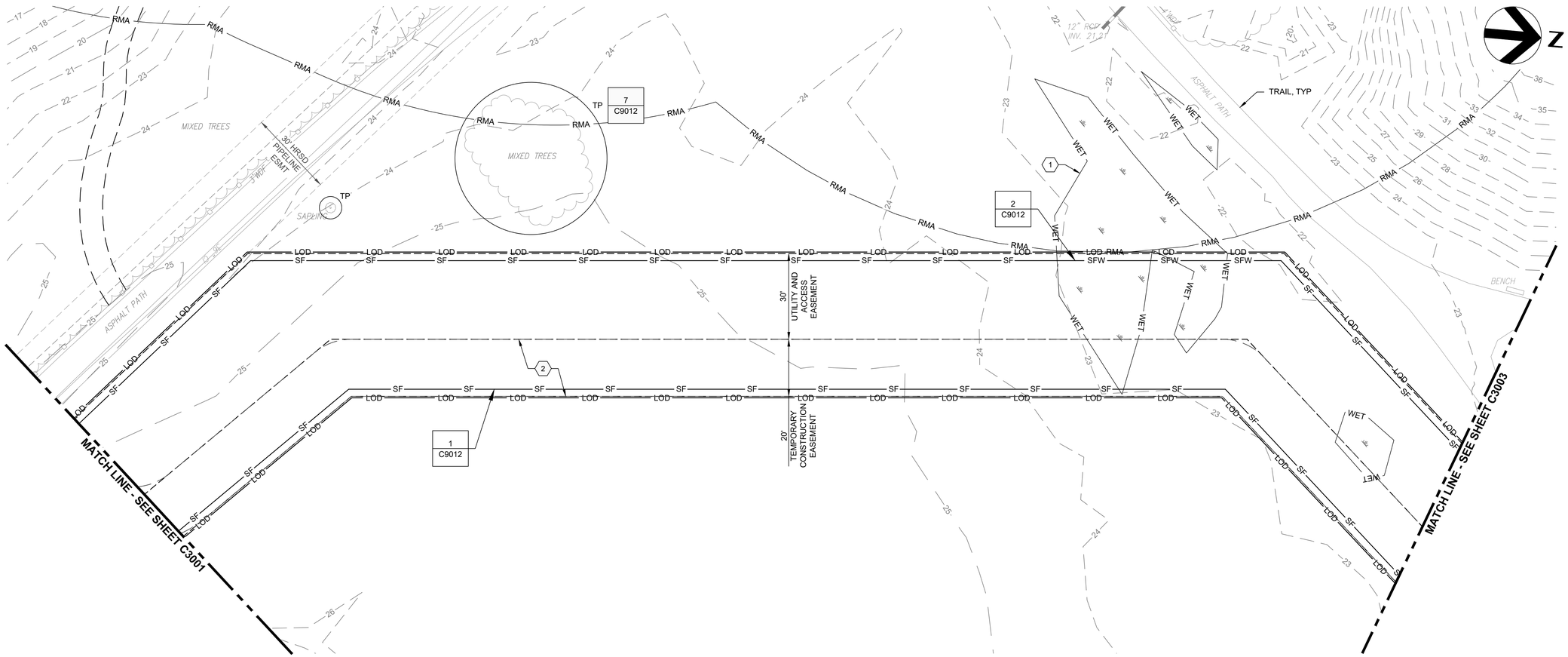
10/4/2021 2:13 PM

GENERAL NOTES

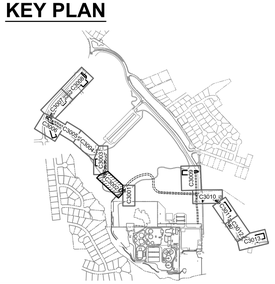
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. LIMITS OF WETLANDS. CONSTRUCTION SHALL NOT DISTURB WETLANDS OUTSIDE OF EASEMENT
2. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 8 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 8 FOR WELL INSTALLATION CONSTRUCTION



KEY PLAN



	10/2021	30% DESIGN SUBMITTAL
ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 2

0 1" 2"

FILENAME	C3002.DWG
SCALE	1" = 20'
DWG NO.	C3002

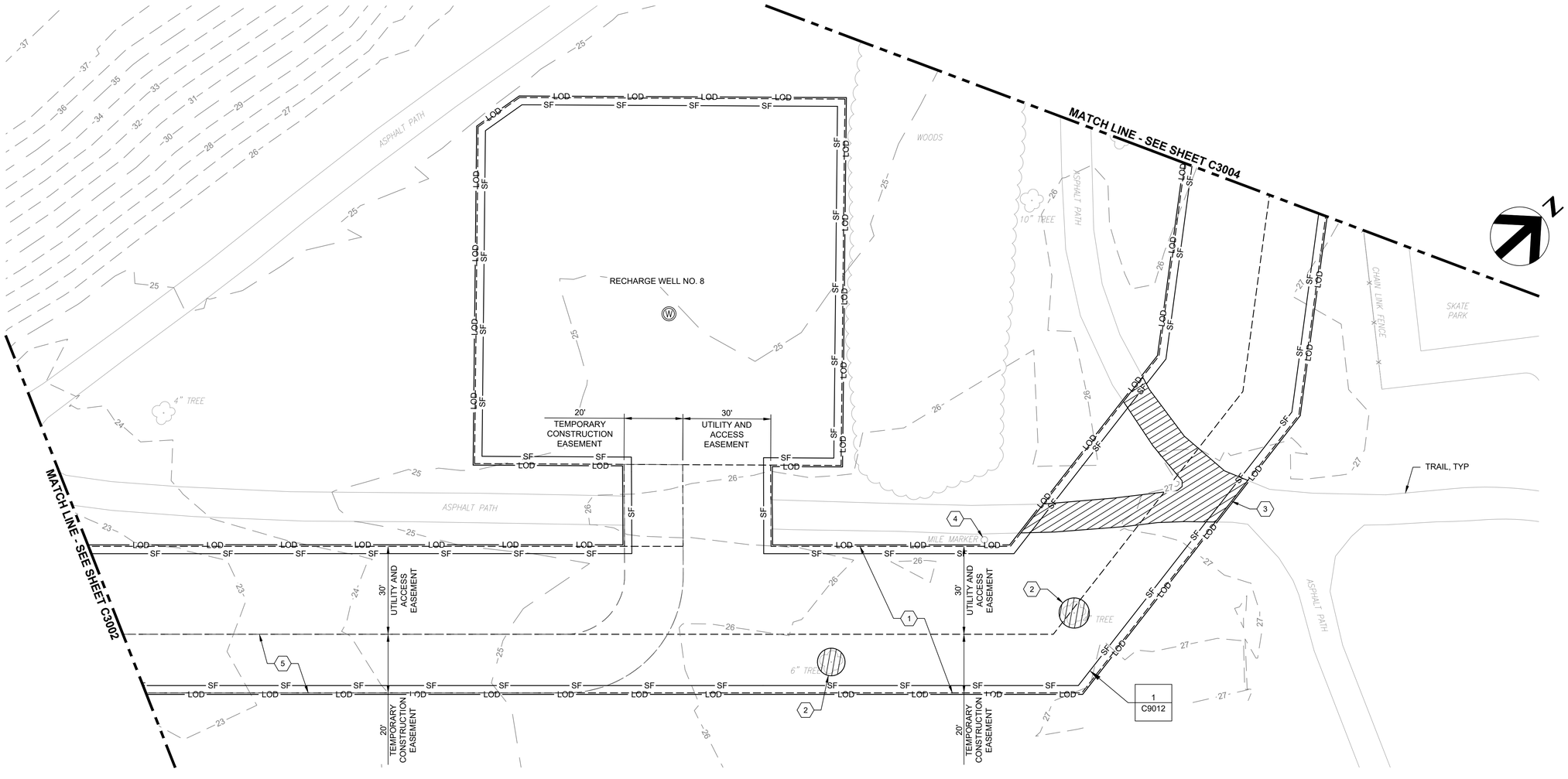
10/4/2021 2:15 PM

GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. CLEAR AND GRUB TREE
3. DEMOLISH ASPHALT PATHWAY
4. DO NOT DISTURB MILE MARKER
5. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 8 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 8 FOR WELL INSTALLATION CONSTRUCTION



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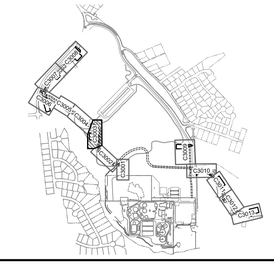

DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 3

0 1" 2"

FILENAME	C3003.DWG
SCALE	1" = 20'
DWG NO.	C3003

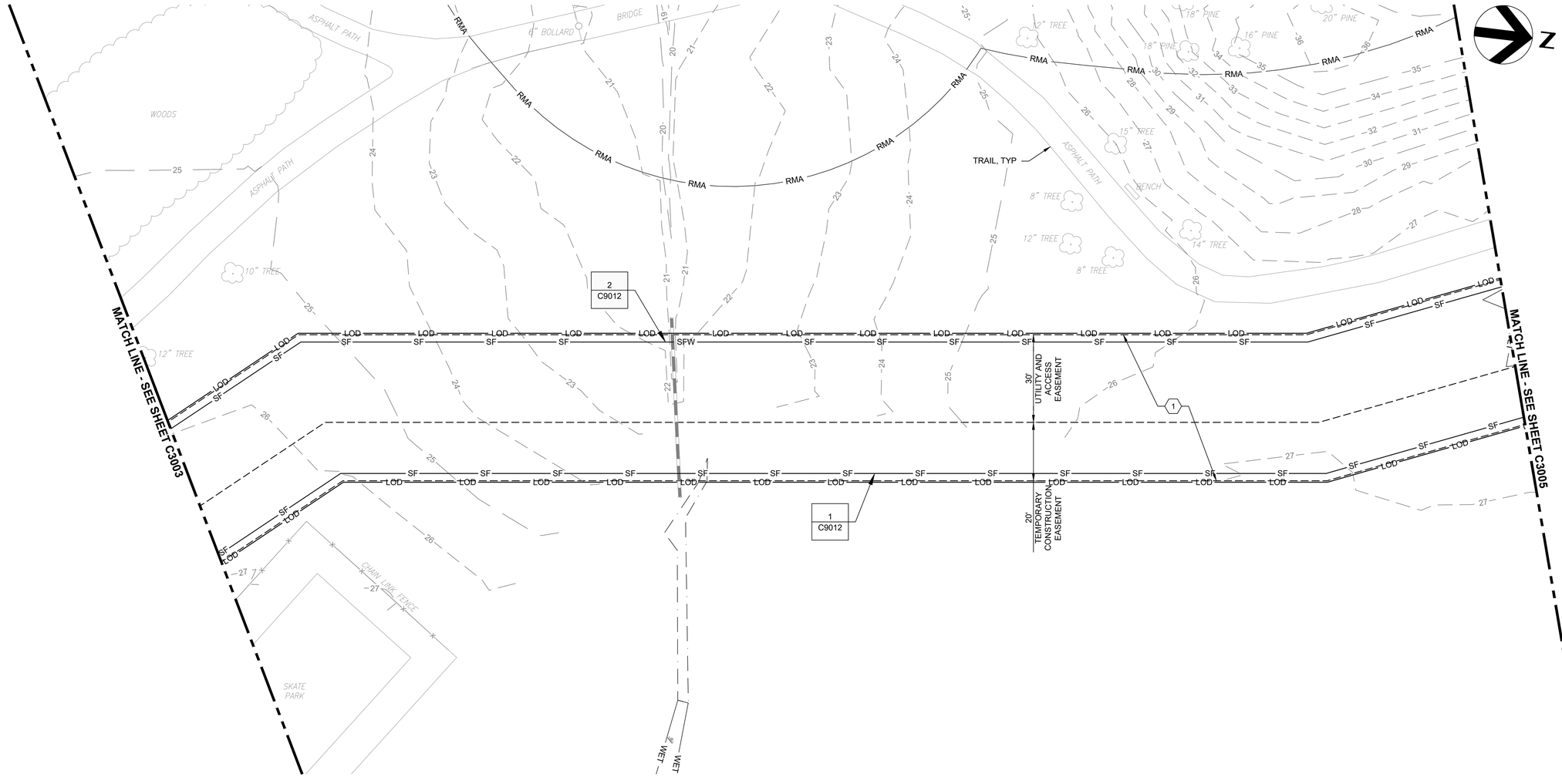
10/4/2021 2:17 PM

GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2



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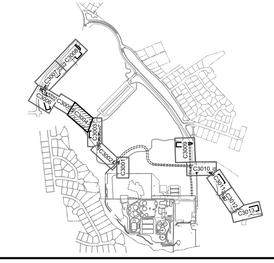

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 4

0 1" 2"

FILENAME	C3004.DWG
SCALE	1" = 20'
DWG NO.	C3004

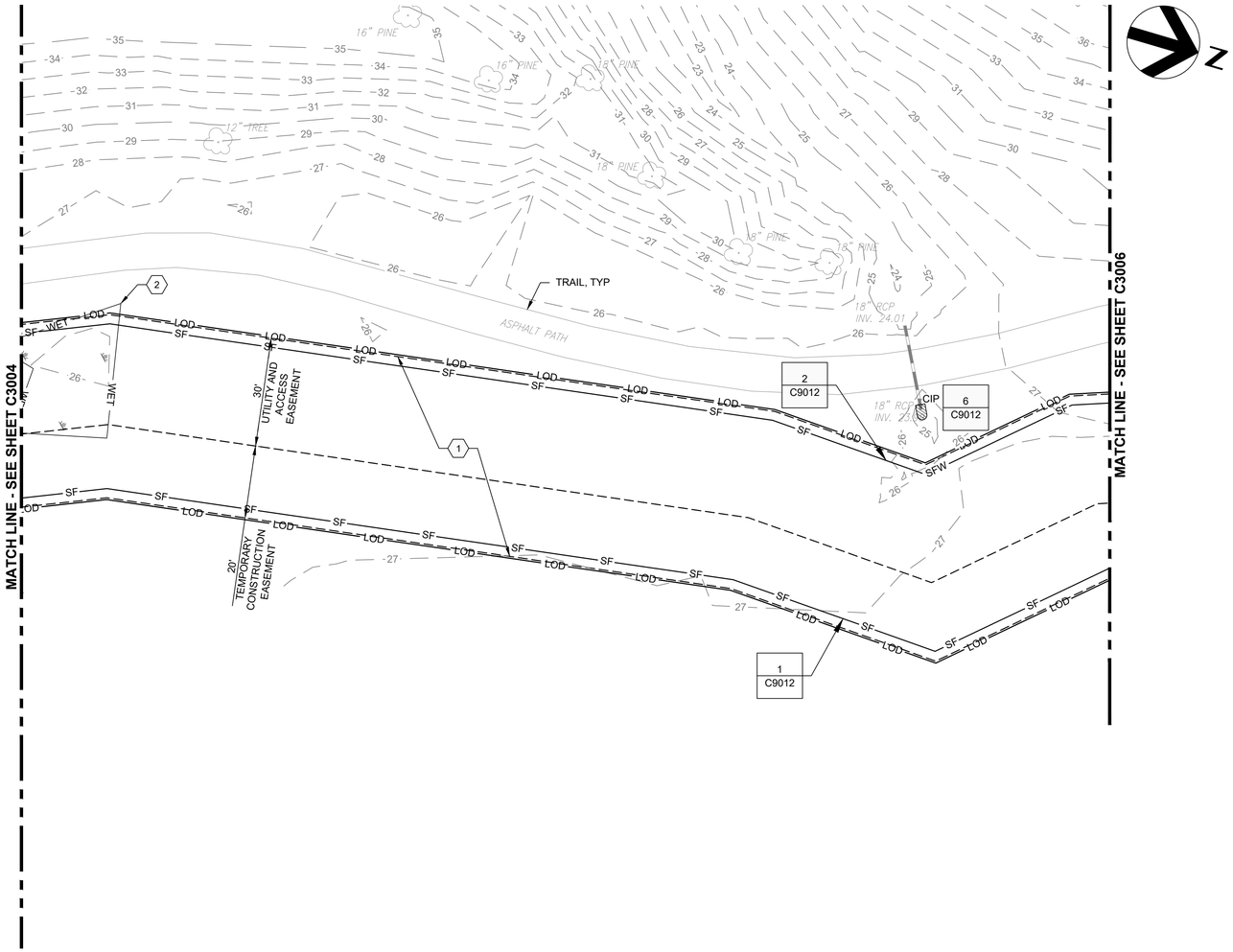
10/4/2021 2:18 PM

GENERAL NOTES

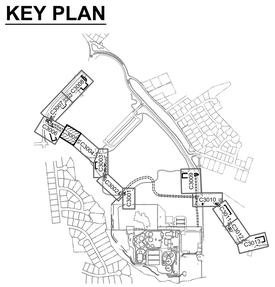
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. LIMITS OF WETLANDS. CONSTRUCTION SHALL NOT DISTURB WETLANDS OUTSIDE OF EASEMENT



KEY PLAN



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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 5

0 1" 2"

FILENAME C3005.DWG

SCALE 1" = 20'

DWG NO. C3005

10/4/2021 2:20 PM

GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. MAINTAIN EXISTING GATE
3. MAINTAIN STONE CONSTRUCTION ENTRANCE
4. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 9 AND MONITORING WELL SITES. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 9 AND MONITORING WELL FOR WELLS INSTALLATION CONSTRUCTION

RECHARGE WELL NO. 9

MENCHVILLE ROAD

MATCH LINE - SEE SHEET C3005

MATCH LINE - SEE SHEET C3007

KEY PLAN

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	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 6

0 1" 2"

FILENAME	C3006.DWG
SCALE	1" = 20'

DWG NO. C3006

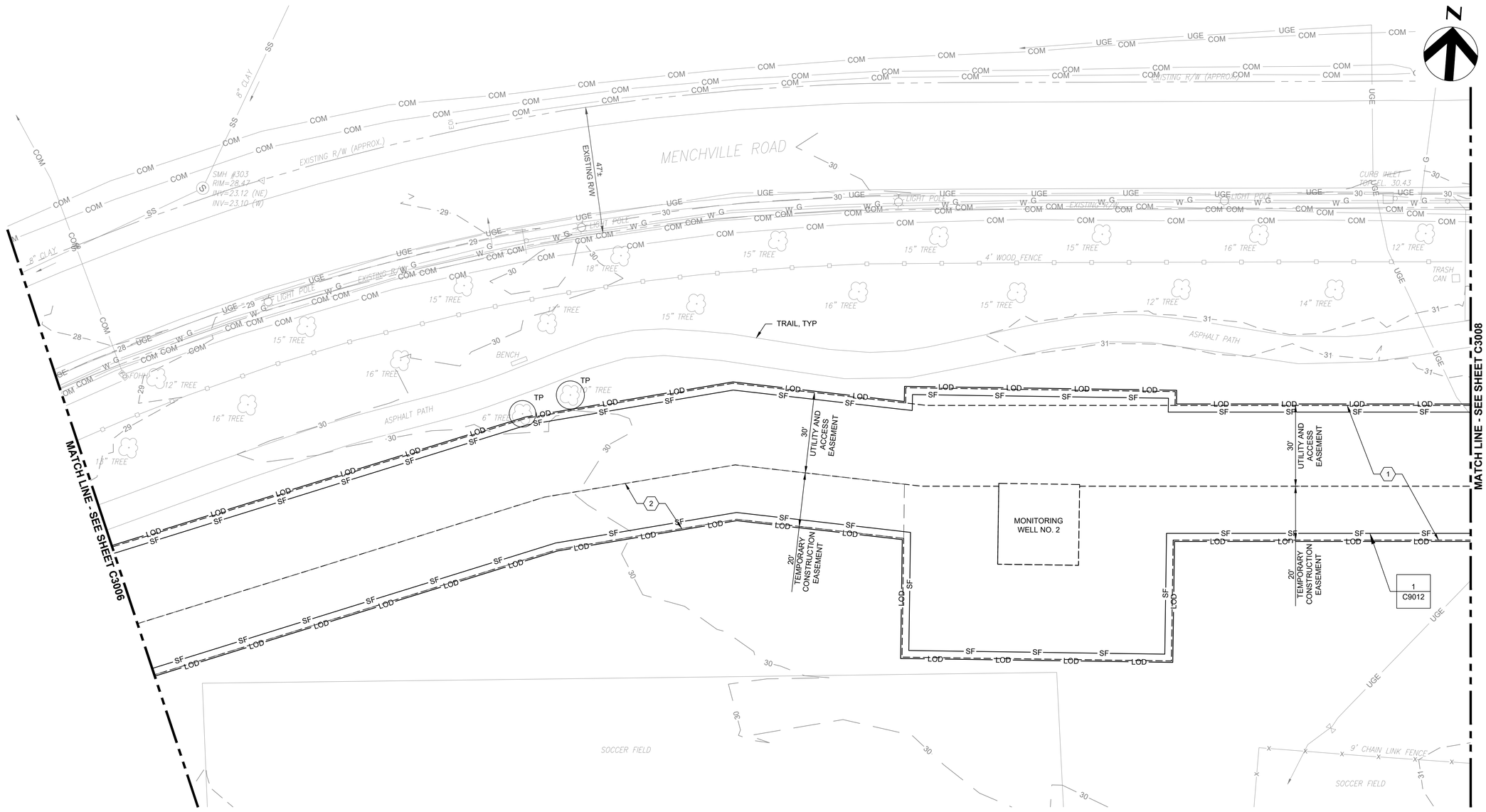
10/4/2021 2:21 PM

GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. TEMPORARY CONSTRUCTION ACCESS FOR MONITORING WELL SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO MONITORING WELL FOR WELL INSTALLATION CONSTRUCTION



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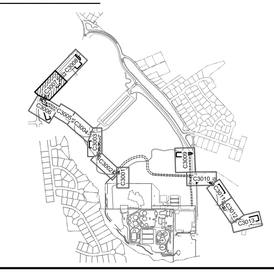

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 7

0 1" 2"

FILENAME C3007.DWG
SCALE 1" = 20'

DWG NO. **C3007**

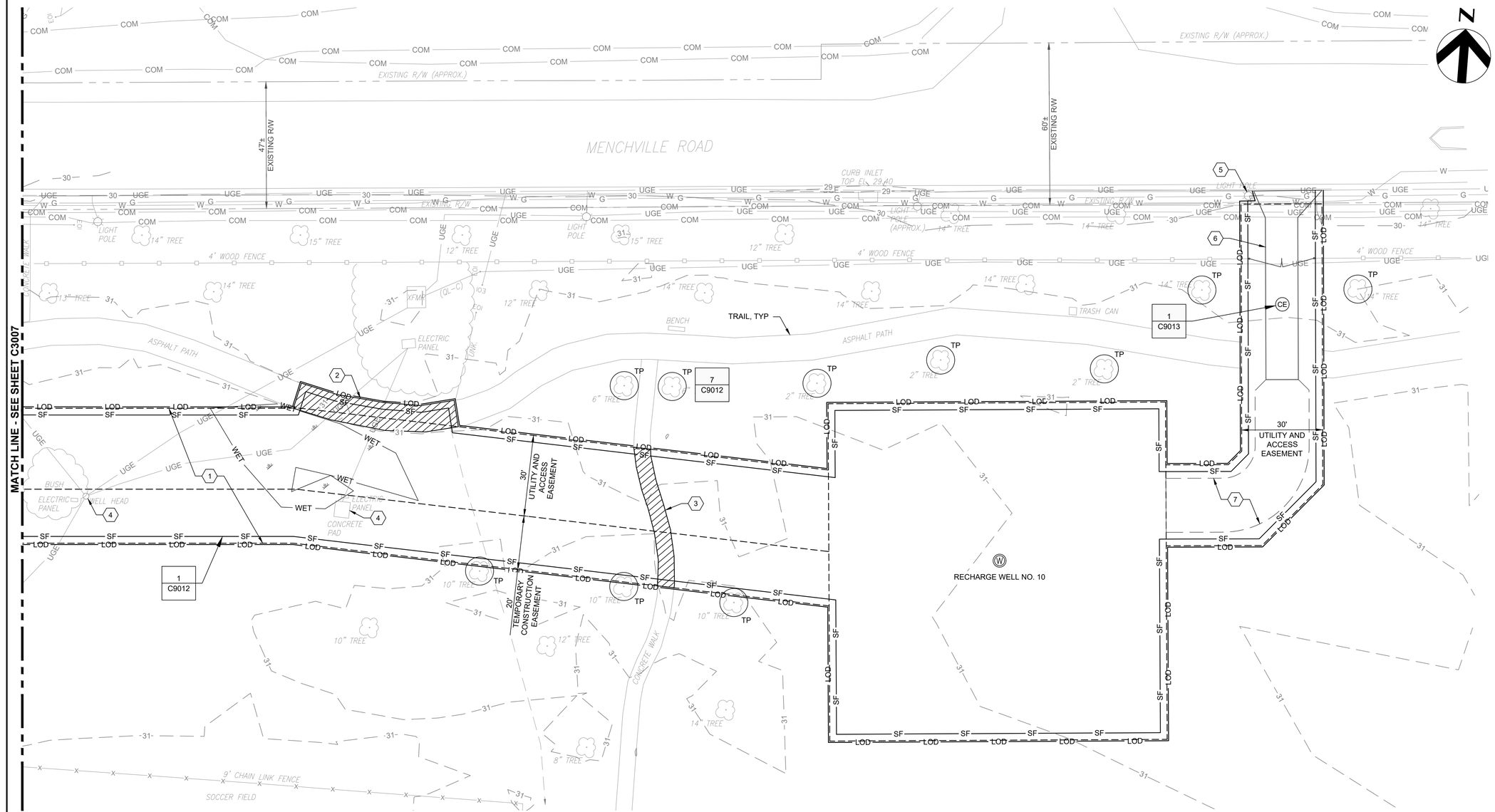
10/4/2021 2:23 PM

GENERAL NOTES

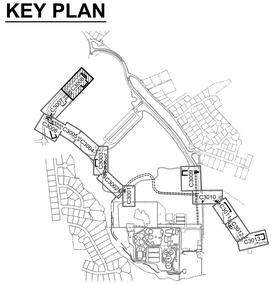
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. DEMOLISH ASPHALT PATHWAY
3. DEMOLISH CONCRETE PATHWAY
4. POLE AND TRANSFORMER TO REMAIN
5. LIGHT POLE TO REMAIN
6. MAINTAIN STONE CONSTRUCTION ENTRANCE
7. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 10 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 10 FOR WELL INSTALLATION CONSTRUCTION



KEY PLAN



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

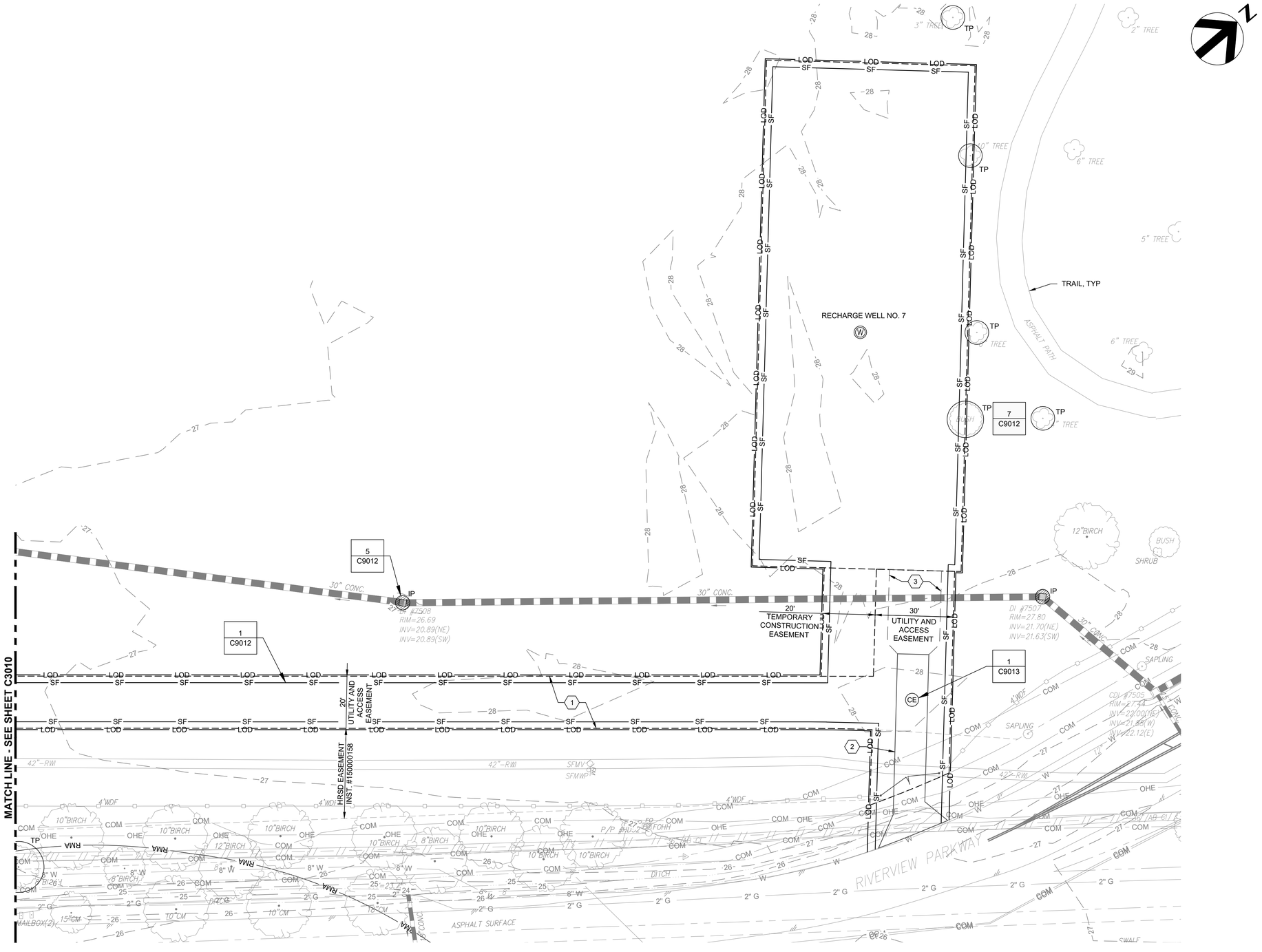
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 8

0 1" 2"

FILENAME	C3008.DWG
SCALE	1" = 20'
DWG NO.	C3008

10/4/2021 2:24 PM



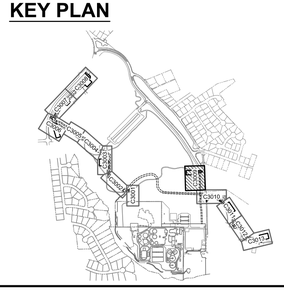
GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. MAINTAIN STONE CONSTRUCTION ENTRANCE
3. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 7 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 7 FOR WELL INSTALLATION CONSTRUCTION

KEY PLAN



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 9

0 1" 2"

FILENAME C3009.DWG

SCALE 1" = 20'

DWG NO. C3009

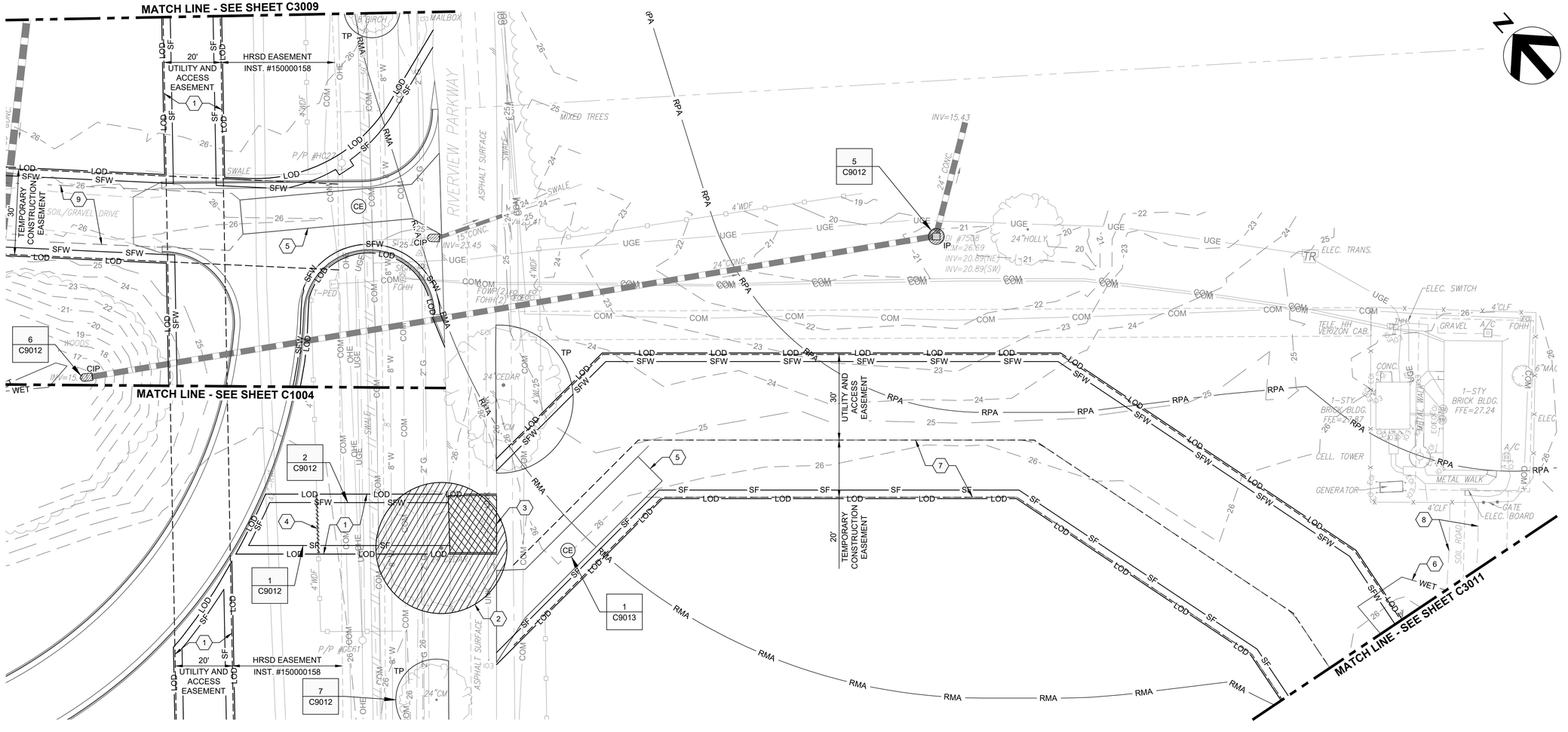
10/4/2021 2:26 PM

GENERAL NOTES

1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. CLEAR AND GRUB TREE
3. REMOVE AND REPLACE ASPHALT ROADWAY
4. REMOVE AND REPLACE FENCE
5. MAINTAIN STONE CONSTRUCTION ENTRANCE
6. LIMITS OF WETLANDS. DO NOT DISTURB WETLANDS OUTSIDE OF EASEMENT
7. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 6 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 6 FOR WELL INSTALLATION CONSTRUCTION
8. ROAD FOR COMMUNICATIONS TOWER ACCESS SHALL REMAIN ACCESSIBLE AT ALL TIMES
9. MAINTAIN TEMPORARY CONSTRUCTION ROAD



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 10

0 1" 2"

FILENAME C3010.DWG
SCALE 1" = 20'

DWG NO. **C3010**

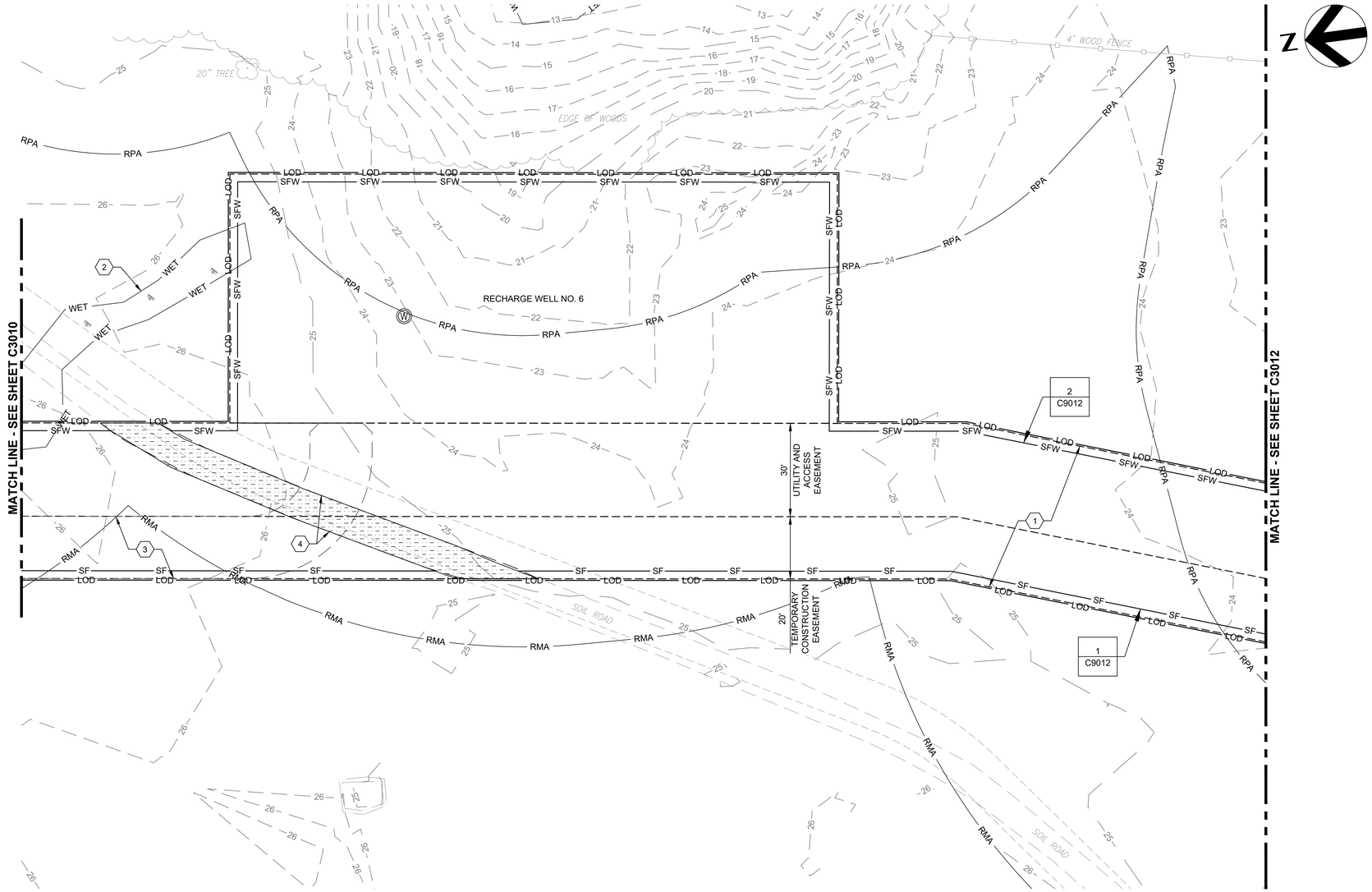
10/4/2021 2:27 PM

GENERAL NOTES

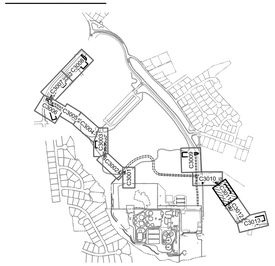
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. LIMITS OF WETLANDS. DO NOT DISTURB WETLANDS OUTSIDE OF EASEMENT
3. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 6 SITE. ACCESS SHALL BE MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 6 FOR WELL INSTALLATION CONSTRUCTION
4. ROAD FOR COMMUNICATIONS TOWER ACCESS SHALL REMAIN ACCESSIBLE AT ALL TIMES



KEY PLAN



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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 11

0 1" 2"

FILENAME C3011.DWG
SCALE 1" = 20'

DWG NO. C3011

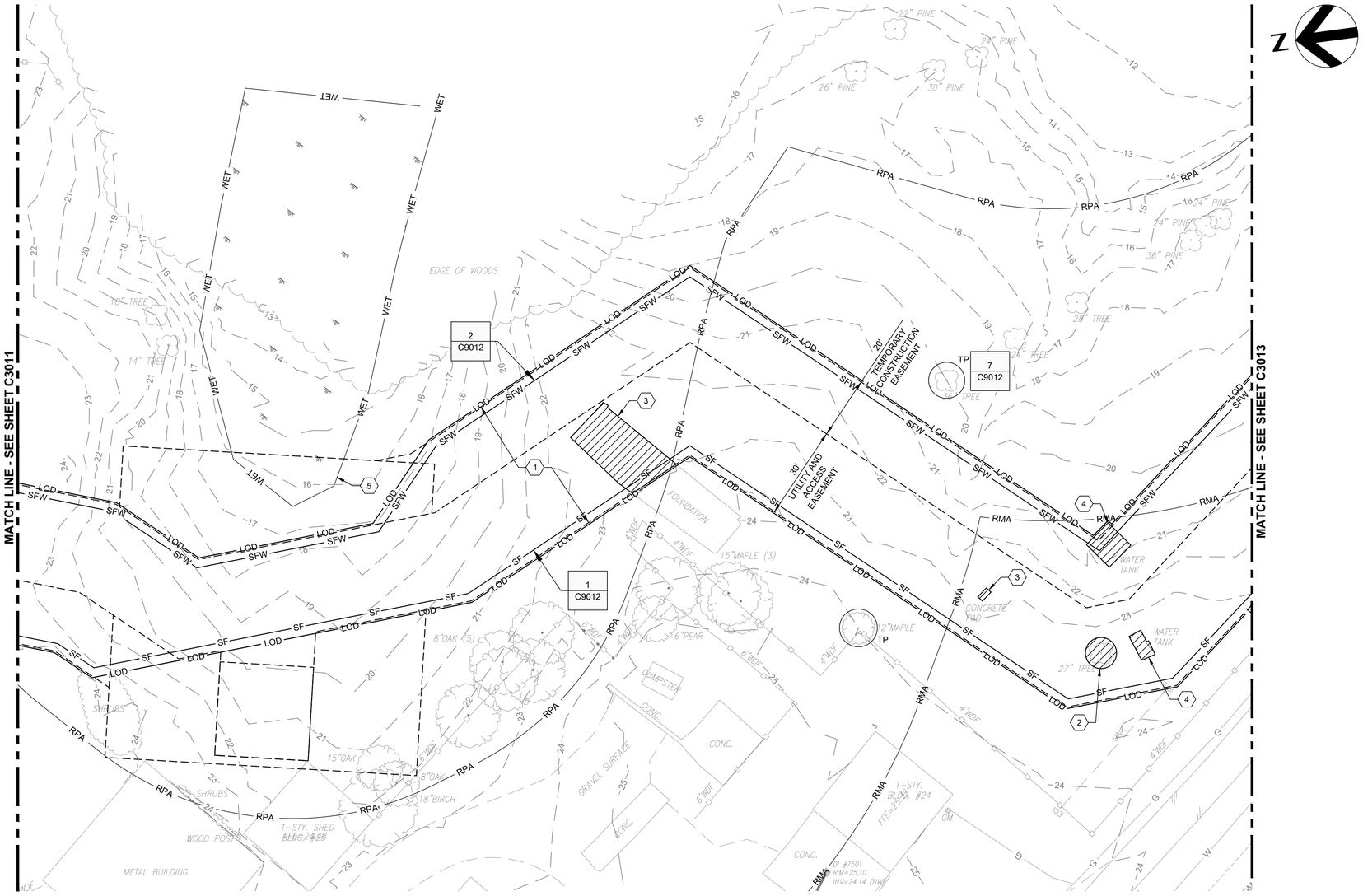
10/4/2021 2:29 PM

GENERAL NOTES

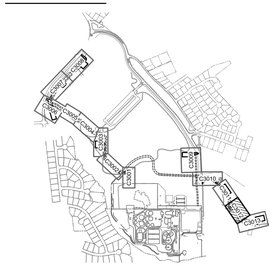
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. CLEAR AND GRUB TREE
3. DEMOLISH FOUNDATION AND CONCRETE PAD
4. DEMOLISH WATER TANK
5. LIMITS OF WETLANDS. CONSTRUCTION SHALL NOT DISTURB WETLANDS. SILT FENCE SHALL BE INSTALLED OUTSIDE LIMITS OF WETLANDS



KEY PLAN



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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 12

0 1" 2"

FILENAME C3012.DWG
SCALE 1" = 20'

DWG NO. C3012

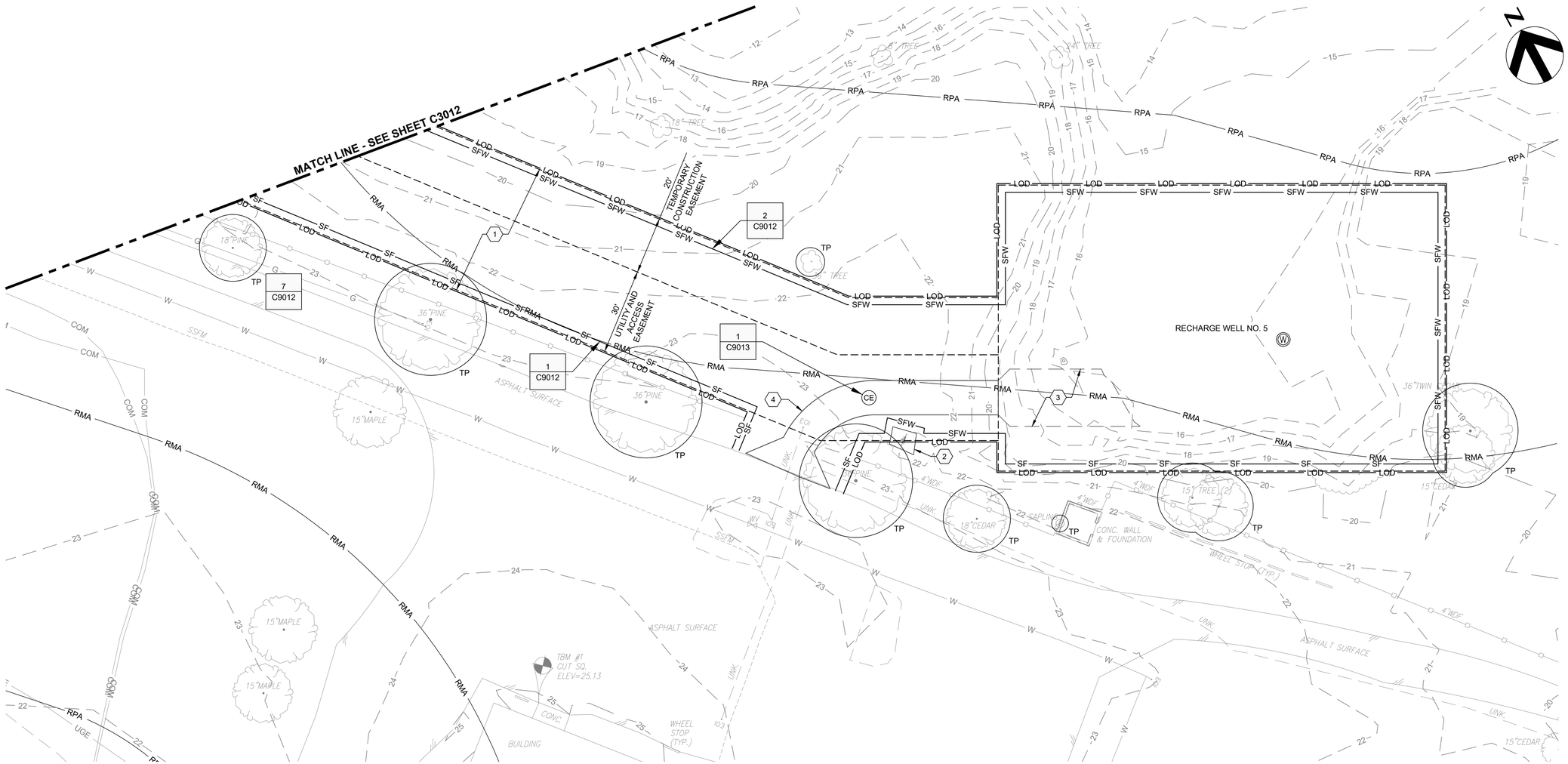
10/4/2021 2:30 PM

GENERAL NOTES

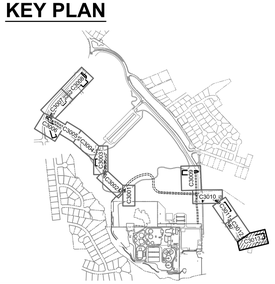
1. SEE SHEETS C9010 THROUGH C9013 FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES AND STANDARD DETAILS.
2. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

1. PROVIDE CLEARING AND GRUBBING WITHIN THIS GENERAL AREA. DESIGN-BUILDER SHALL COORDINATE CLEARING AND GRUBBING LIMITS WITH NEW WORK FOR PACKAGES 1 AND 2
2. LIMITS OF WETLANDS. DO NOT DISTURB WETLANDS OUTSIDE OF EASEMENT
3. TEMPORARY CONSTRUCTION ACCESS FOR RECHARGE WELL NO. 5 SITE. ACCESS SHALL BE FURNISHED AND MAINTAINED BY THE DESIGN BUILDER. ACCESS SHALL BE MADE AVAILABLE TO OTHERS FOR ACCESS TO RECHARGE WELL NO. 5 FOR WELL INSTALLATION CONSTRUCTION
4. MAINTAIN STONE CONSTRUCTION ENTRANCE



KEY PLAN



		DESIGN MANAGER WILLIAM S. M'COY
		PROJECT ENGINEER XXXX X. XXXX
		DESIGNED BY XXXX X. XXXX
		CHECKED BY XXXX X. XXXX
		DRAWN BY XXXX X. XXXX
10/2021	30% DESIGN SUBMITTAL	
ISSUE	DATE DESCRIPTION	PROJECT NUMBER 10292462

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

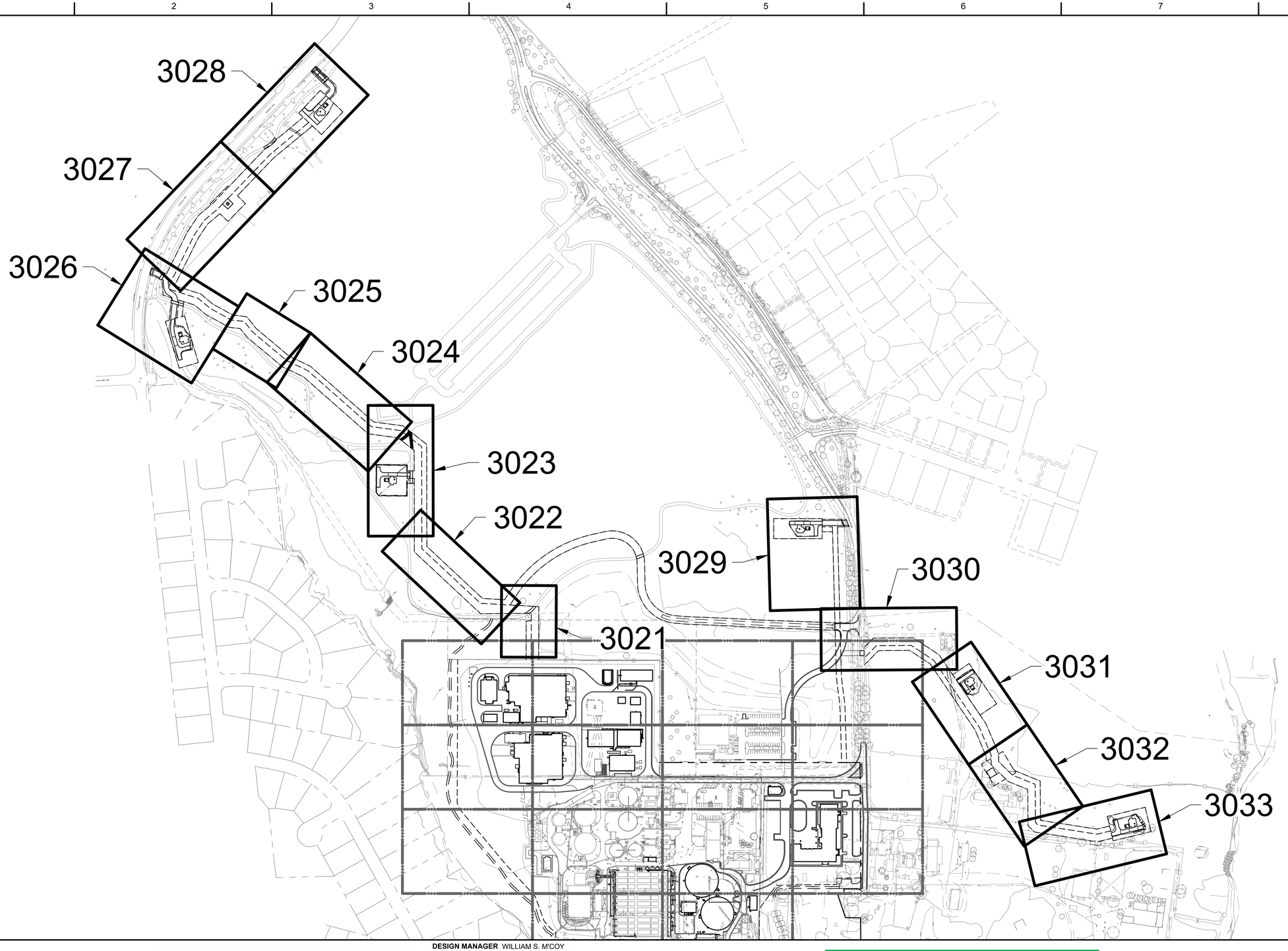
RECHARGE WELL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN 13

0 1" 2"

FILENAME C3013.DWG
SCALE 1" = 20'

DWG NO. C3013

10/4/2021 2:32 PM



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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Virginia Beach, VA 23462
757.222.1500

10/4/2021 4:10 PM

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE OVERALL KEY PLAN

0 1" 2"

FILENAME C3020.DWG
SCALE 1" = 200'

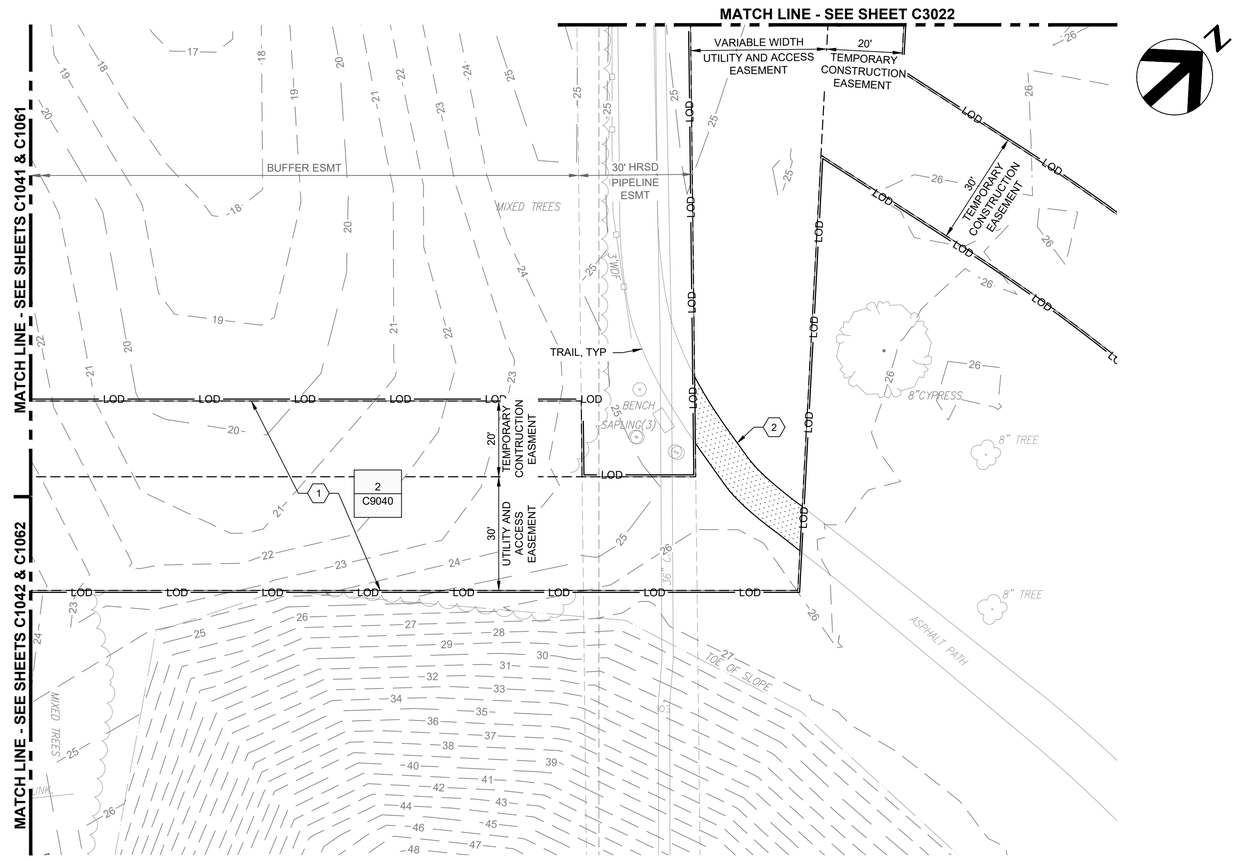
DWG NO. **C3020**

GENERAL NOTES

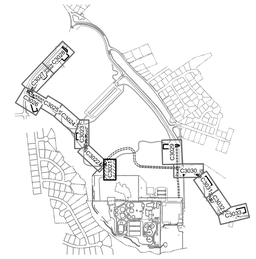
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS
2. RESTORE ASPHALT PATH



KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 1

0 1" 2"

FILENAME C3021.DWG
SCALE 1" = 20'

DWG NO. **C3021**

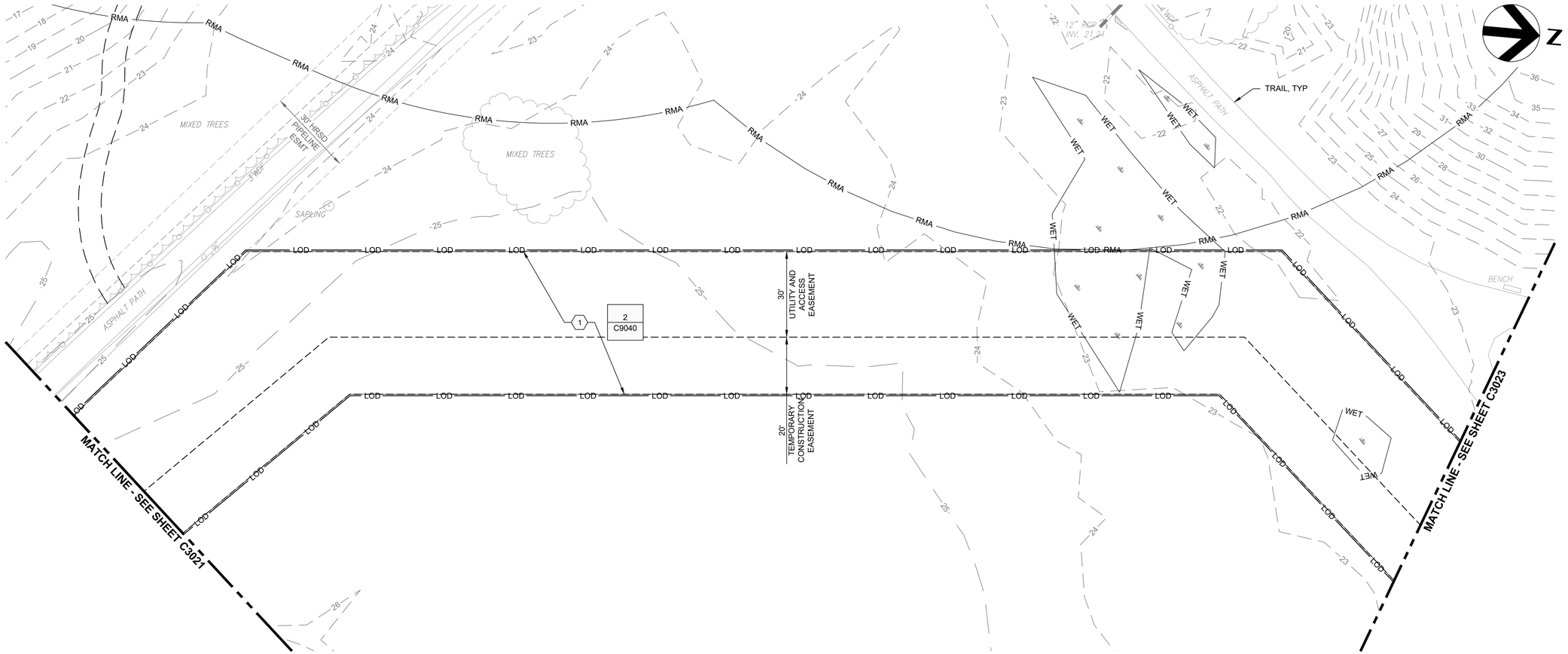
10/4/2021 4:11 PM

GENERAL NOTES

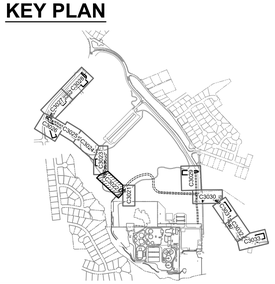
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS



KEY PLAN



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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 2

0 1" 2"

FILENAME	C3022.DWG
SCALE	1" = 20'

DWG NO. **C3022**

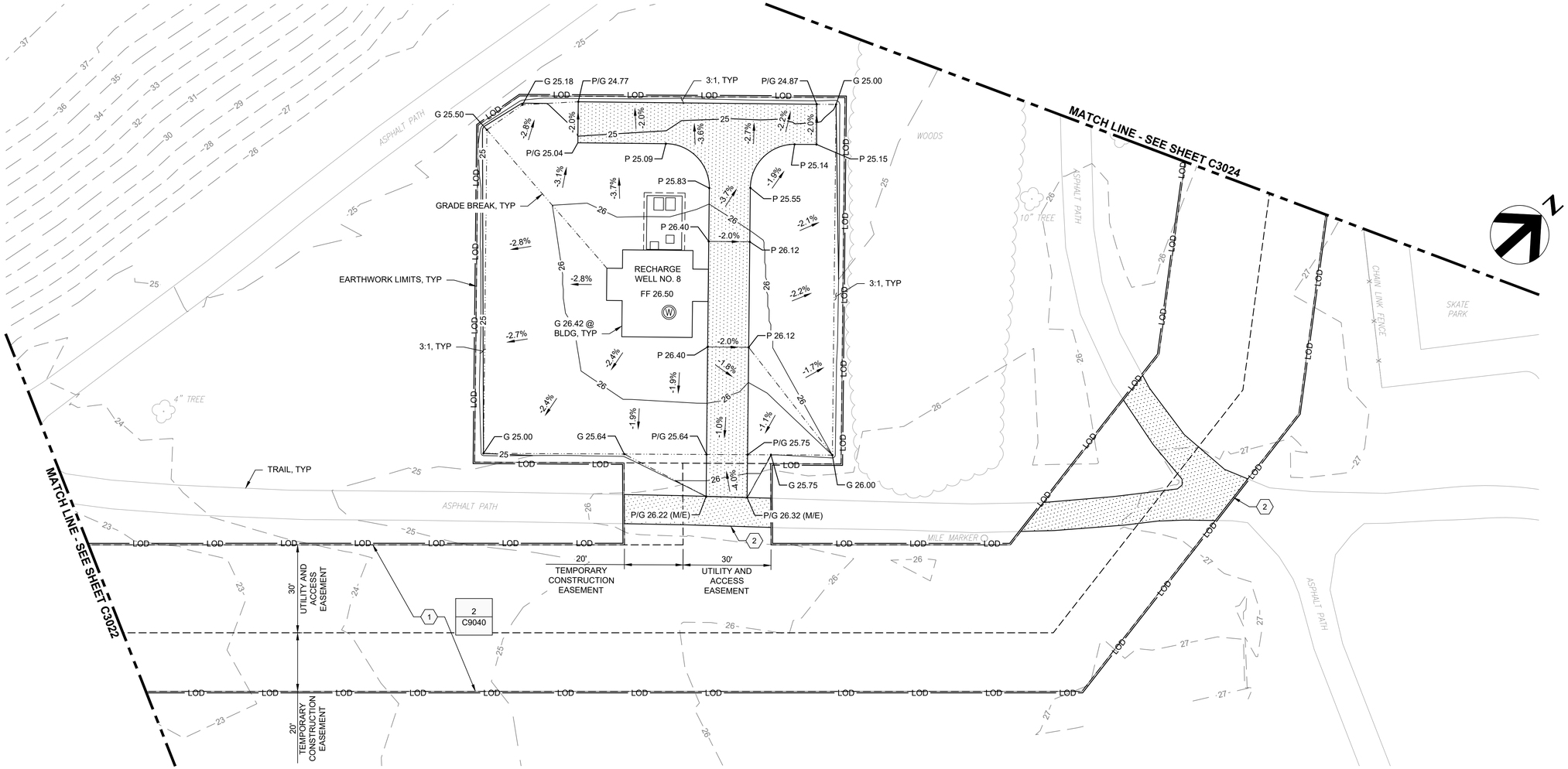
10/4/2021 4:13 PM

GENERAL NOTES

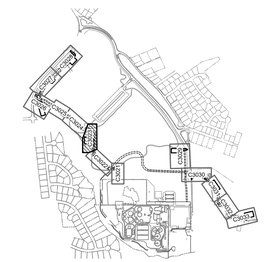
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS
2. RESTORE ASPHALT PATH



KEY PLAN



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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 8 SITE PLAN AND GRADING AND DRAINAGE PLAN 3

0 1" 2"

FILENAME C3023.DWG
SCALE 1" = 20'

DWG NO. **C3023**

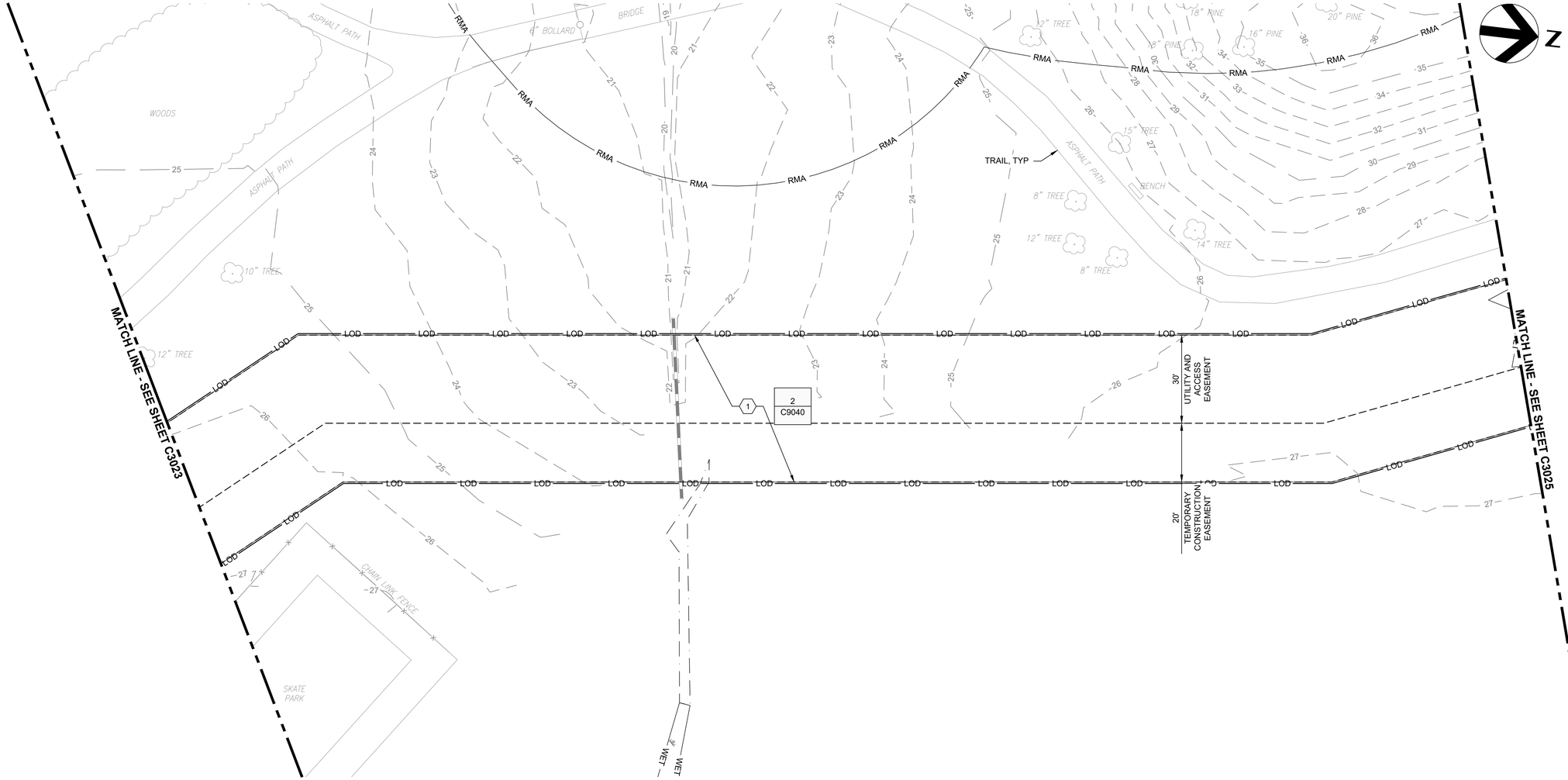
10/4/2021 4:15 PM

GENERAL NOTES

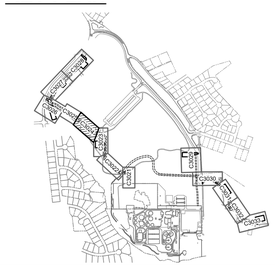
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS



KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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OR
RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 4

0 1" 2"

FILENAME C3024.DWG
SCALE 1" = 20'

DWG NO. C3024

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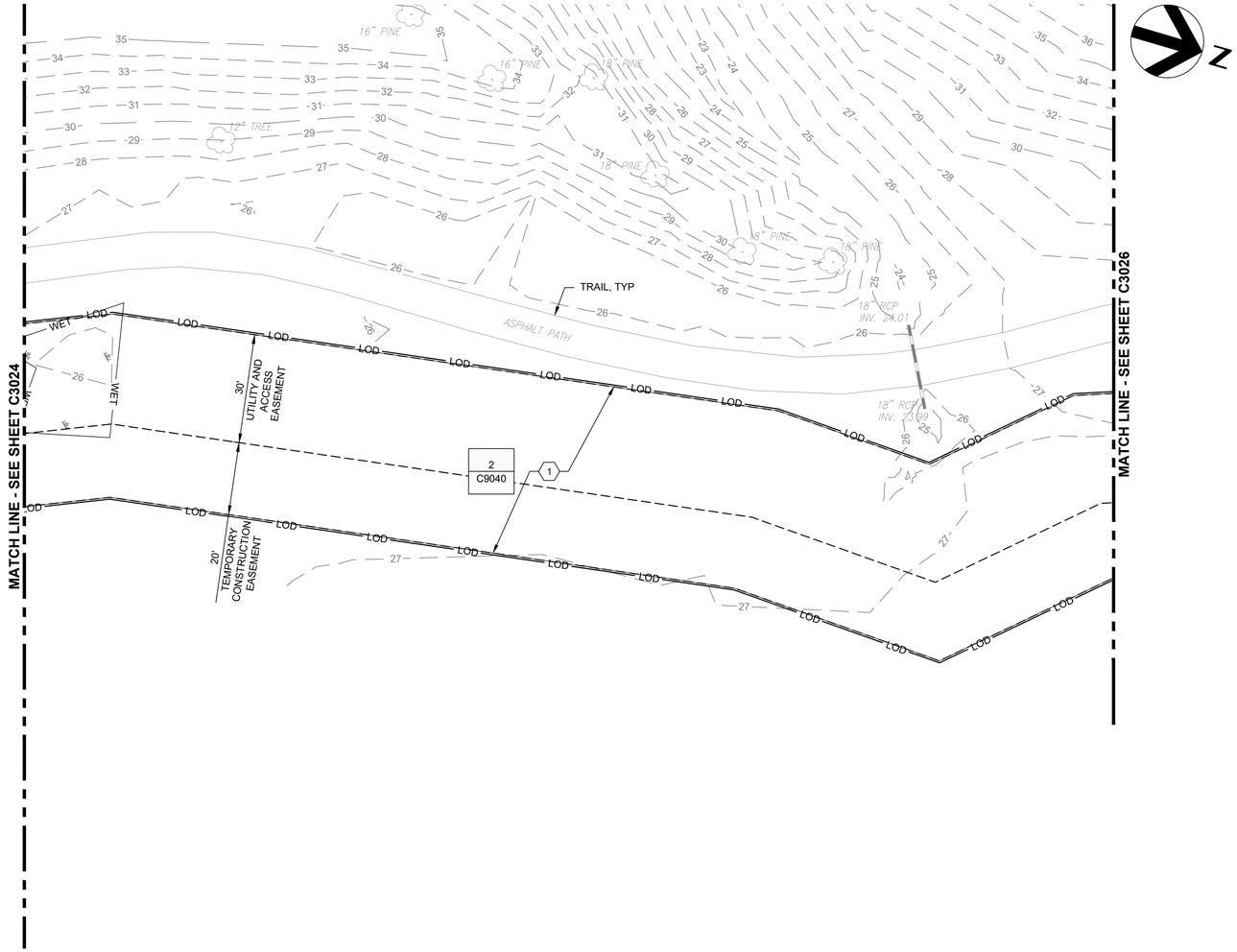
GENERAL NOTES

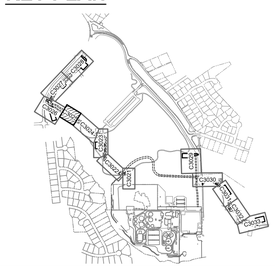
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS



KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 5

0 1" 2"

FILENAME	C3025.DWG
SCALE	1" = 20'

DWG NO. **C3025**

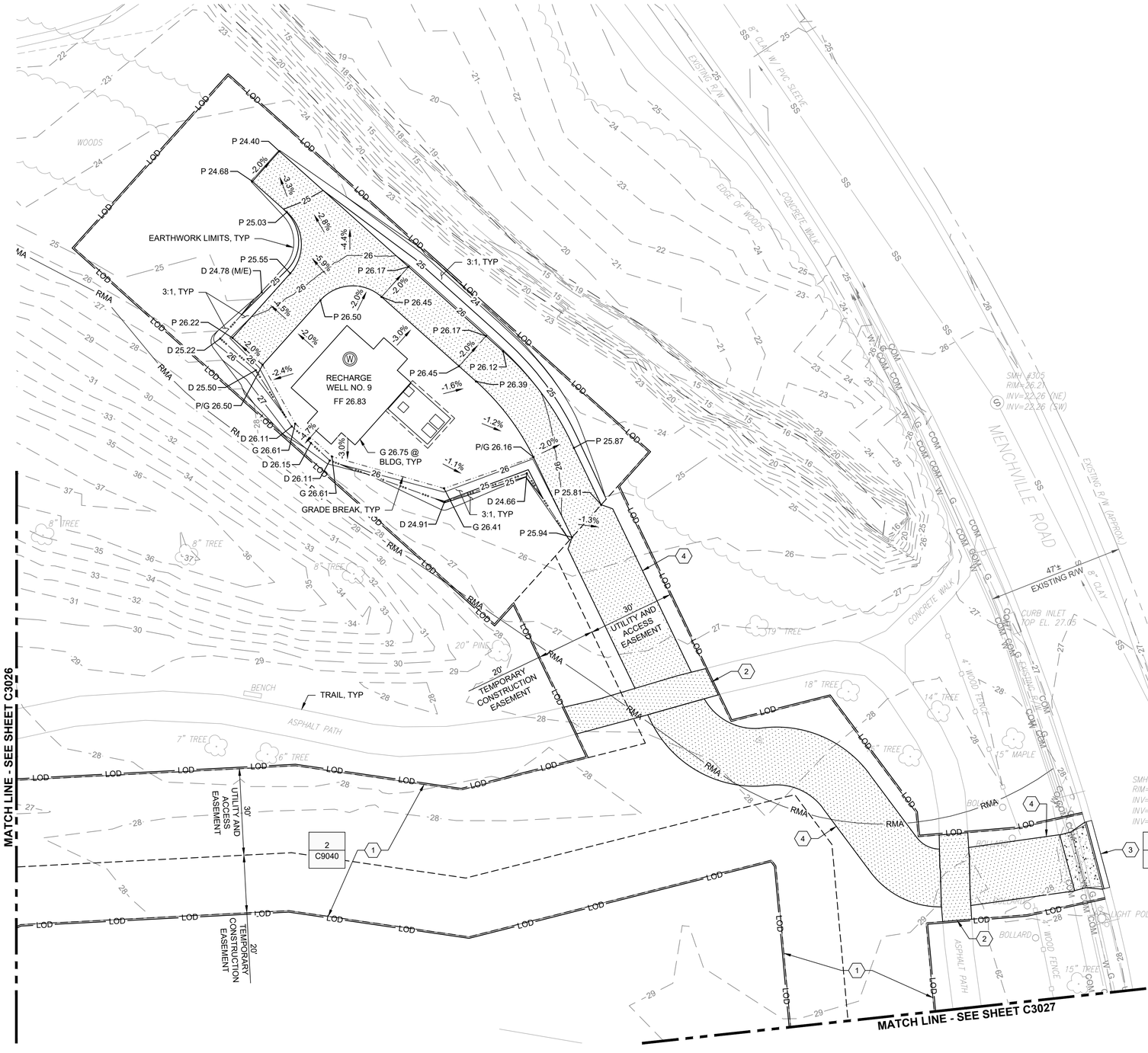
10/4/2021 4:19 PM

GENERAL NOTES

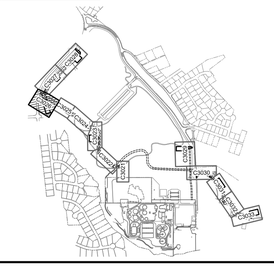
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS
2. RESTORE ASPHALT PATH
3. INSTALL CONCRETE ENTRANCE
4. INSTALL PERMANENT 20 FT WIDE ASPHALT ROAD



KEY PLAN



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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 9 SITE PLAN AND GRADING AND DRAINAGE PLAN 6

0 1" 2"

FILENAME C3026.DWG
SCALE 1" = 20'

DWG NO. **C3026**

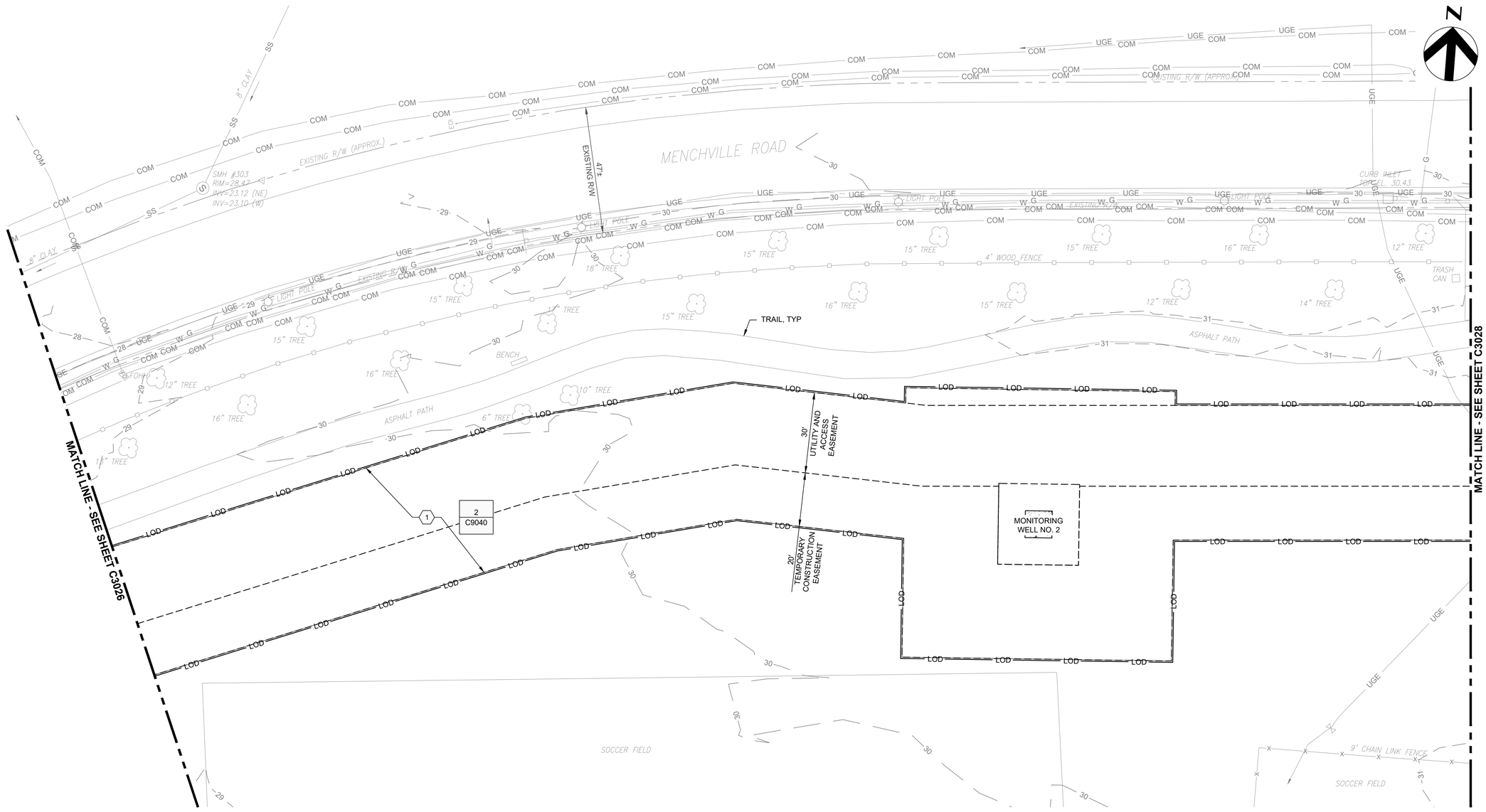
10/4/2021 4:21 PM

GENERAL NOTES

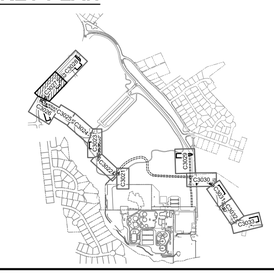
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS



KEY PLAN



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 7

0 1" 2"

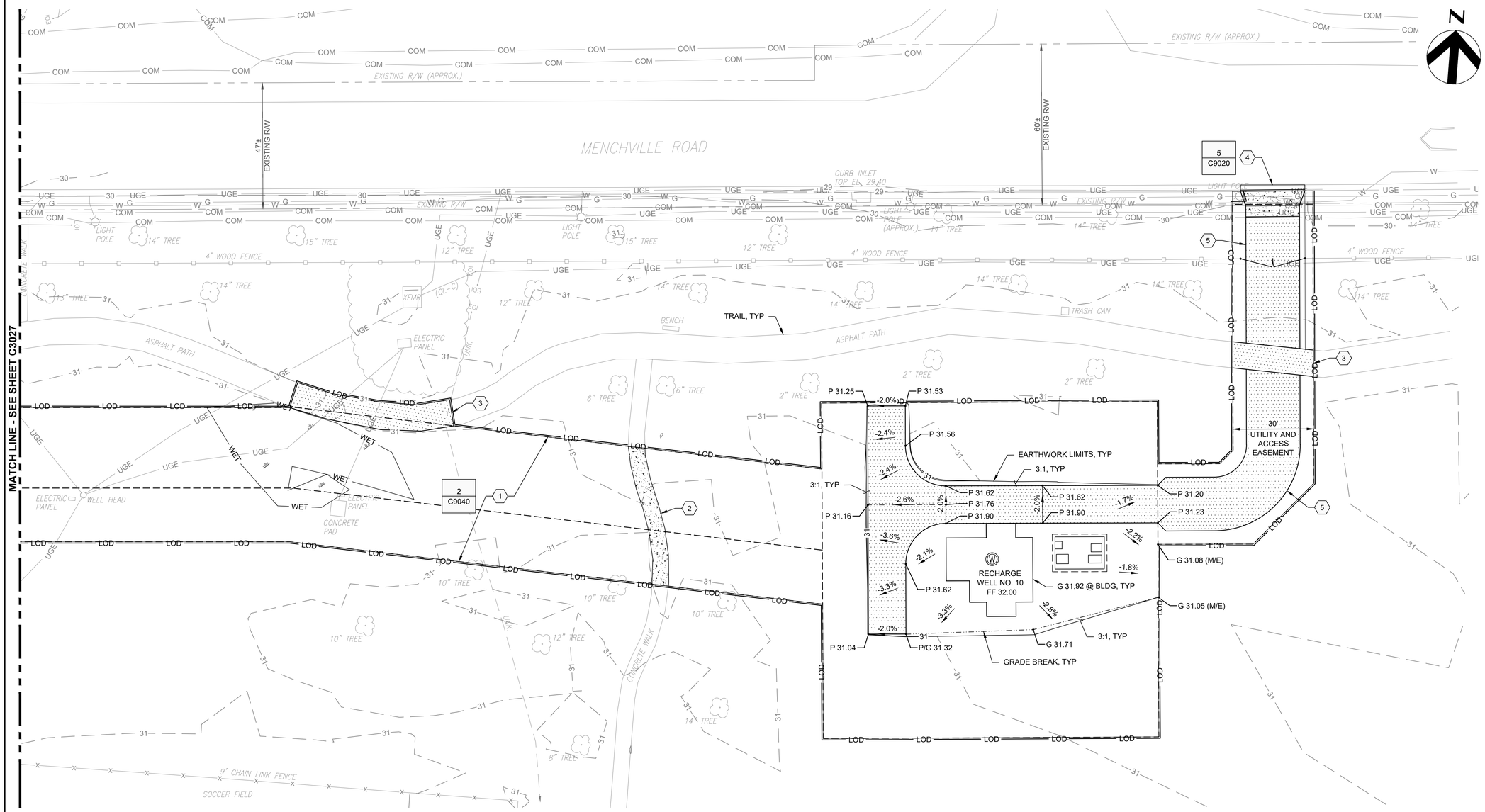
FILENAME C3027.DWG
SCALE 1" = 20'

DWG NO. **C3027**

10/4/2021 4:23 PM

GENERAL NOTES

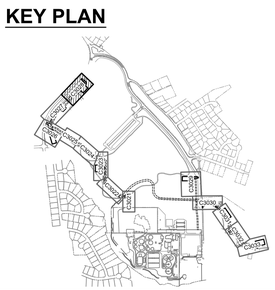
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.



KEYNOTES

1. SEED ALL DISTURBED AREAS
2. RESTORE CONCRETE PATH
3. RESTORE ASPHALT PATH
4. INSTALL CONCRETE ENTRANCE
5. INSTALL PERMANENT 20 FT WIDE ASPHALT ROAD

KEY PLAN



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

RECHARGE WELL NO. 10 SITE PLAN AND GRADING AND DRAINAGE PLAN 8

0 1" 2"

FILENAME C3028.DWG

SCALE 1" = 20'

DWG NO. C3028

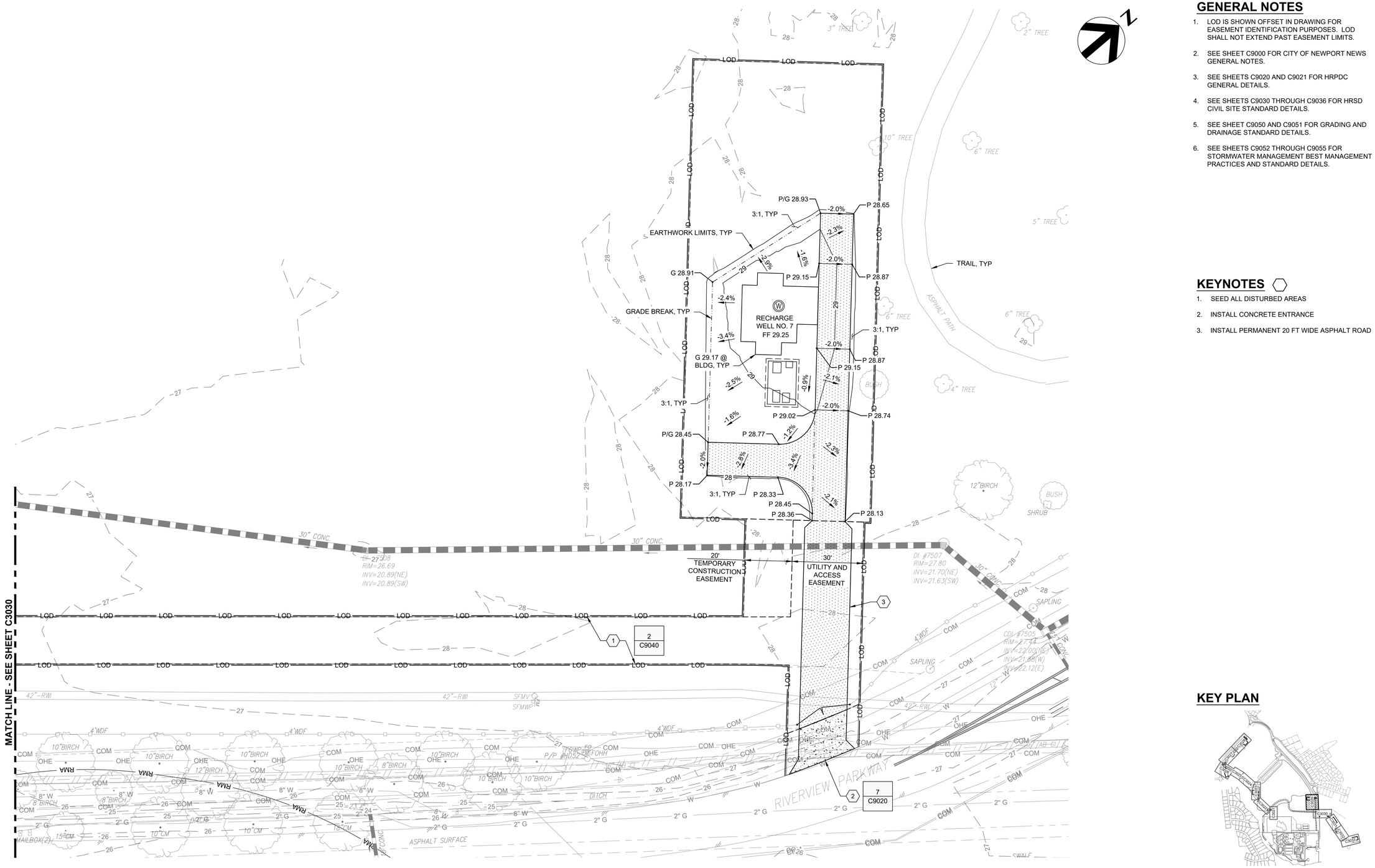
10/4/2021 4:24 PM

GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS
2. INSTALL CONCRETE ENTRANCE
3. INSTALL PERMANENT 20 FT WIDE ASPHALT ROAD



KEY PLAN

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 7 SITE PLAN AND GRADING AND DRAINAGE PLAN 9

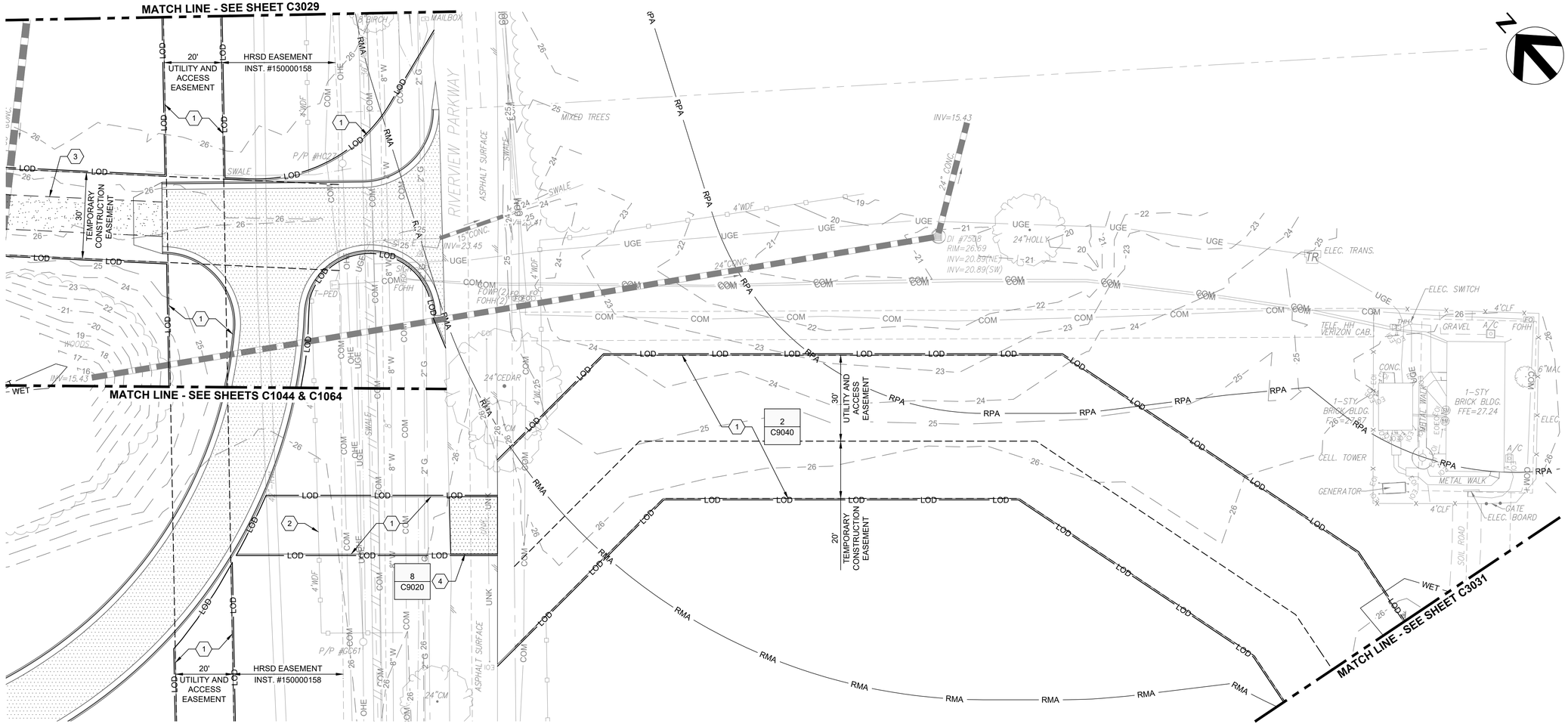
0 1" 2"

FILENAME	C3029.DWG
SCALE	1" = 20'

DWG NO. **C3029**

GENERAL NOTES

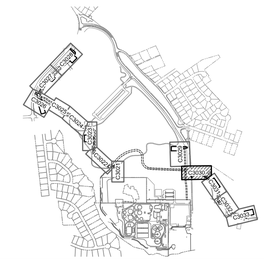
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.



KEYNOTES

1. SEED ALL DISTURBED AREAS
2. REPLACE FENCING
3. RESTORE GRAVEL ROADWAY
4. RESTORE ROADWAY ASPHALT

KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 10

0 1" 2"

FILENAME C3030.DWG
SCALE 1" = 20'

DWG NO. **C3030**

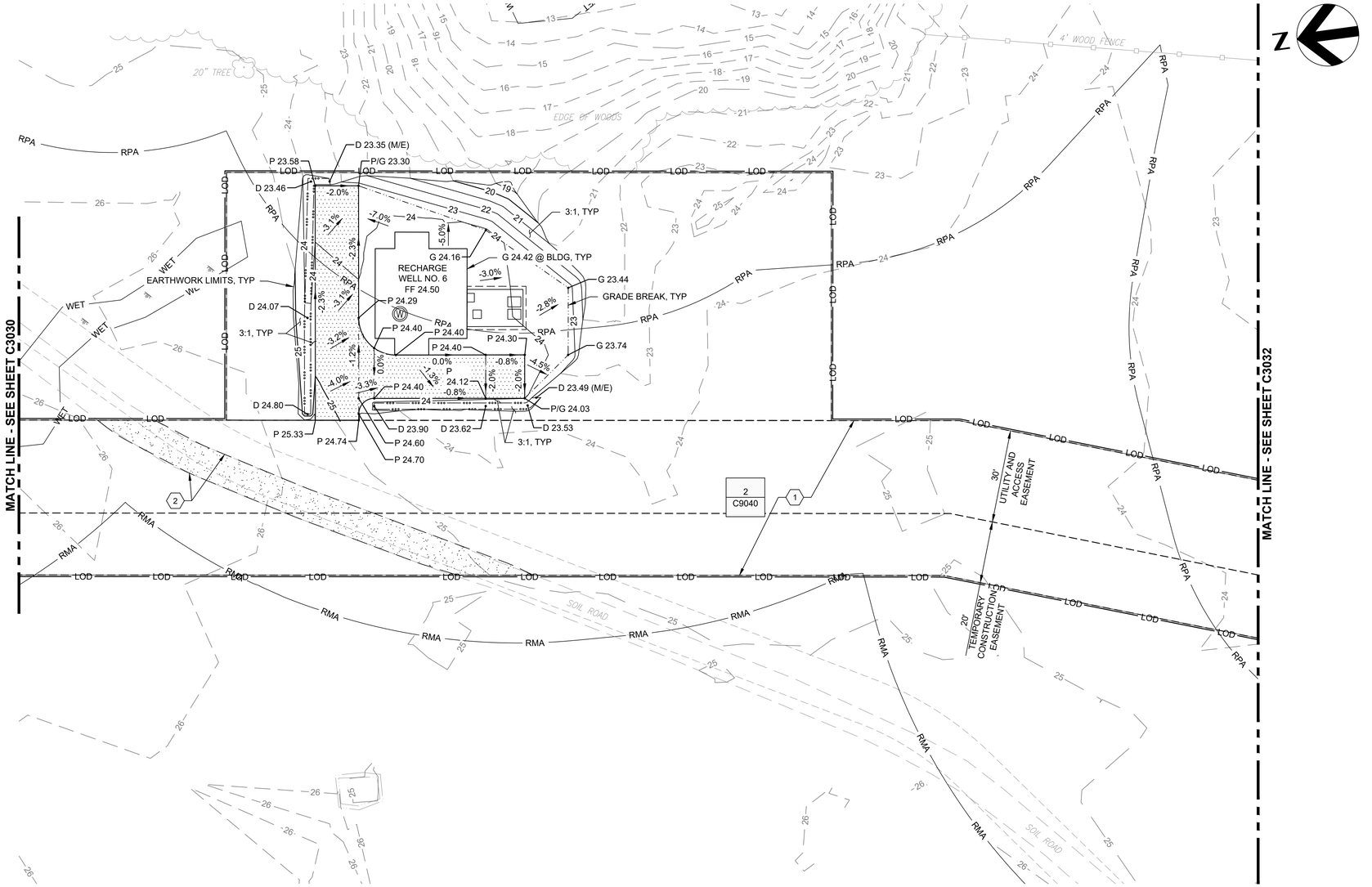
10/4/2021 4:28 PM

GENERAL NOTES

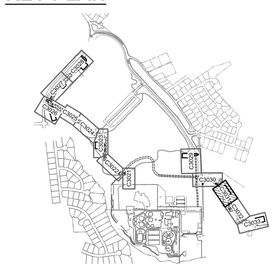
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS
2. RESTORE ROAD FOR COMMUNICATIONS TOWER ACCESS TO PRECONSTRUCTION GRADE/CONDITION



KEY PLAN



	10/2021	30% DESIGN SUBMITTAL
ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

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Virginia Beach, VA 23462
757.222.1500

10/4/2021 4:30 PM

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NO. 6 SITE PLAN AND GRADING AND DRAINAGE PLAN 11

0 1" 2"

FILENAME C3031.DWG
SCALE 1" = 20'

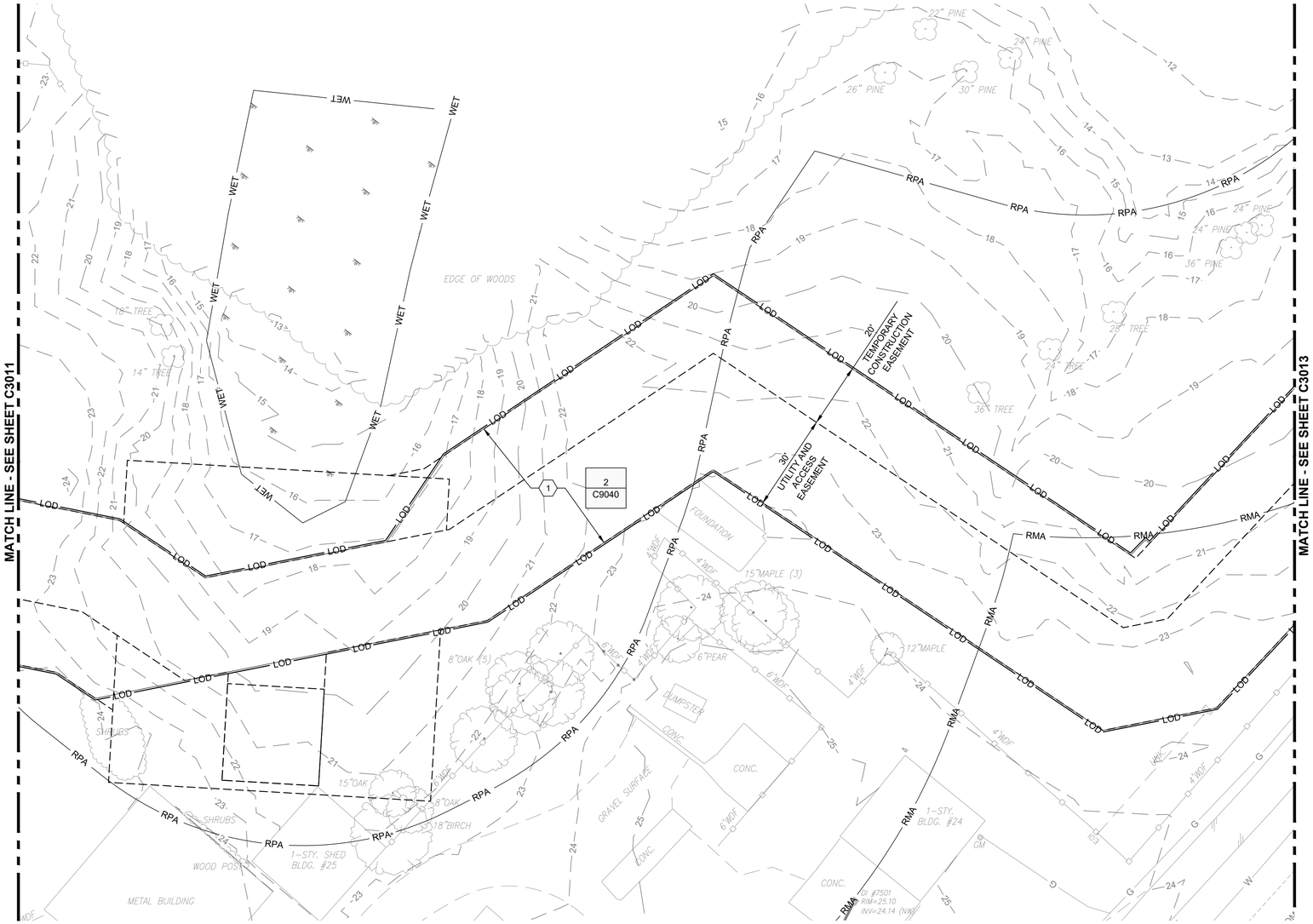
DWG NO. **C3031**

GENERAL NOTES

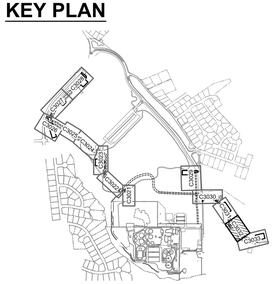
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.

KEYNOTES

1. SEED ALL DISTURBED AREAS



KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
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HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL SITE PLAN AND GRADING AND DRAINAGE PLAN 12

0 1" 2"

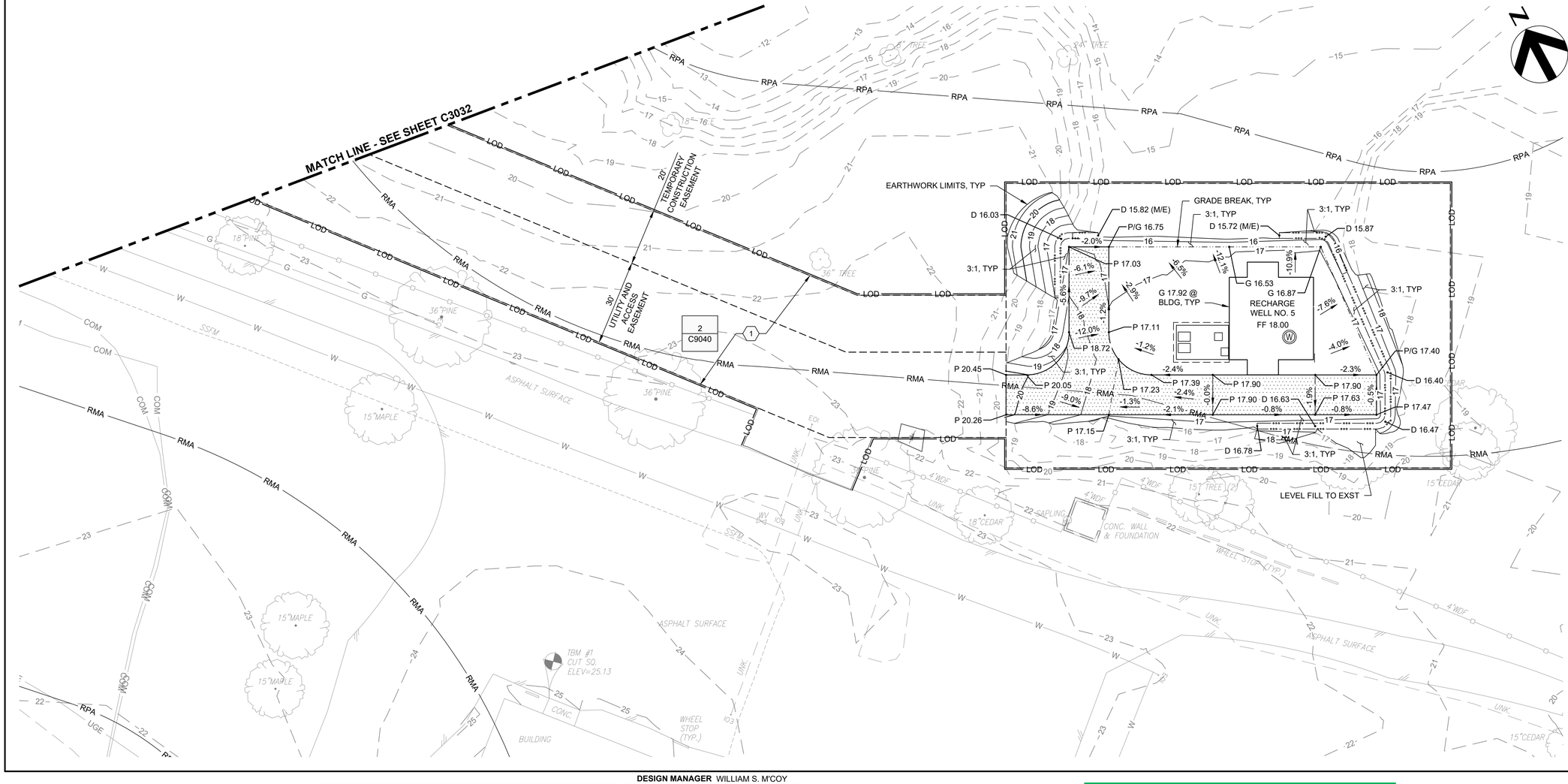
FILENAME	C3032.DWG
SCALE	1" = 20'

DWG NO. **C3032**

10/4/2021 4:32 PM

GENERAL NOTES

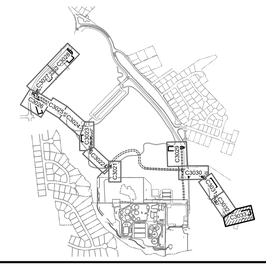
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.
2. SEE SHEET C9000 FOR CITY OF NEWPORT NEWS GENERAL NOTES.
3. SEE SHEETS C9020 AND C9021 FOR HRPDC GENERAL DETAILS.
4. SEE SHEETS C9030 THROUGH C9036 FOR HRSD CIVIL SITE STANDARD DETAILS.
5. SEE SHEET C9050 AND C9051 FOR GRADING AND DRAINAGE STANDARD DETAILS.
6. SEE SHEETS C9052 THROUGH C9055 FOR STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES AND STANDARD DETAILS.



KEYNOTES

1. SEED ALL DISTURBED AREAS

KEY PLAN



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PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

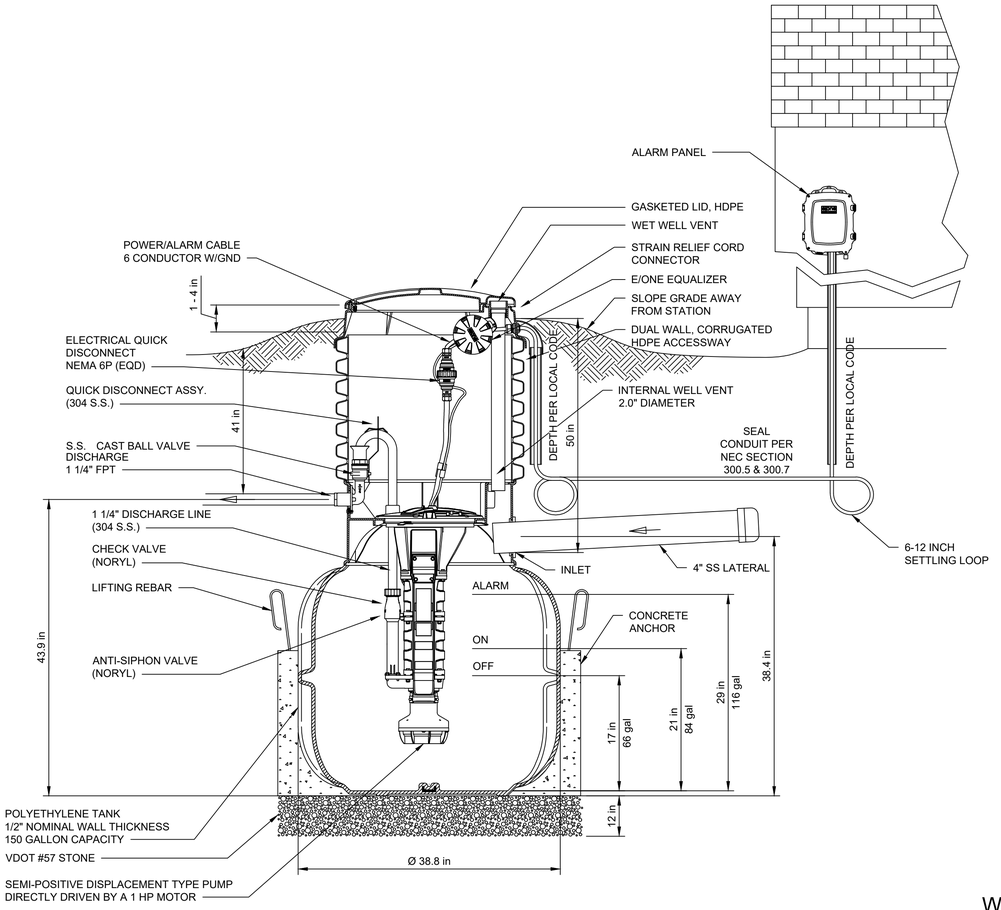
RECHARGE WELL NO. 5 SITE PLAN AND GRADING AND DRAINAGE PLAN 13

0 1" 2"

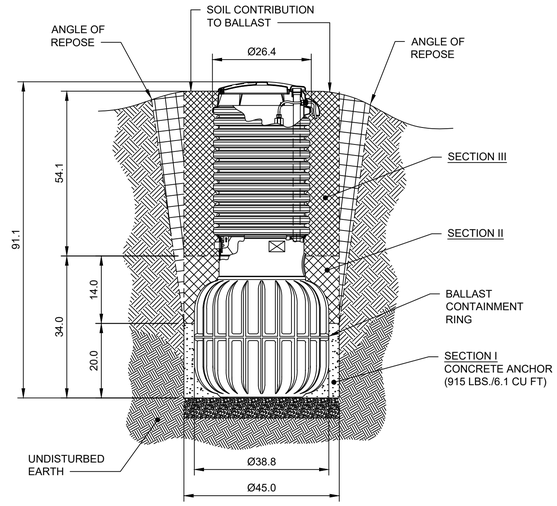
FILENAME C3033.DWG
SCALE 1" = 20'

DWG NO. **C3033**

10/4/2021 4:34 PM



NOTE: DEVICE DIMENSIONS ARE FOR REFERENCE ONLY



SECTION III - DRY SOIL (ACCESS WAY)

SECTION II - SATURATED SOIL (WET WELL)

SECTION I - CONCRETE ANCHOR

ROUND AGGREGATE (GRAVEL)

NOTES:

FURNISH E-ONE D H51-93 GRINDER PUMP STATION AT WELL HOUSES NO. 5, 6, 7, 8, 9, 10.

WELL HOUSE SANITARY SEWER GRINDER PUMP STATION

1

SCALE: N.T.S.

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL HOUSE DETAILS
SANITARY SEWER GRINDER PUMP STATION

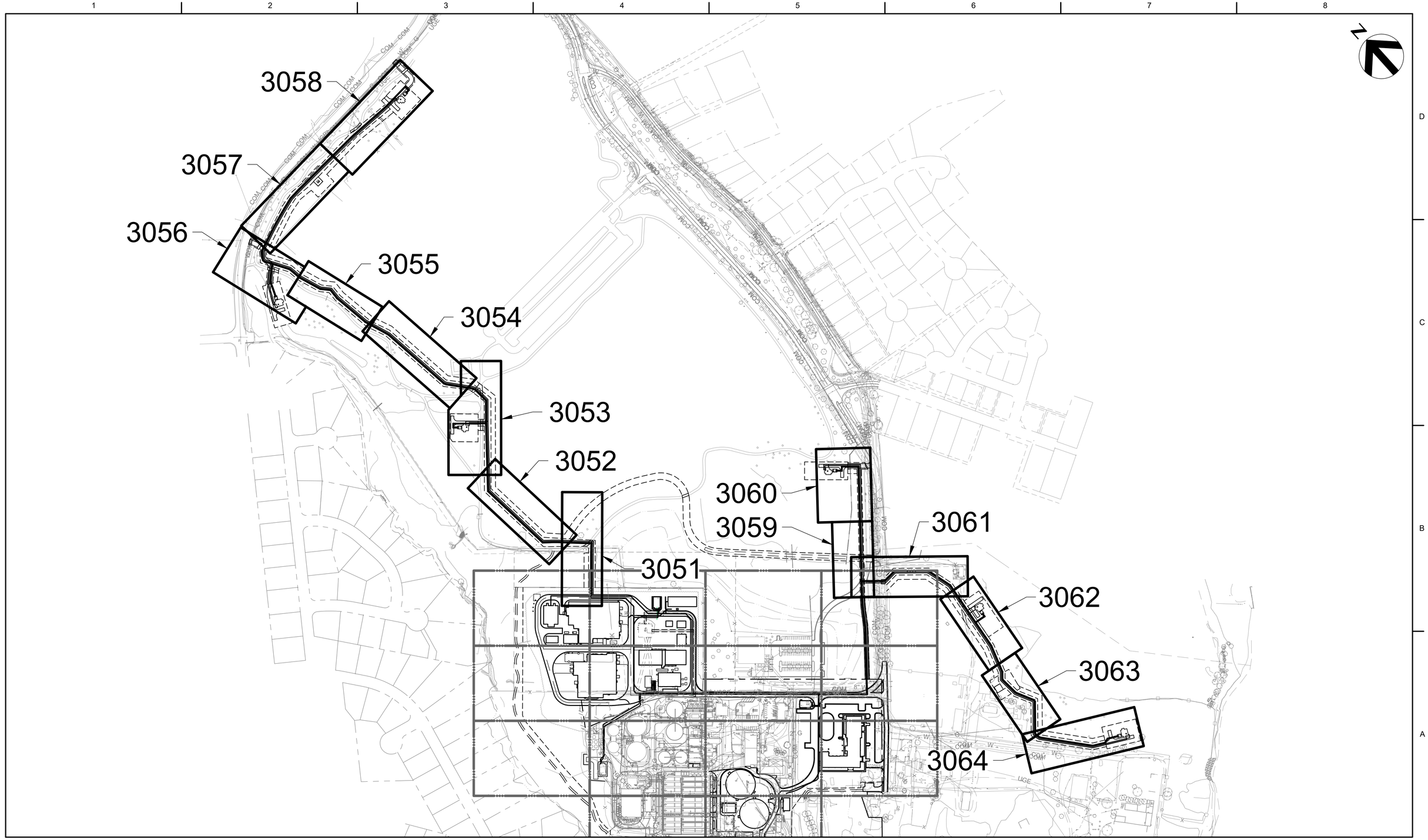
0 1" 2"

FILENAME C3036.DWG

SCALE AS NOTED

DWG NO. **C3036**

10/4/2021 4:35 PM



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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10/4/2021 4:18 PM

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

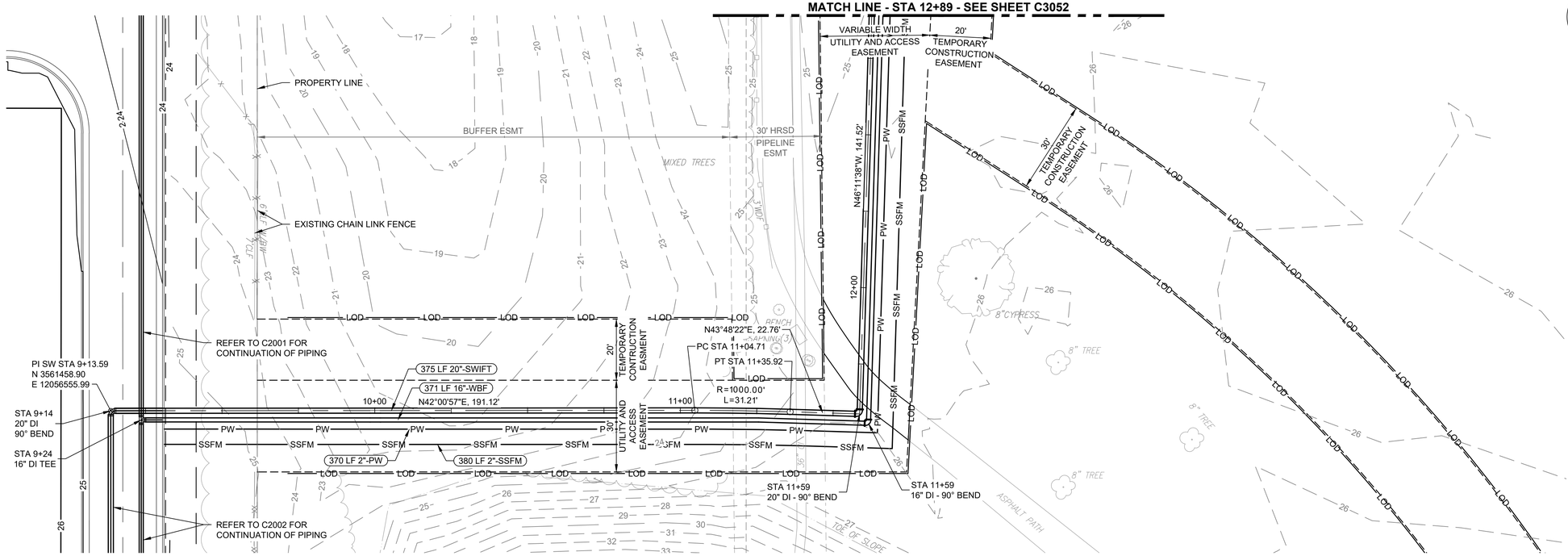
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

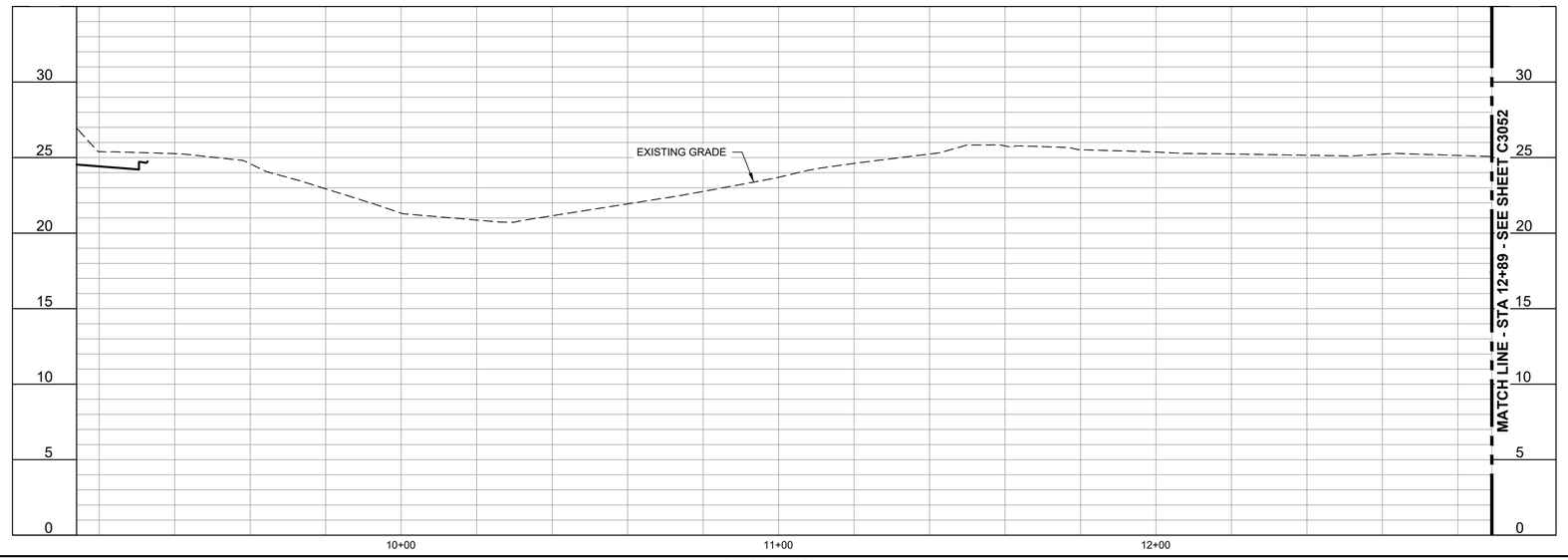
RECHARGE WELL NOS. 5-10
PARK PIPING OVERALL KEY PLAN

0 1" 2"

FILENAME C3050.DWG
SCALE 1" = 200'

DWG NO. **C3050**





GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN

HDR
US-A
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757.222.1500

ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 1
PARK NORTH
STA 09+14 - STA 12+89

0 1" 2"

FILENAME C3051.DWG
SCALE H: 1" = 20', V: 1" = 5'

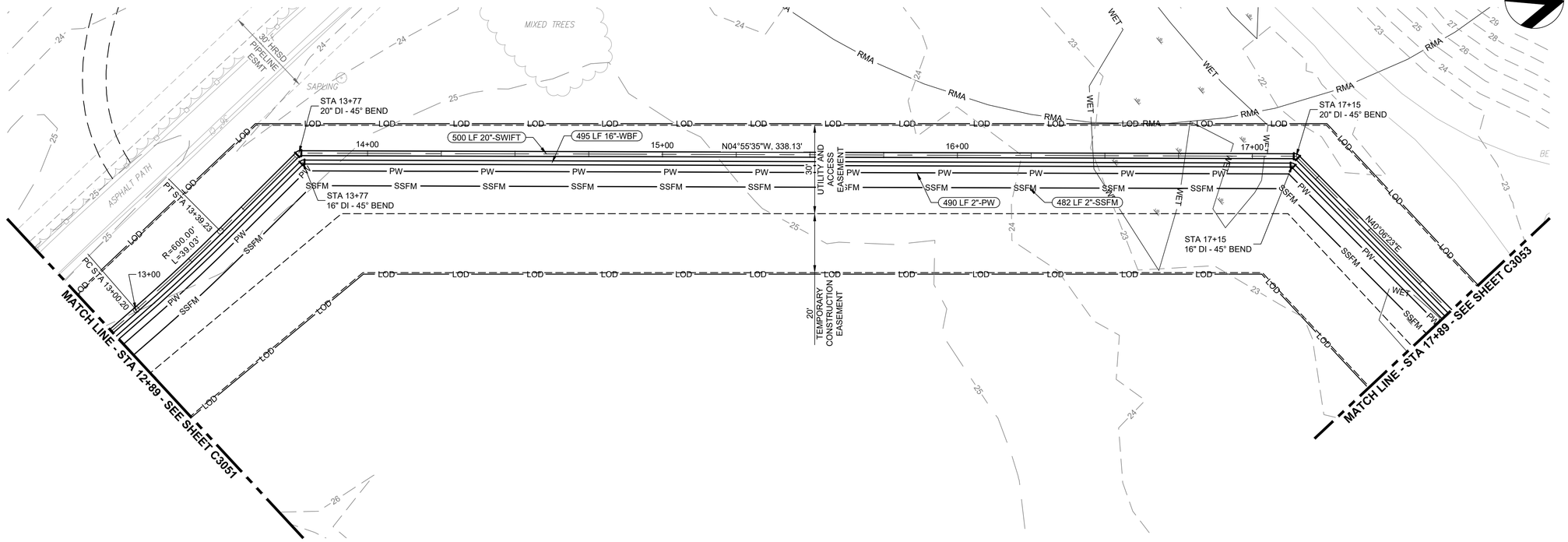
DWG NO. C3051

10/3/2021 11:54 AM

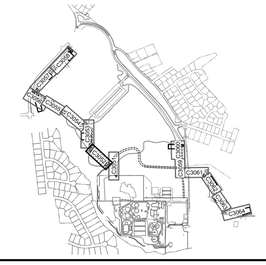
GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES



KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY	
PROJECT ENGINEER	XXXX X. XXXX	
DESIGNED BY	XXXX X. XXXX	
CHECKED BY	XXXX X. XXXX	
DRAWN BY	XXXX X. XXXX	
PROJECT NUMBER	10292462	

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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Virginia Beach, VA 23462
757.222.1500

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 2
PARK NORTH
STA 12+89 - STA 17+89

0 1" 2"

FILENAME C3052.DWG
SCALE H: 1" = 20', V: 1" = 5'

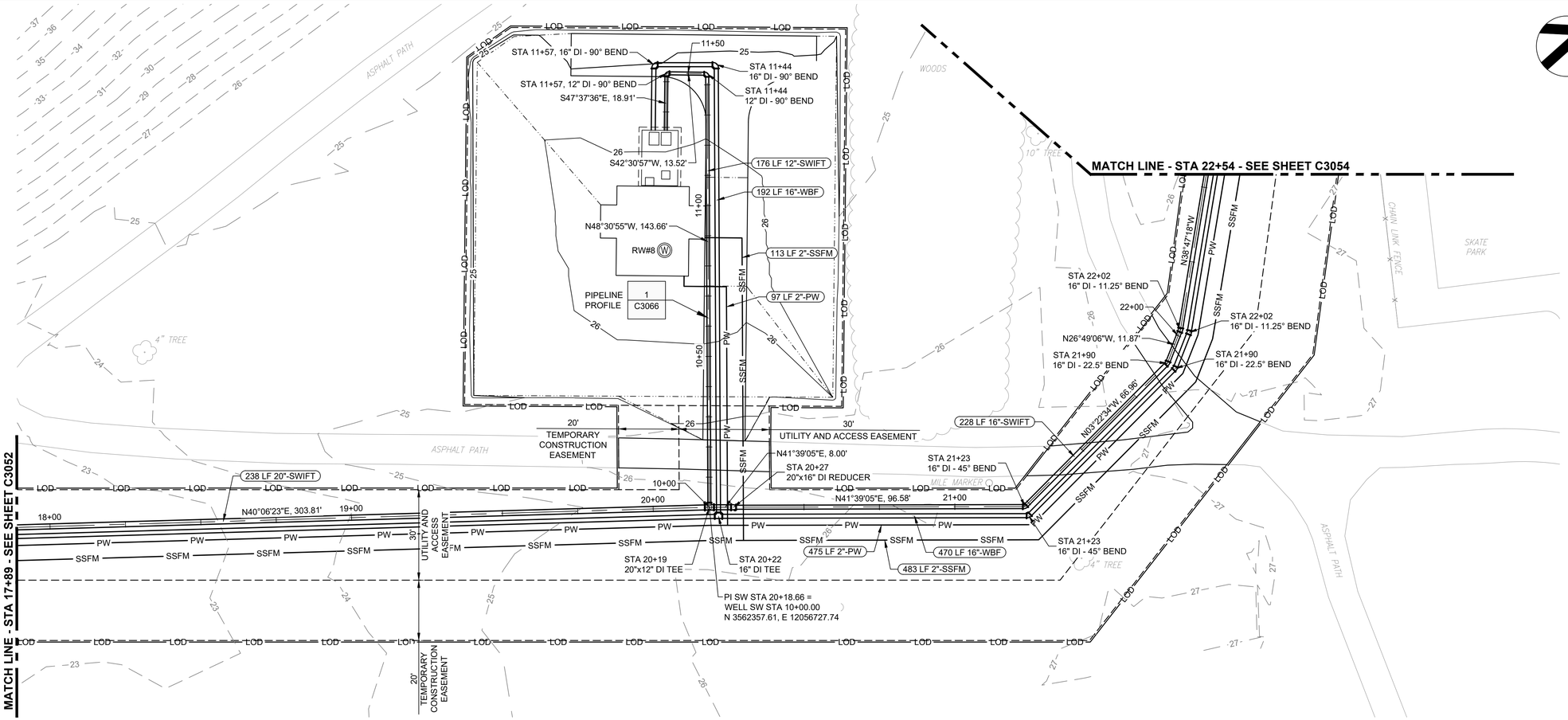
DWG NO. C3052

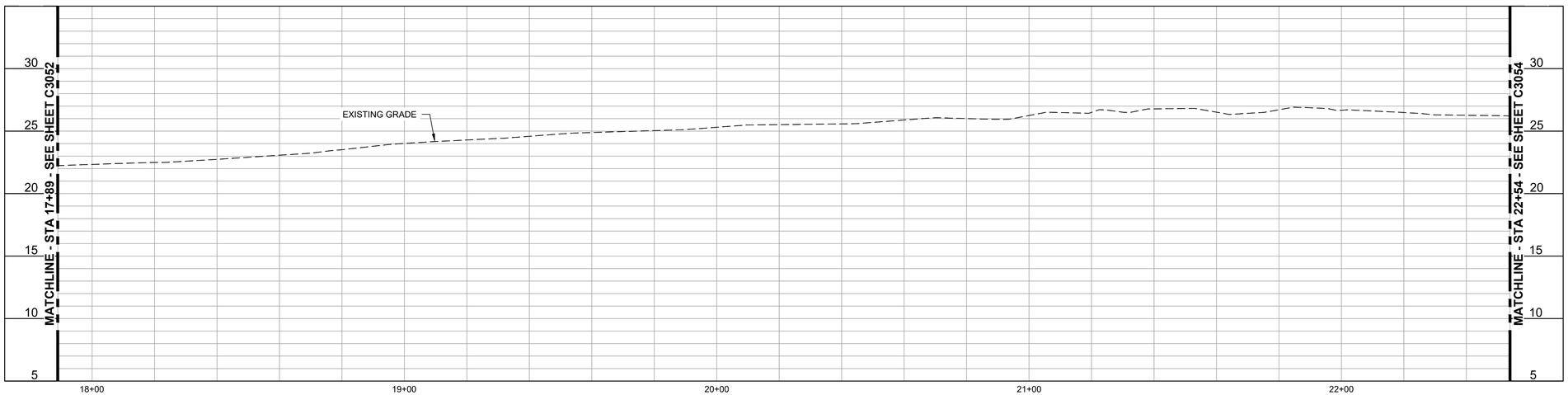
10/3/2021 11:56 AM

GENERAL NOTES

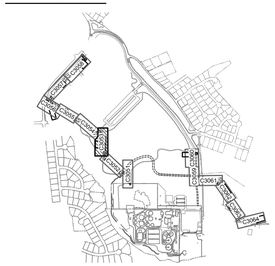
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES





KEY PLAN



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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10 PARK PIPING AND PROFILES 3 PARK NORTH STA 17+89 - STA 22+54

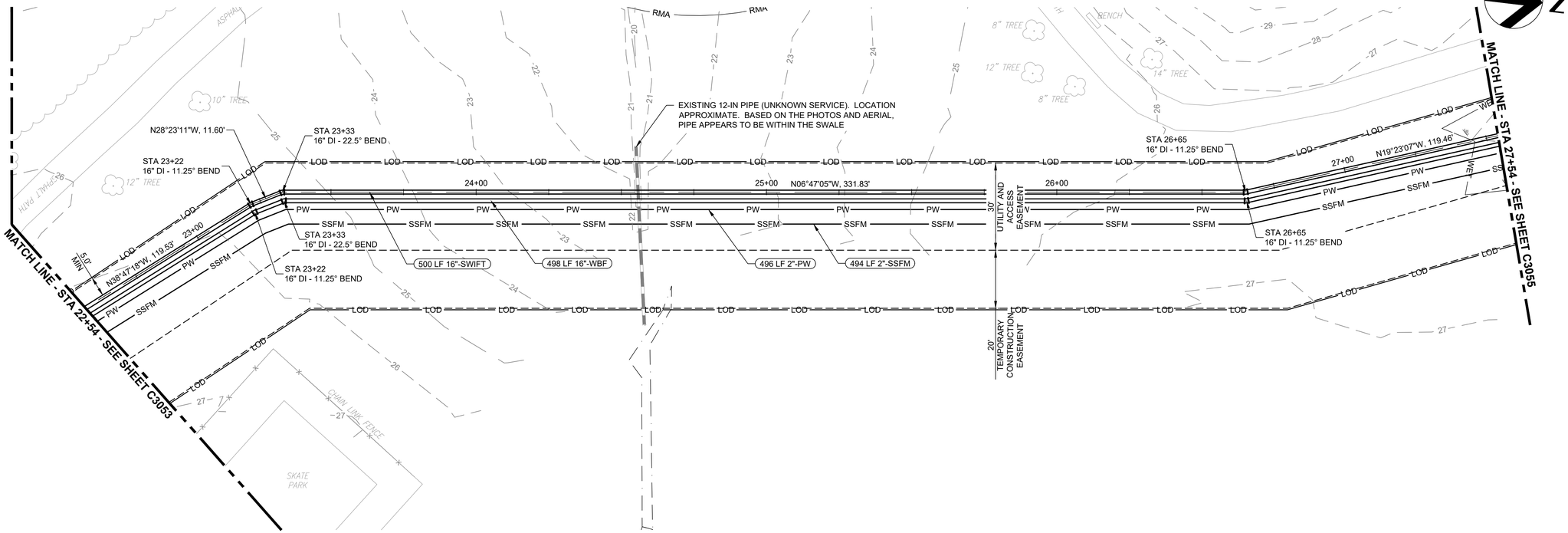
0 1" 2"

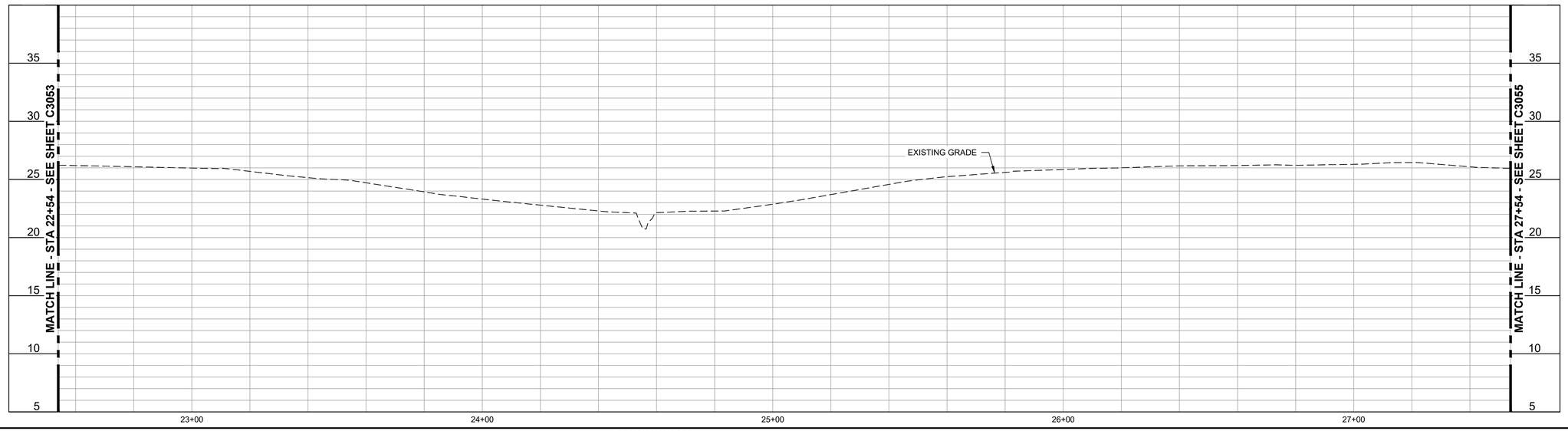
FILENAME C3053.DWG

SCALE H: 1" = 20', V: 1" = 5'

DWG NO. C3053

10/3/2021 11:59 AM



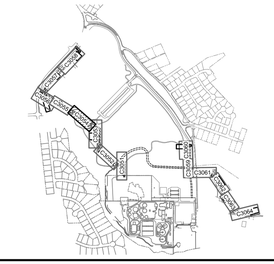


GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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Virginia Beach, VA 23462
757.222.1500

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 4
PARK NORTH
STA 22+54 - STA 27+54

0 1" 2"

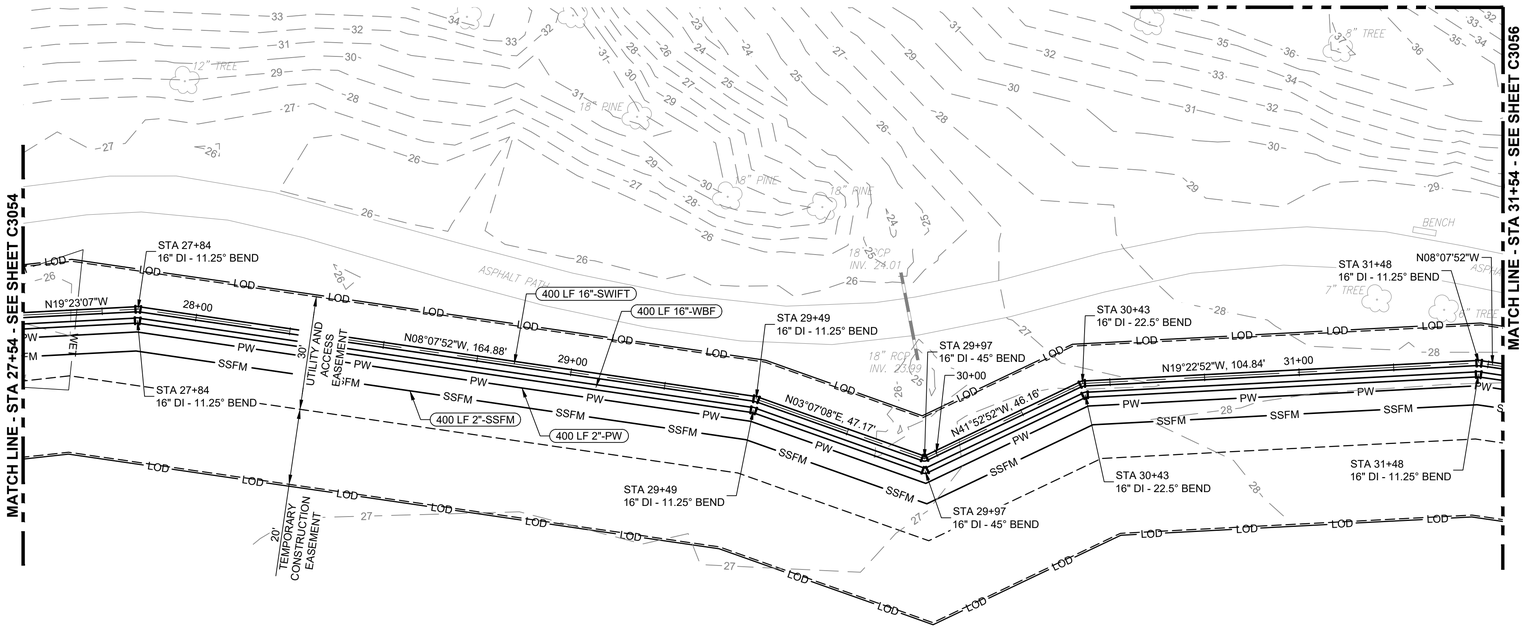
FILENAME	C3054.DWG
SCALE	H: 1" = 20', V: 1" = 5'

DWG NO. **C3054**

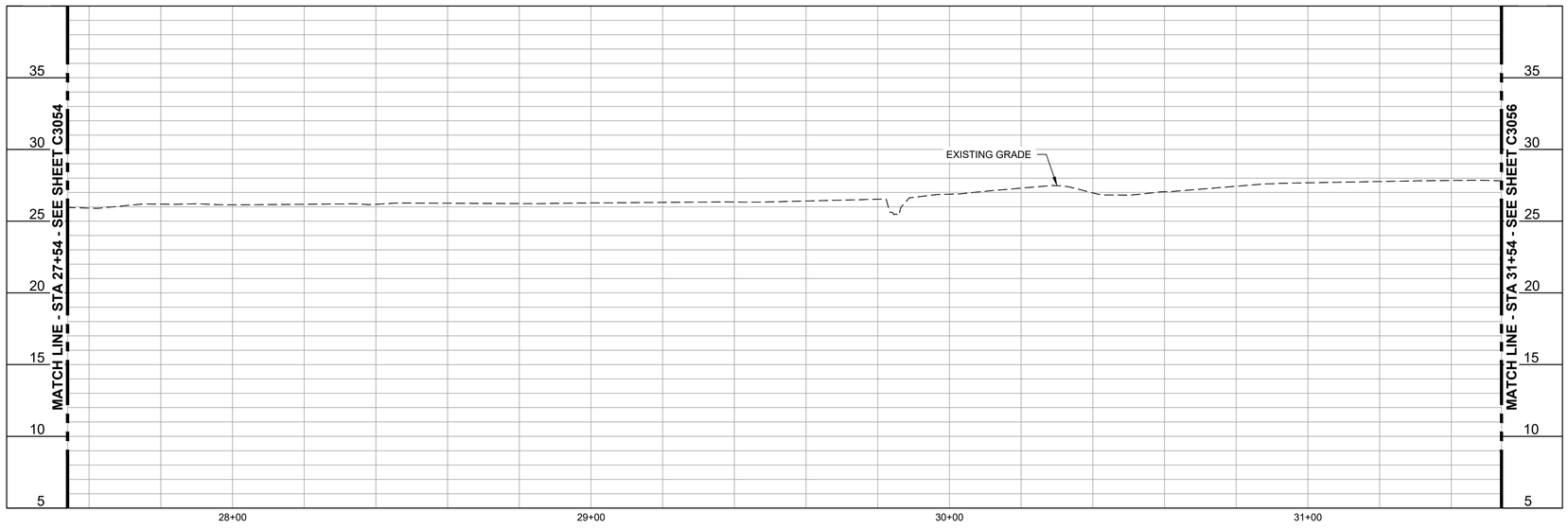
10/3/2021 12:02 PM

GENERAL NOTES

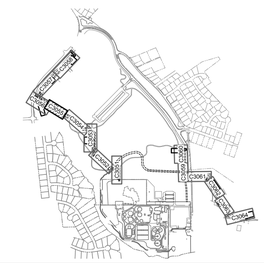
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.



KEYNOTES



KEY PLAN



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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 5
PARK NORTH
STA 27+54 - STA 31+54

0 1" 2"

FILENAME	C3055.DWG
SCALE	H: 1" = 20', V: 1" = 5'

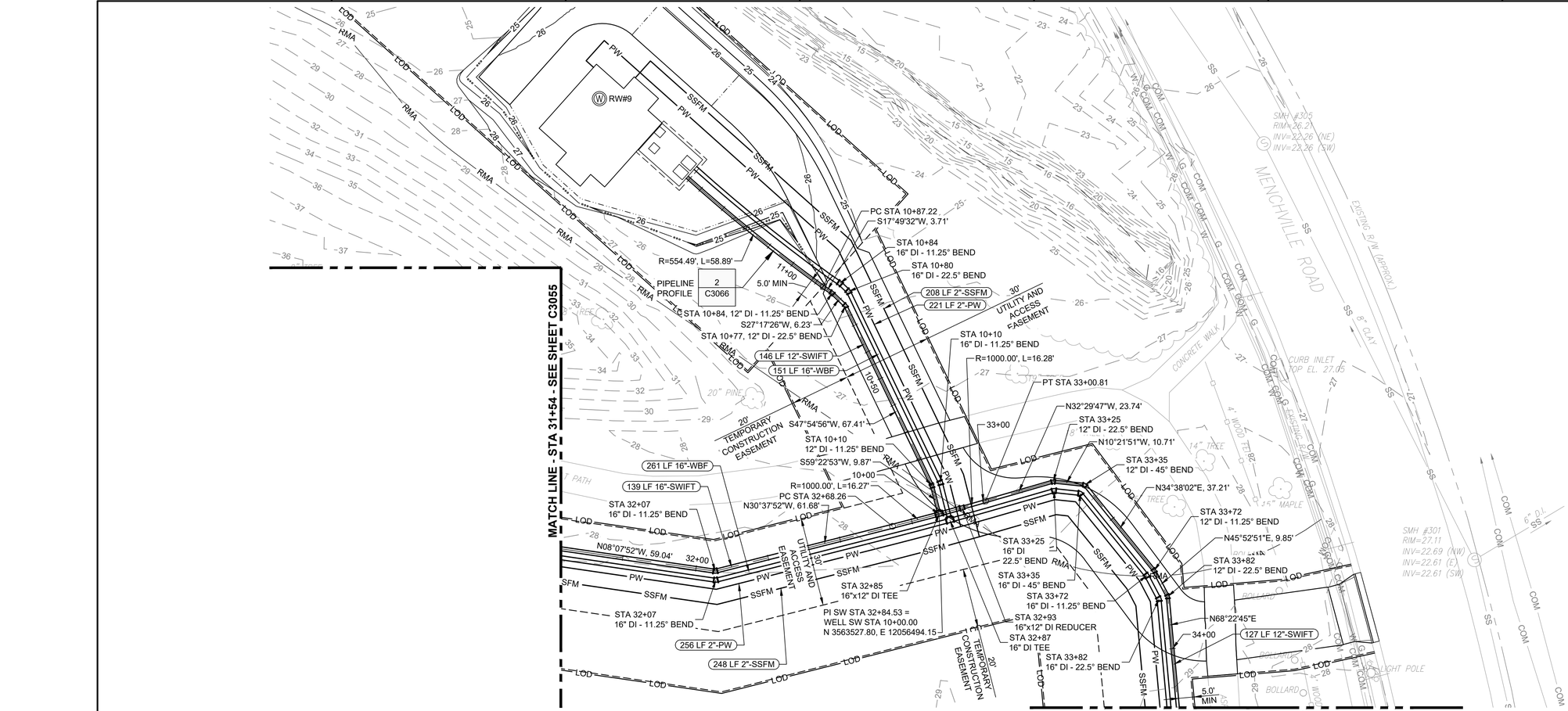
DWG NO. **C3055**

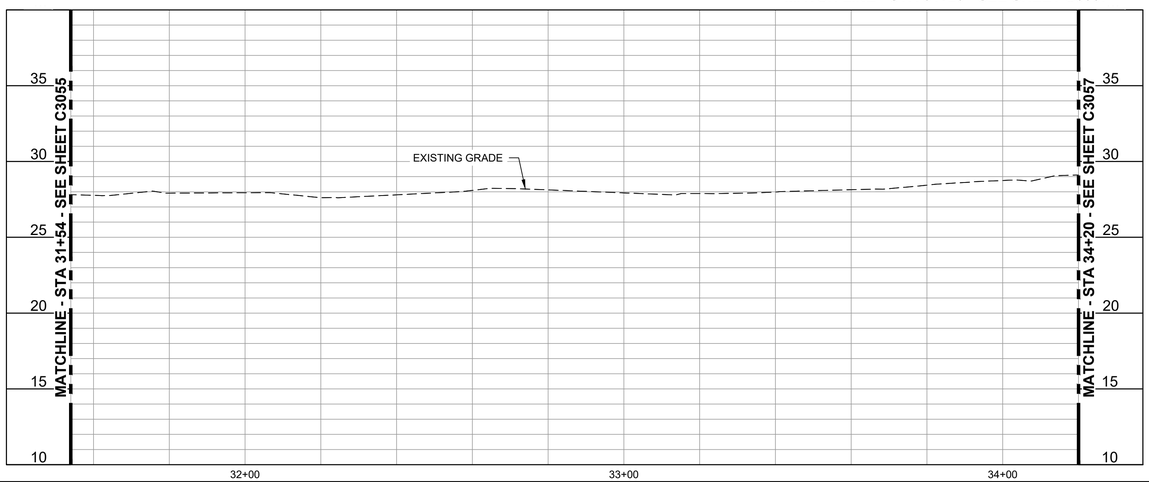
10/3/2021 12:05 PM

GENERAL NOTES

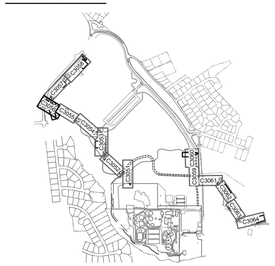
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES





KEY PLAN



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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

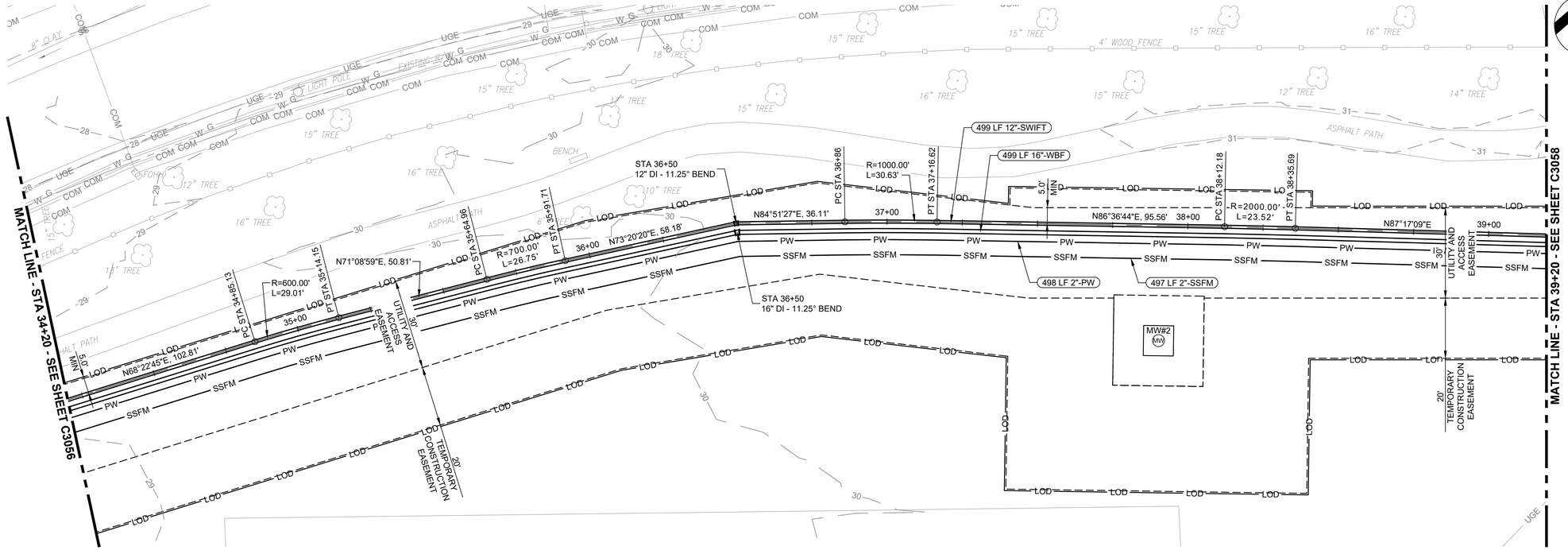
RECHARGE WELL NOS. 5-10 PARK PIPING AND PROFILES 6 PARK NORTH STA 31+54 - STA 34+20

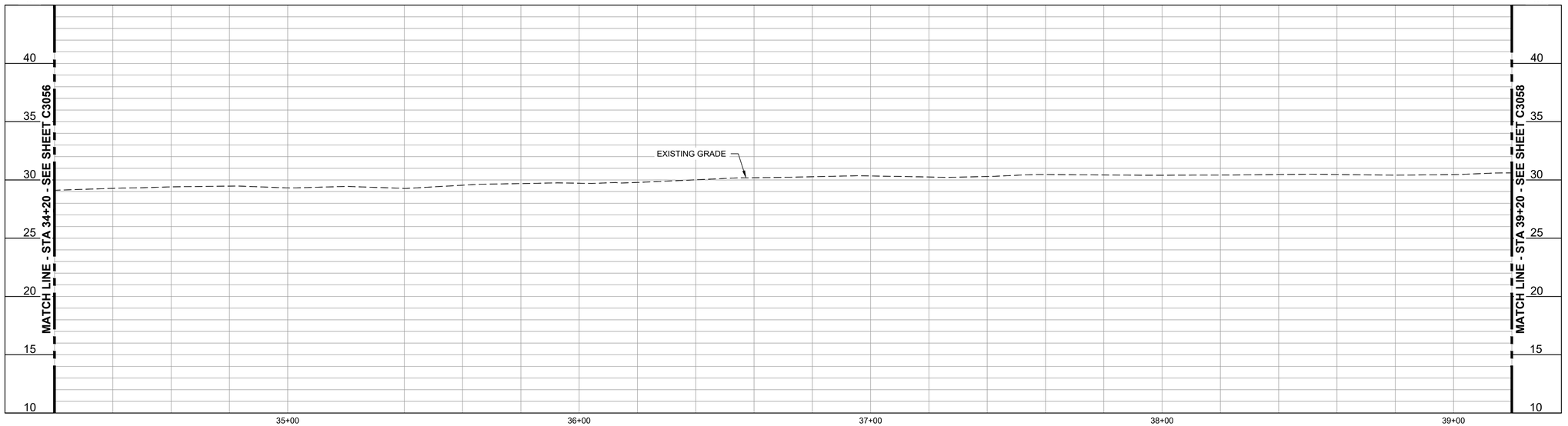
0 1" 2"

FILENAME C3056.DWG
SCALE H: 1" = 20', V: 1" = 5'

DWG NO. C3056

10/3/2021 12:08 PM



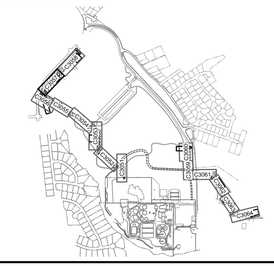


GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN



HDR US-A
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 7
PARK NORTH
STA 34+20 - STA 39+20

0 1" 2"

FILENAME C3057.DWG
SCALE H: 1" = 20', V: 1" = 5'

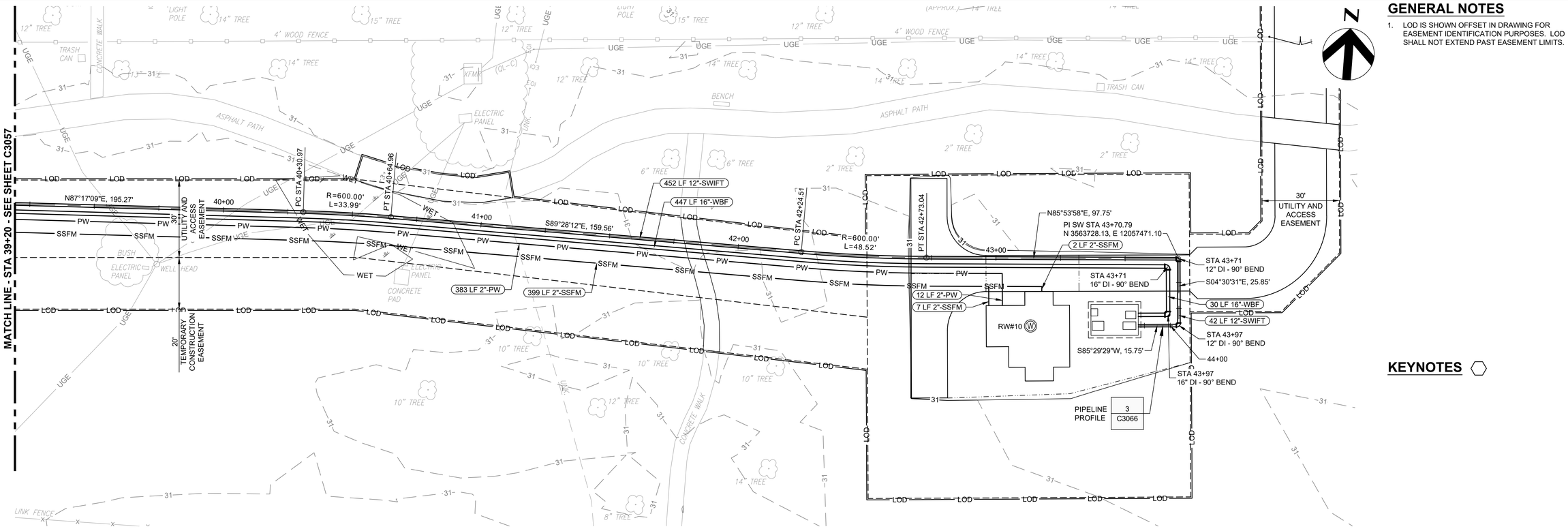
DWG NO. C3057

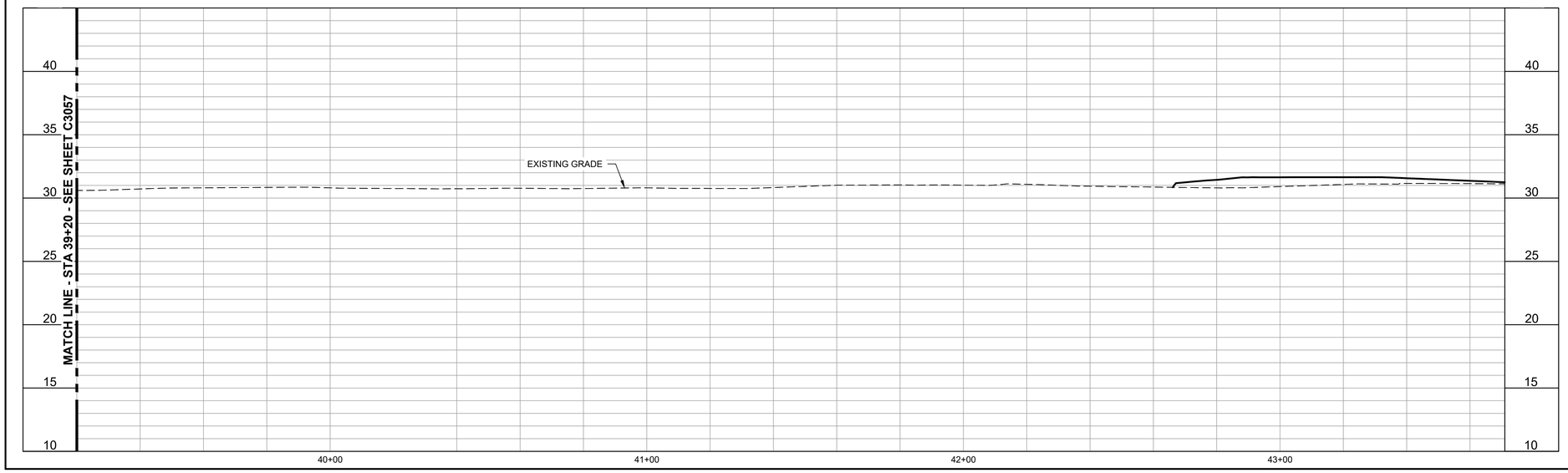
10/3/2021 12:10 PM

GENERAL NOTES

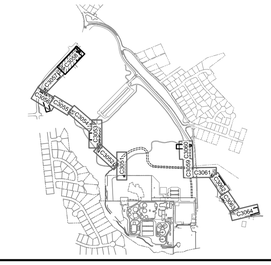
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES





KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

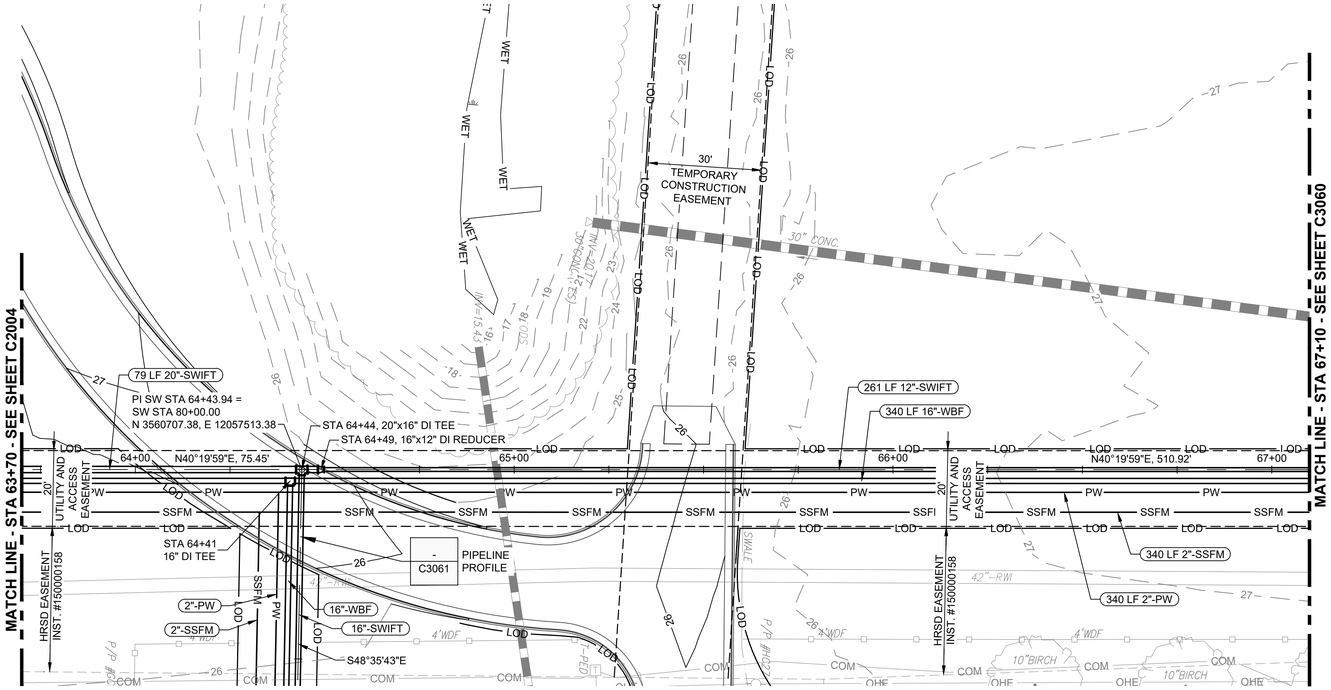
RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 8
PARK NORTH
STA 39+20 - STA 43+71

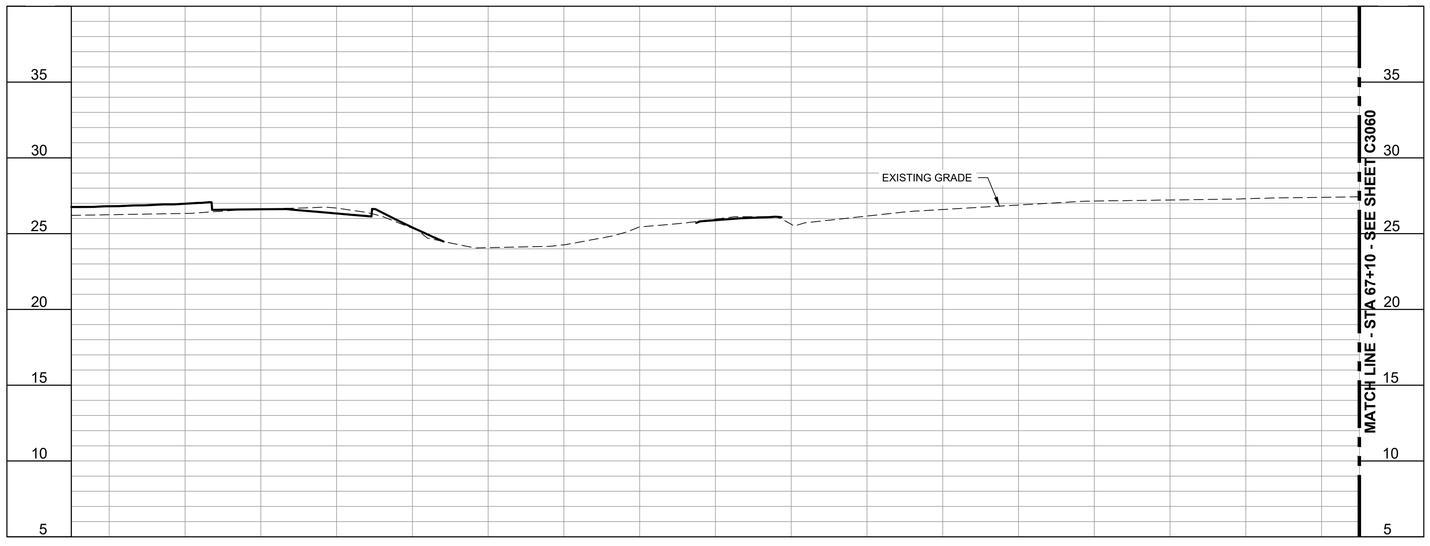
0 1" 2"

FILENAME	C3058.DWG
SCALE	H: 1" = 20', V: 1" = 5'

DWG NO. **C3058**

10/3/2021 12:13 PM



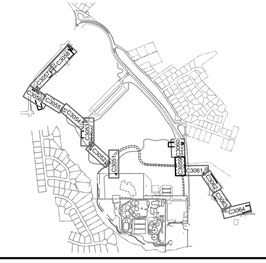


GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 9
CITY FARM RD
STA 63+70- STA 67+10

0 1" 2"

FILENAME C3059.DWG
SCALE H: 1" = 20', V: 1" = 5'

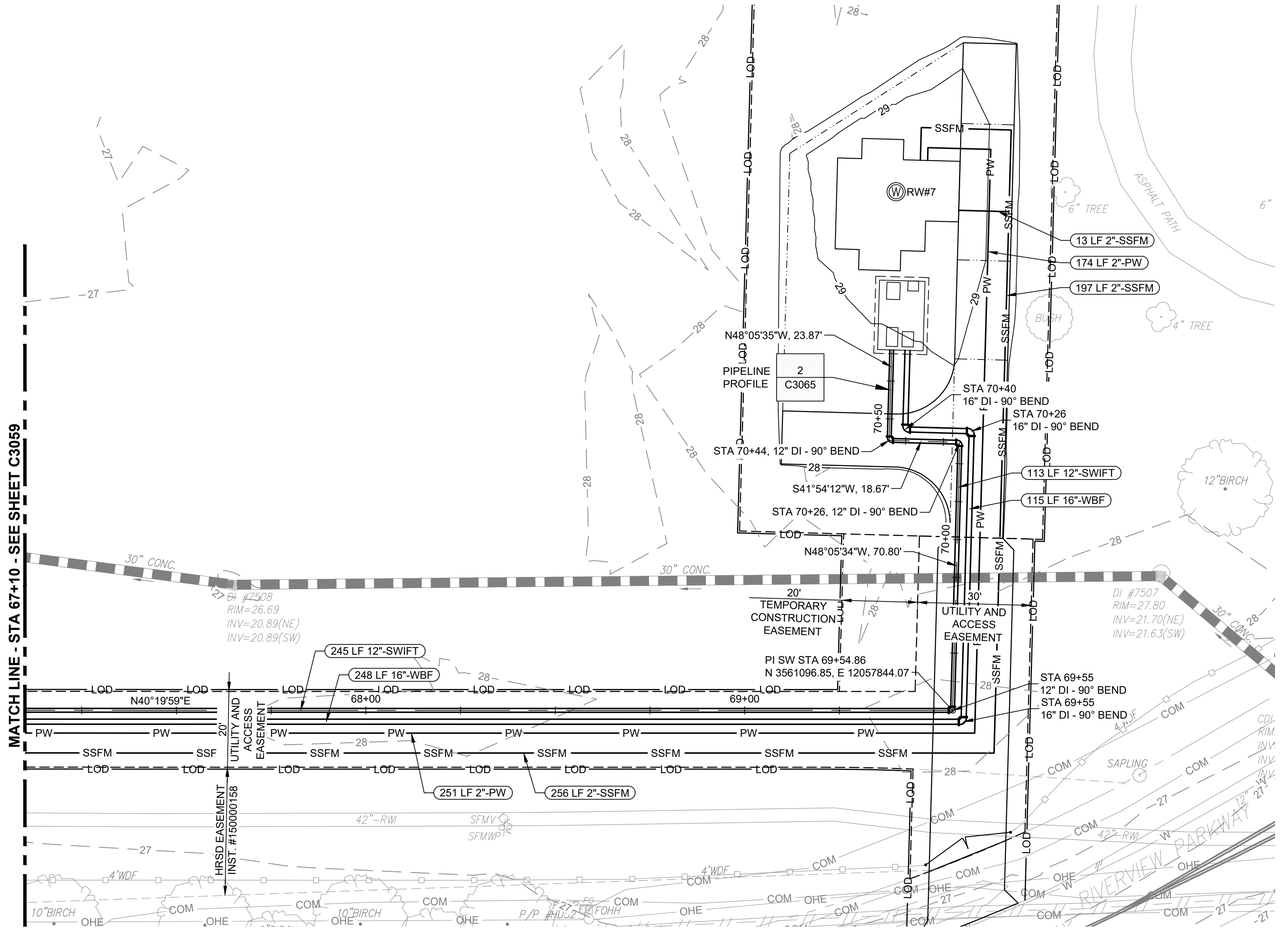
DWG NO. C3059

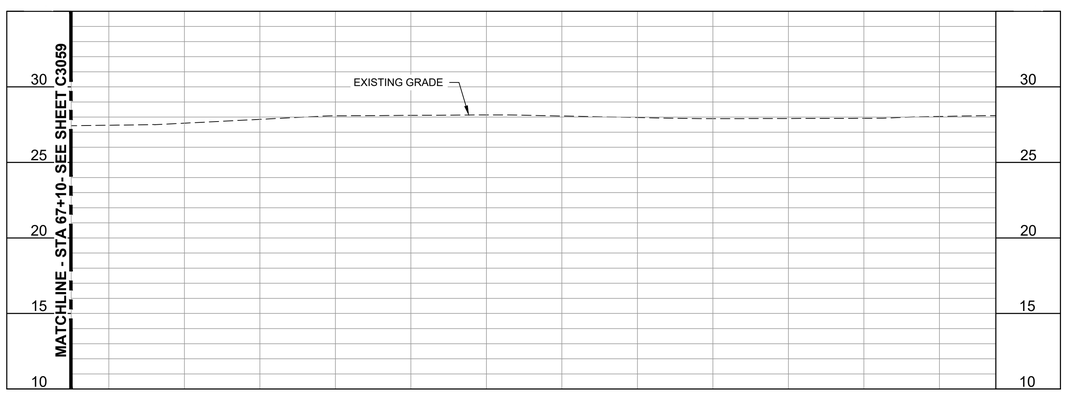
10/3/2021 12:16 PM

GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES





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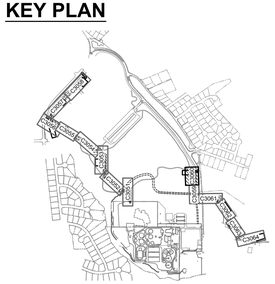

10/3/2021 12:18 PM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELLS NOS. 5-10
PARK PIPING AND PROFILES 10
CITY FARM RD
STA 67+10 - STA 69+55

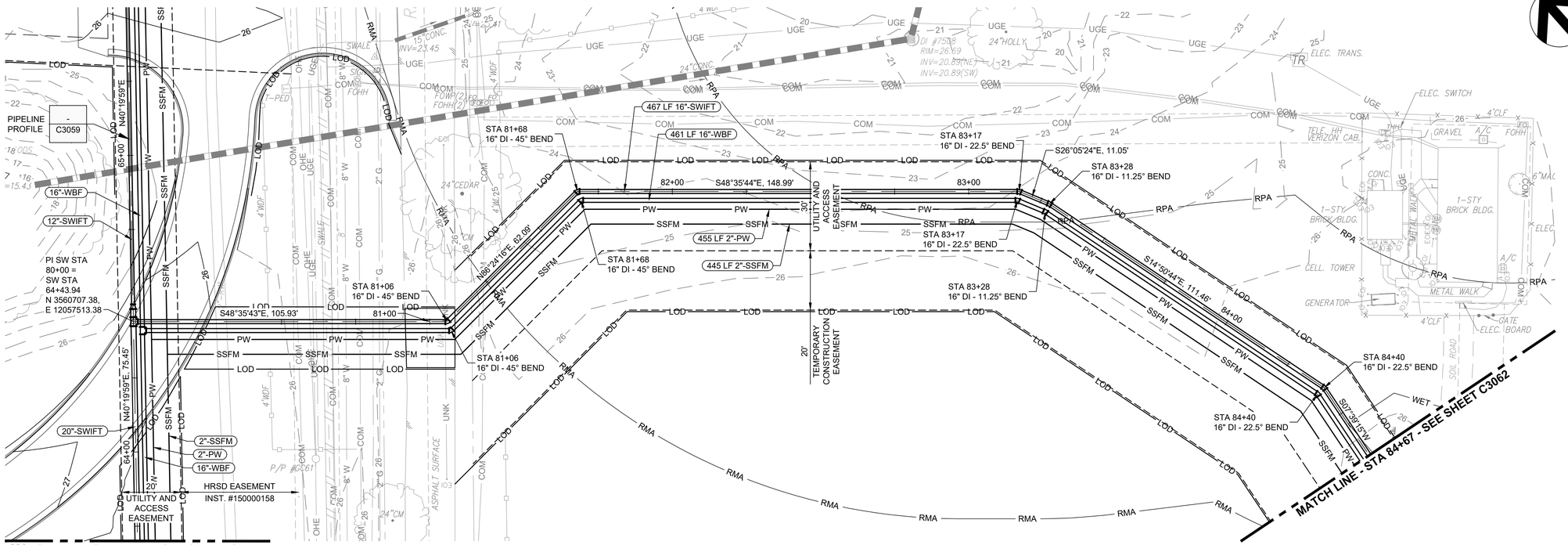
0 1" 2"

FILENAME	C3060.DWG
SCALE	H: 1" = 20', V: 1" = 5'

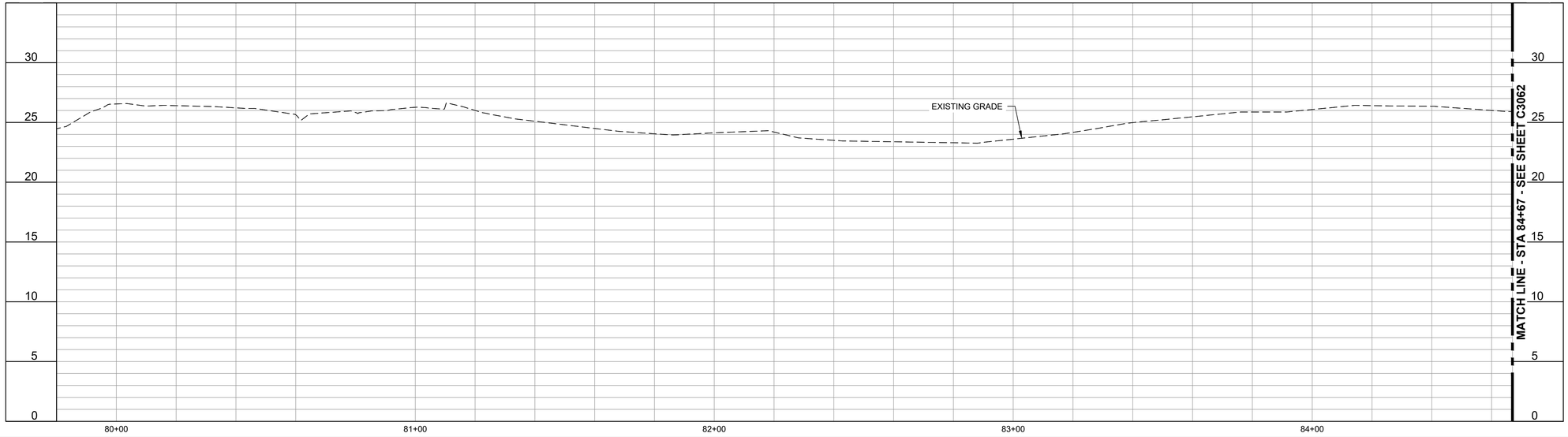
DWG NO. **C3060**

GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.



KEYNOTES



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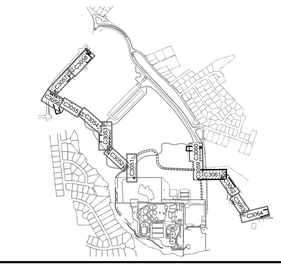

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 11
PARK SOUTH
STA 80+00 - STA 84+67

0 1" 2"

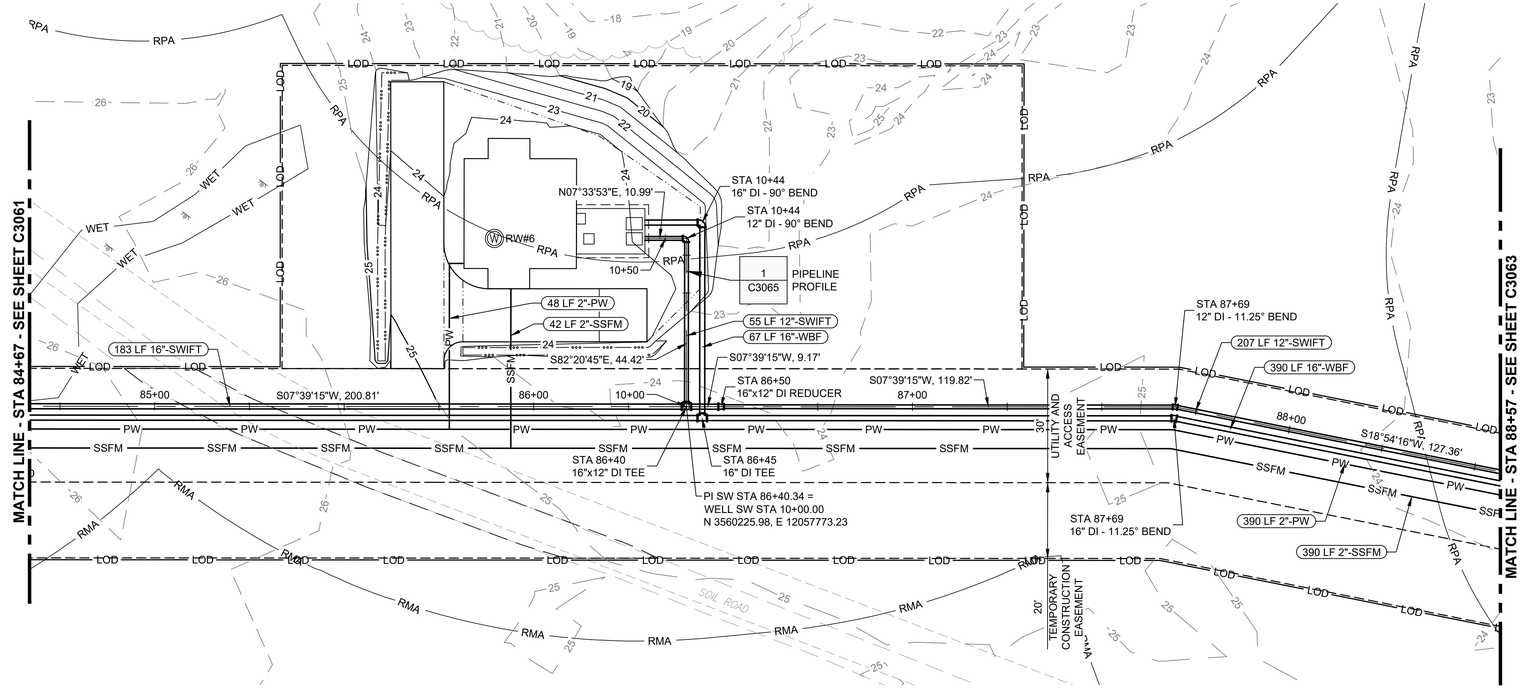
FILENAME	C3061.DWG
SCALE	H: 1" = 20', V: 1" = 5'

DWG NO. **C3061**

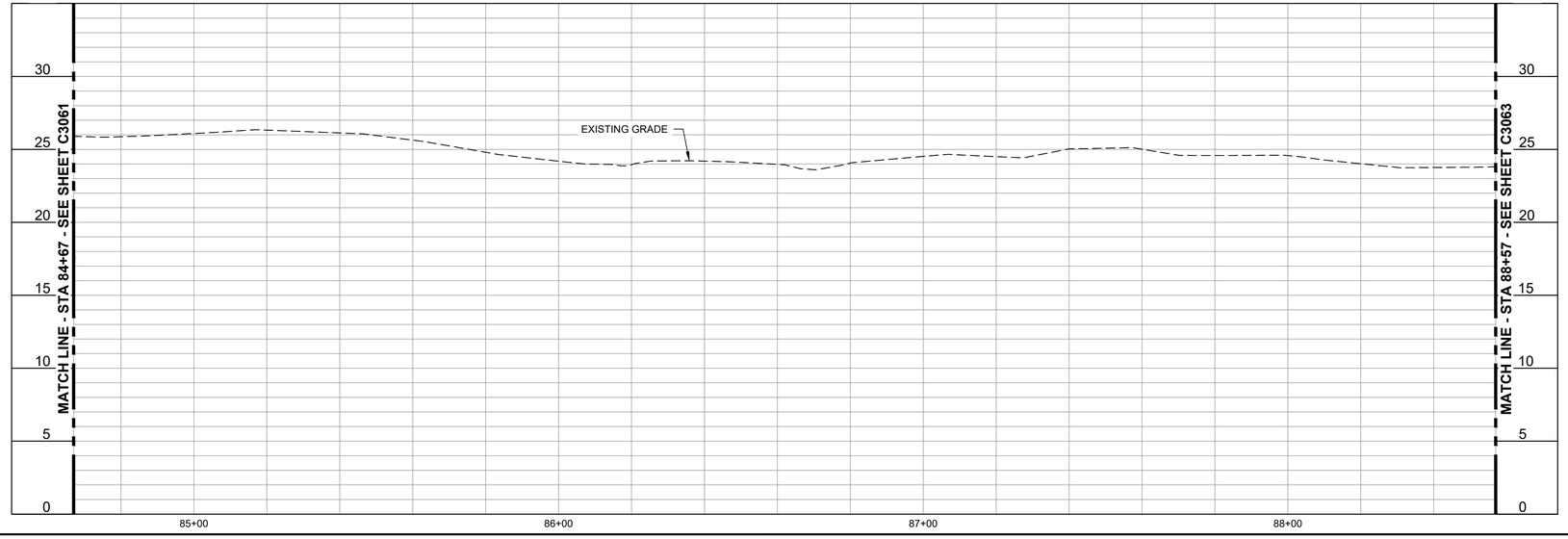
10/3/2021 12:20 PM

GENERAL NOTES

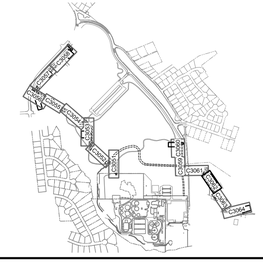
1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.



KEYNOTES



KEY PLAN



DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

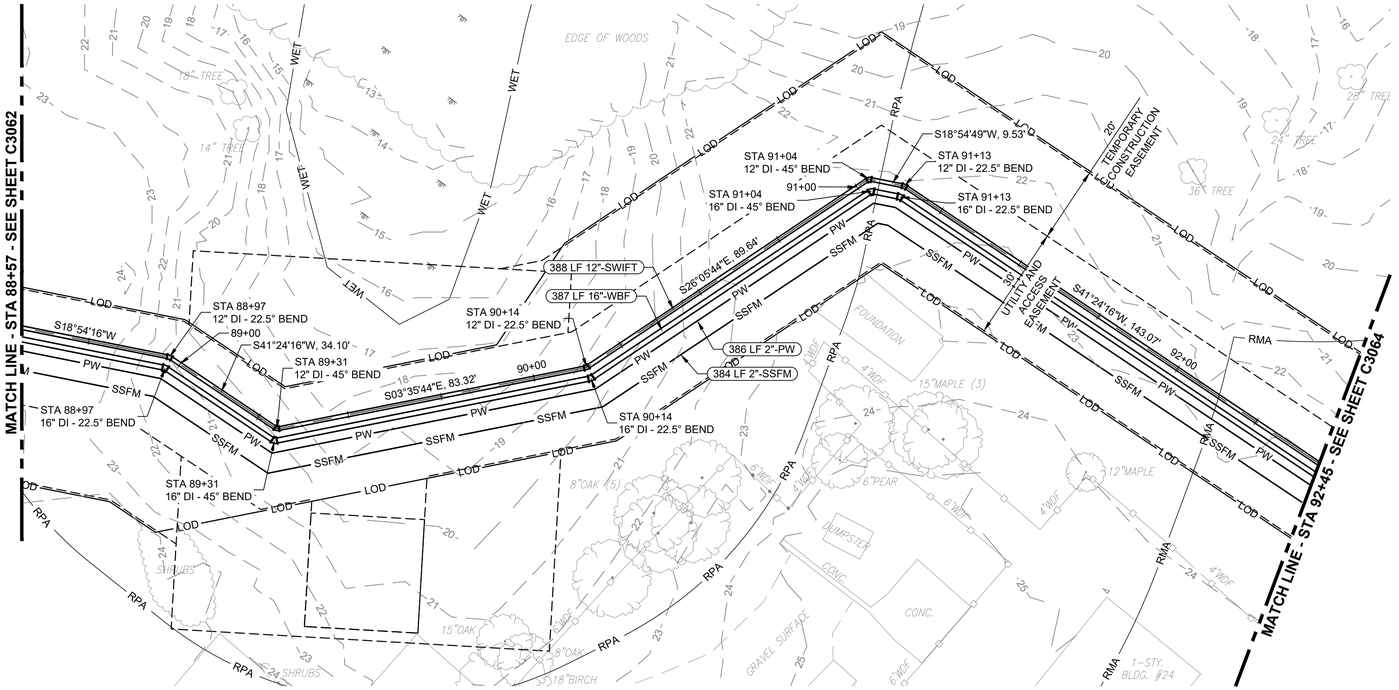
RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 12
PARK SOUTH
STA 84+67 - STA 88+57

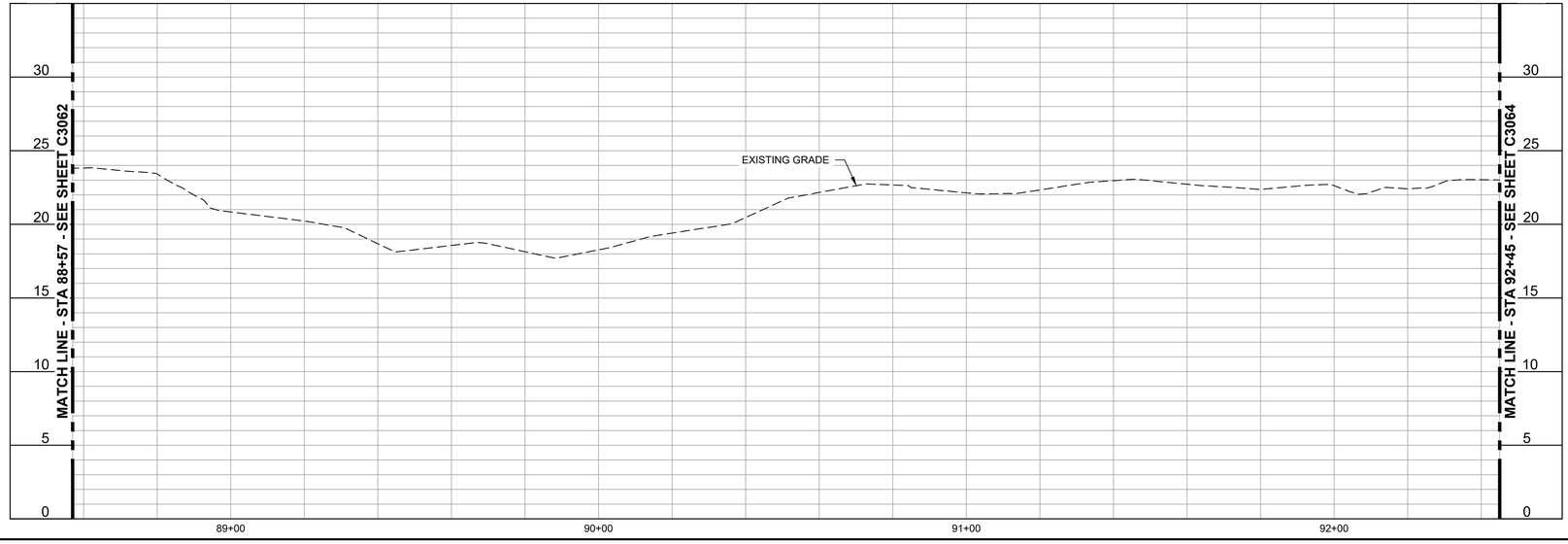
0 1" 2"

FILENAME	C3062.DWG
SCALE	H: 1" = 20', V: 1" = 5'

DWG NO. **C3062**

10/3/2021 12:23 PM



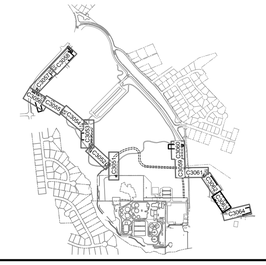


GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN



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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 13
PARK SOUTH
STA 88+57 - STA 92+45

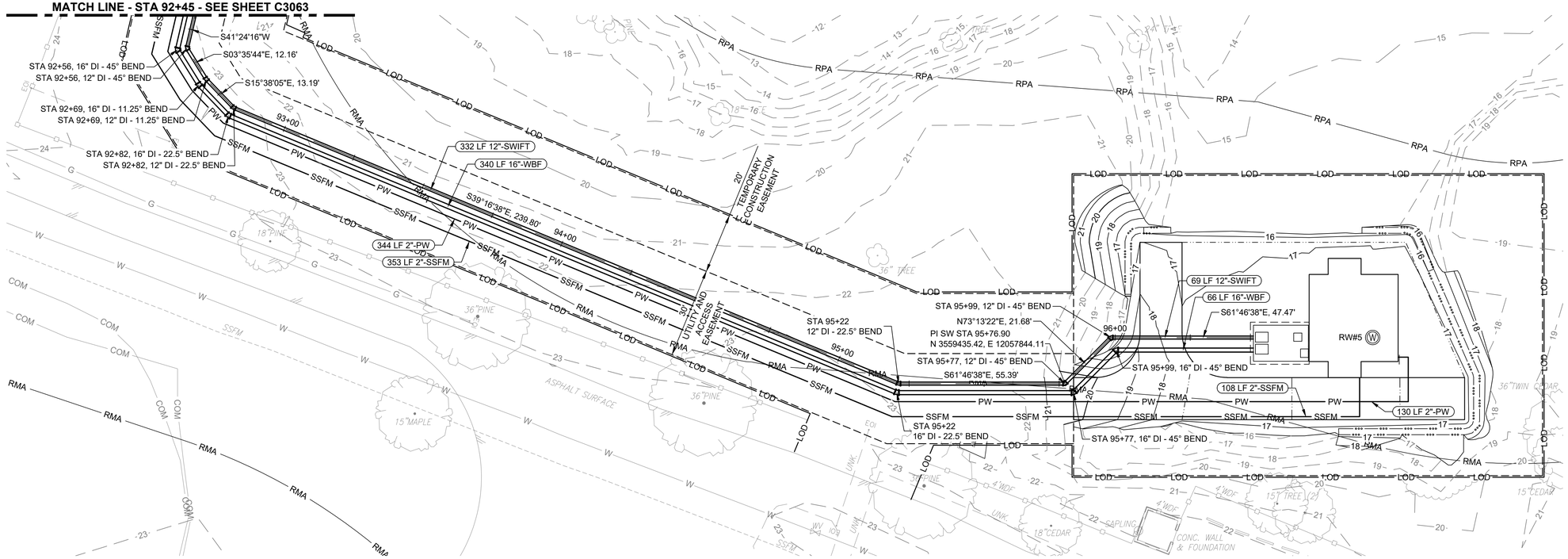
0 1" 2"

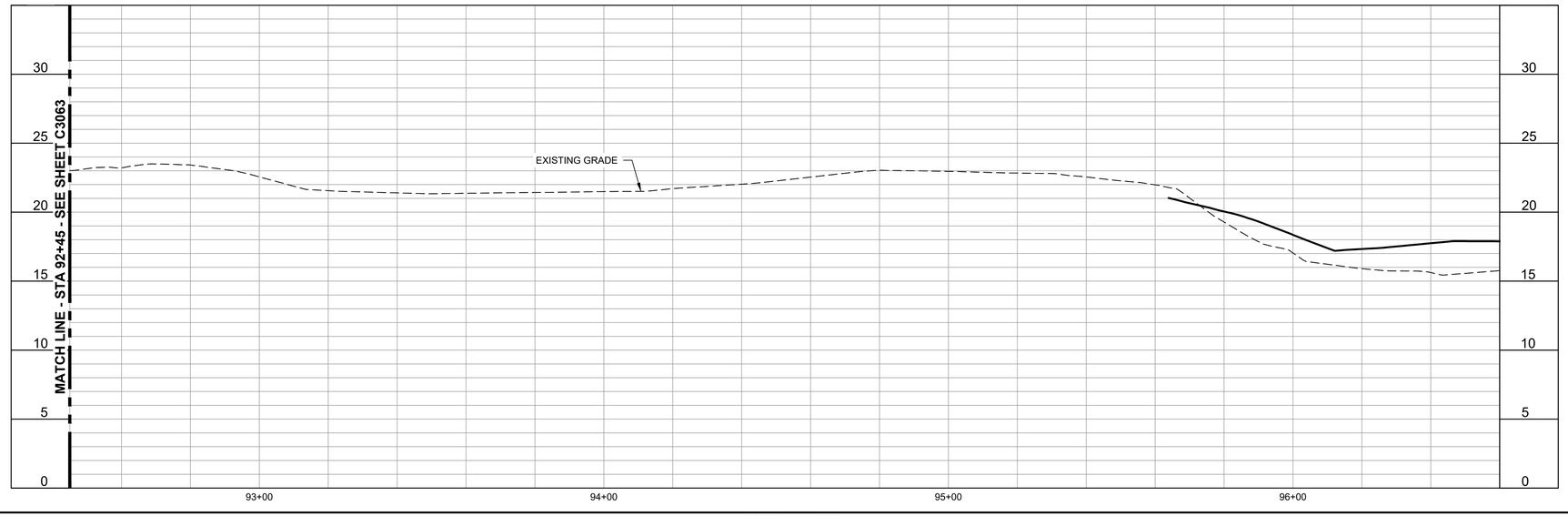
FILENAME	C3063.DWG
SCALE	H: 1" = 20', V: 1" = 5'

DWG NO. **C3063**

10/3/2021 12:26 PM

MATCH LINE - STA 92+45 - SEE SHEET C3063



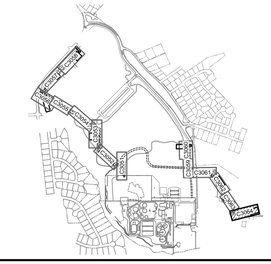


GENERAL NOTES

1. LOD IS SHOWN OFFSET IN DRAWING FOR EASEMENT IDENTIFICATION PURPOSES. LOD SHALL NOT EXTEND PAST EASEMENT LIMITS.

KEYNOTES

KEY PLAN



HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

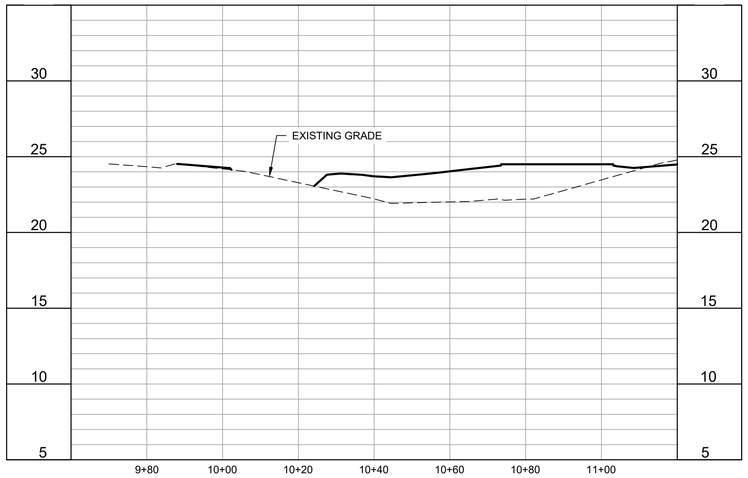
RECHARGE WELL NOS. 5-10
PARK PIPING AND PROFILES 14
PARK SOUTH
STA 92+45 - STA 96+46

0 1" 2"

FILENAME	C3064.DWG
SCALE	H: 1" = 20', V: 1" = 5'

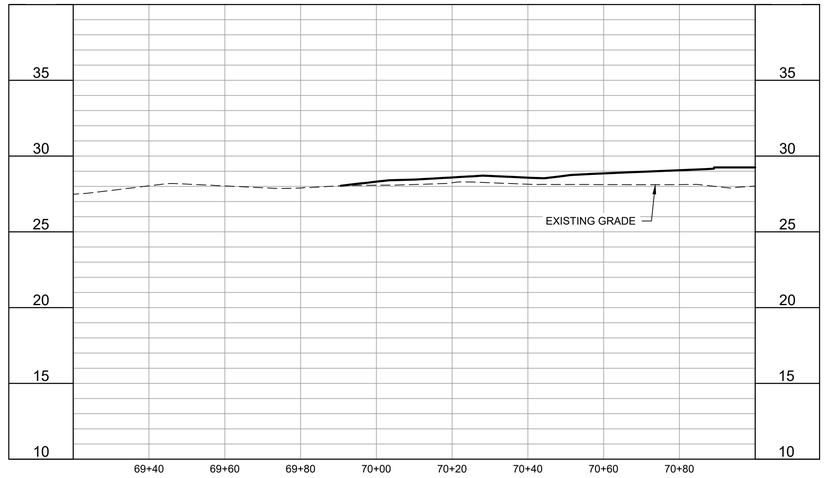
DWG NO. **C3064**

10/3/2021 12:28 PM



1 C3062 RECHARGE WELL PROFILE - WELL NO. 6

SCALE: H: 1" = 20', V: 1" = 5'



2 C3060 RECHARGE WELL PROFILE - WELL NO. 7

SCALE: H: 1" = 20', V: 1" = 5'

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL PROFILES 1
PARK SOUTH
WELL NOS. 6-7

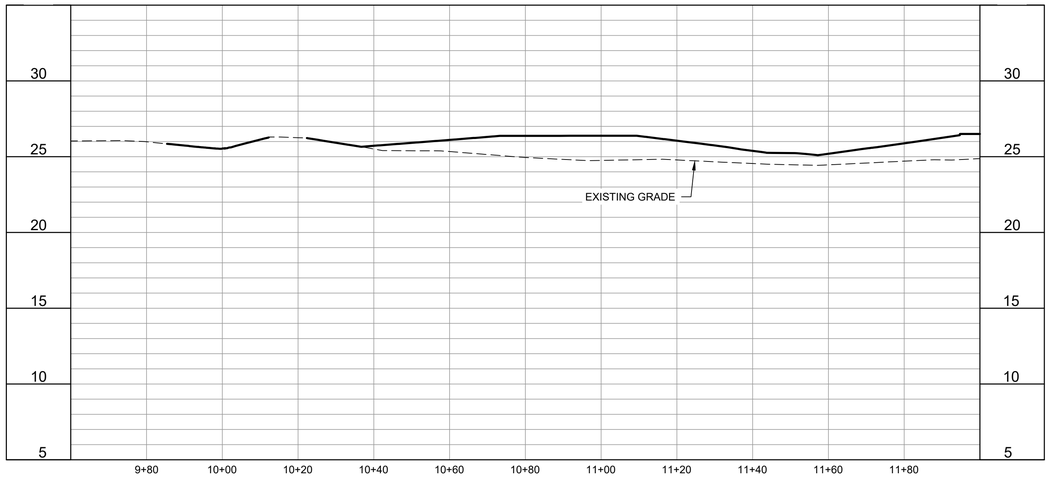
0 1" 2"

FILENAME C3065.DWG

SCALE H: 1" = 20', V: 1" = 5'

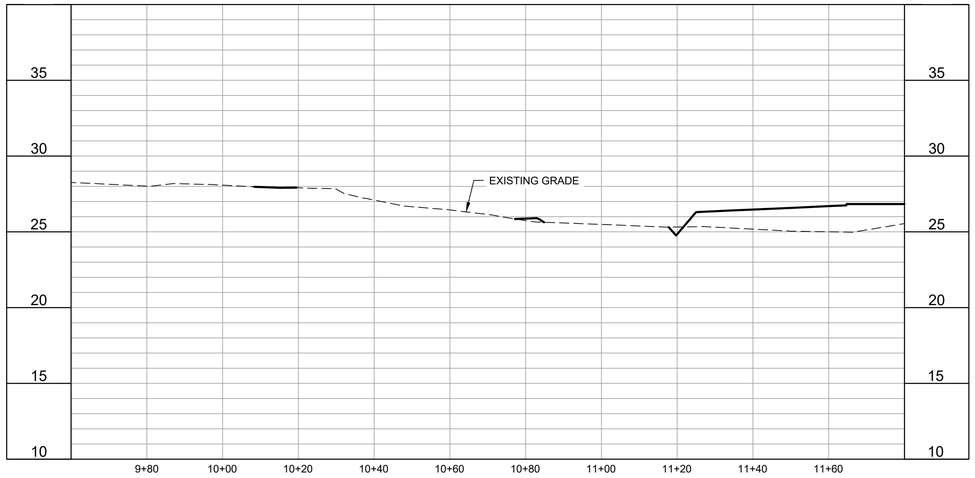
DWG NO. **C3065**

10/3/2021 12:30 PM



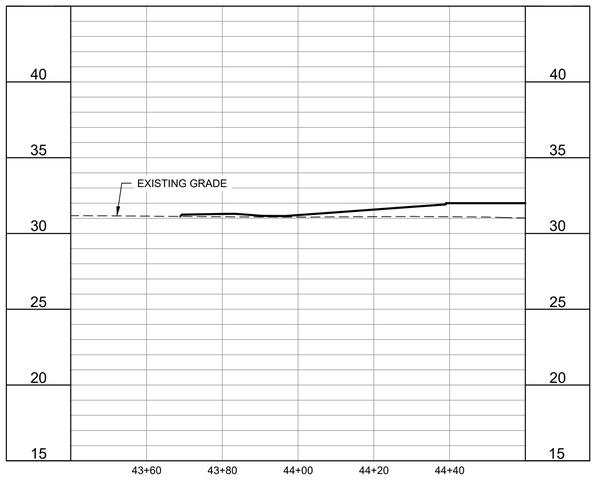
1 C3053 RECHARGE WELL PROFILE - WELL NO. 8

SCALE: H: 1" = 20', V: 1" = 5'



2 C3056 RECHARGE WELL PROFILE - WELL NO. 9

SCALE: H: 1" = 20', V: 1" = 5'



3 C3058 RECHARGE WELL PROFILE - WELL NO. 10

SCALE: H: 1" = 20', V: 1" = 5'

HDR US-A
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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

RECHARGE WELL PROFILES 2 PARK NORTH WELL NOS. 8-10

0 1" 2"

FILENAME C3066.DWG

SCALE H: 1" = 20', V: 1" = 5'

DWG NO. **C3066**

10/3/2021 12:32 PM

CITY OF NEWPORT NEWS GENERAL NOTES:

CONSTRUCTION

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THE CURRENT NEWPORT NEWS DESIGN CRITERIA MANUAL, VDOT STANDARDS AND SPECIFICATIONS, VDOT ROAD AND BRIDGES STANDARDS AND SPECIFICATIONS, LATEST EDITION OF THE HAMPTON ROADS PLANNING DISTRICT COMMISSION (HRPDC) REGIONAL CONSTRUCTION STANDARDS, THE NEWPORT NEWS SPECIAL PROVISIONS OF THE HRPDC REGIONAL CONSTRUCTION STANDARDS, THE STORMWATER MANAGEMENT HANDBOOK, VIRGINIA DEQ STORMWATER DESIGN SPECIFICATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND ANY OTHER APPLICABLE CITY OR STATE ORDINANCE, CODE AND/OR LAW.
2. EXTERIOR CONCRETE SHALL BE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) CLASS A3.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THE PLAN. THE CONTRACTOR SHALL REPAIR, AT THEIR OWN EXPENSE, ALL UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL FOLLOW ALL “MISS UTILITIES OF VIRGINIA” POLICIES PRIOR TO STARTING ANY CONSTRUCTION ACTIVITY.
4. ALL COSTS ASSOCIATED WITH THE REQUIRED RELOCATION/ADJUSTMENT OF UTILITIES AND/OR OBSTRUCTIONS (POWER POLES, TELEPHONE PEDESTALS, GUY WIRES, WATER METERS, STREETLIGHTS, ETC.) DUE TO CONSTRUCTION OF THE PROJECT ARE THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
5. ALL COSTS ASSOCIATED WITH THE INSTALLATION AND UPGRADE OF STREETLIGHTS AND OTHER UTILITIES FOR THE CONSTRUCTION OF THE PROJECT ARE THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
6. THERE SHALL BE ONE (1) R7-8 HANDICAP SIGN WITH AN ADDITIONAL PLATE READING “PENALTY $100 – $500 TOW-AWAY ZONE” PER HANDICAP PARKING SPACE PROVIDED. AT LEAST ONE (1) OUT OF EVERY EIGHT (8) HANDICAP SPACES SHALL BE VAN ACCESSIBLE. ALL DESIGNATED VAN ACCESSIBLE SPACES SHALL HAVE “VAN ACCESSIBLE” ADDED TO THE SIGN ASSEMBLY. THE REQUIRED HANDICAP SIGN ASSEMBLAGE SHALL BE MOUNTED IN ACCORDANCE WITH THE CURRENT ANSI A117.1 STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.

FIRE

7. FIRE HYDRANTS MUST BE LOCATED SO THAT AT LEAST ONE HYDRANT IS CAPABLE OF REACHING THE REAR OF THE BUILDING. THE REQUIRED DISTANCES FROM THE FIRE HYDRANTS, AS WELL AS THE REQUIRED FIRE FLOW, IS SET BY THE CURRENT EDITION OF THE WATER DESIGN STANDARDS OF NEWPORT NEWS WATERWORKS. MINIMUM FIRE HYDRANT SPACING IS CURRENTLY EVERY 400 FEET FOR COMMERCIAL/INDUSTRIAL APPLICATION, AND EVERY 600 FEET FOR RESIDENTIAL.
8. THE HYDRANT DISTANCES SHALL BE MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, AND SHALL BE MEASURED ALONG THE NATURAL AND UNOBSTRUCTED PATH OF VEHICLE TRAVEL.
9. ANY BUSHES, TREES, FENCING OR ANY OTHER POTENTIAL OBSTRUCTION SHALL BE IDENTIFIED AND BE A MINIMUM OF 3 FEET FROM FIRE HYDRANTS AND OTHER FIRE SUPPRESSION EQUIPMENT.
10. FIRE DEPARTMENT CONNECTIONS (FDC) SHALL BE LOCATED ON A STREET FRONT, A MINIMUM OF 40 FEET FROM THE BUILDING, AND NO MORE THAN 100 FEET FROM A FIRE HYDRANT.
11. MINIMUM WIDTH OF ALL FIRE LANES SHALL BE 20 FEET UNLESS OTHERWISE APPROVED BY THE FIRE CODE OFFICIAL. MINIMUM HEIGHT OF CANOPIES (AND/OR OTHER ITEMS) THAT OVERHANG INTO THE FIRE LANE MUST BE 13 FEET AND 6 INCHES. FIRE LANES SHALL BE SURFACED WITH HEAVY DUTY ASPHALT PER THE CURRENT CITY STANDARDS.
12. A FIRE APPARATUS ACCESS ROAD SHALL EXTEND TO WITHIN 150 FEET OF ALL PORTIONS OF THE BUILDING AND ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING/FACILITY. (CERTAIN EXCEPTIONS, SUCH AS A FIRE SPRINKLER SYSTEM, MAY APPLY.)
13. FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET UNLESS OTHERWISE REQUIRED BY THE FIRE CODE OFFICIAL AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF 13 FEET 6 INCHES. THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE MORE THAN ONE FIRE APPARATUS ACCESS ROAD BASED ON OCCUPANCY USE, LOCATION, ETC.
14. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOAD OF FIRE APPARATUS AND SHALL BE SURFACED TO ACCOMMODATE ALL WEATHER DRIVING CONDITIONS. (THE CURRENT MINIMUM WEIGHT LOAD UTILIZED FOR FIRE APPARATUS CALCULATION IS 80,000 POUNDS.) DEAD END FIRE APPARATUS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS. THE REQUIRED TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL. (THE CURRENT MINIMUM TURNING RADIUS FOR FIRE APPARATUS IS 29 FEET.)
15. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIALS ARRIVE ON SITE.
16. APPROVED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS, CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS HAS BEEN FULLY CONSTRUCTED.

SEWER

17. ALL PROPOSED PVC SANITARY SEWER PIPE AND FITTINGS SHALL BE ASTM 3034 SDR 26.
18. ALL PROPOSED DUCTILE IRON SANITARY SEWER PIPE SHALL BE MINIMUM THICKNESS CLASS 52.
19. ALL PROPOSED DUCTILE IRON SANITARY SEWER FORCE MAIN COMPACT FITTINGS SHALL HAVE A MINIMUM ACCEPTABLE PRESSURE RATING OF 250 PSI.
20. ALL SANITARY SEWER GRAVITY PIPES PLACED BELOW 10 FEET IN COVER OR LESS THAN 3 FEET IN COVER SHALL BE MADE OF DUCTILE IRON.
21. A NEWPORT NEWS STANDARD ACCESS POINT/CLEANOUT SHALL BE PLACED AT THE CITY RIGHT OF WAY FOR ALL SANITARY SEWER LATERALS.
22. ANY SANITARY SEWER GRAVITY LINE THAT CROSSES A WATER LINE WITH 18 INCHES OR LESS OF VERTICAL SEPARATION OR A MAIN THE RUNS PARALLEL TO A WATER LINE WITH LESS THAN 10FEET OF SEPARATION, SHALL BE MADE OF DUCTILE IRON.
23. REINFORCED CONCRETE PIPE ARE REQUIRED IN AREAS SUBJECT TO TRAFFIC LOADS.

PAVEMENT MARKINGS

24. ALL PROPOSED ON-SITE PAVEMENT MARKINGS SHALL BE REFLECTORIZED TYPE A (PAINT) OR TYPE B (PREFORMED OR THERMOPLASTIC MATERIAL) IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. PARKING SPACES SHALL BE DELINEATED BY 4-INCH WHITE LINES, (FEDERAL STANDARD COLOR #595-17886 OR EQUIVALENT), HANDICAPPED PARKING SPACES SHALL BE DELINEATED BY 4-INCH BLUE LINES (BENNETE’S PAINT BLUE WAVE Q13-28T OR EQUIVALENT) FOR SPACES AND SYMBOLS, FIRE LANES AND PARCEL PICK-UP MARKINGS SHALL BE 4-INCH YELLOW FEDERAL STANDARD COLOR #595-13538 OR EQUIVALENT).
25. ALL PROPOSED PAVEMENT MARKINGS WITHIN CITY RIGHT OF WAY SHALL BE REFLECTORIZED TYPE B (PREFORMED OR THERMOPLASTIC MATERIAL) IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND AS OUTLINED IN THE NEWPORT NEWS/DEPARTMENT OF ENGINEERING’S “PAVEMENT MARKINGS – MATERIALS AND APPLICATIONS” SPECIFICATIONS EXCEPT AS OTHERWISE NOTED HEREIN. FEDERAL STANDARD COLOR #595-17886 OR EQUIVALENT SHALL DELINEATE WHITE MARKINGS, HANDICAPPED PARKING SPACES SHALL BE DELINEATED BY BENNETE’S PAINT BLUE WAVE Q13-28T OR EQUIVALENT FOR SPACES/SYMBOLS AND FEDERAL STANDARD COLOR #595-13538 OR EQUIVALENT SHALL DELINEATE YELLOW MARKINGS. ALL PERMANENT MARKINGS MUST BE SPOTTED AND FIELD VERIFIED BY THE CITY PRIOR TO INSTALLATION BY THE CONTRACTOR.
26. ALL PAVEMENT MARKINGS, SIGNAGE AND OTHER PERMANENT TRAFFIC CONTROL DEVICES DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE REPLACED/REINSTALLED. THESE ITEMS MUST BE SPOTTED AND FIELD VERIFIED BY THE CITY PRIOR TO INSTALLATION BY THE CONTRACTOR.

LANDSCAPING

27. WITHIN LANDSCAPED AND GREEN AREAS, HEALTHY EXISTING TREES OF A MINIMUM 6-INCH DIAMETER AT BREAST HEIGHT, MEASURED AT LEAST 4 FEET AND 6 INCHES ABOVE GRADE, FOR SINGLE STEMMED, DECIDUOUS TREES, AND A MINIMUM OF 8 FEET IN HEIGHT FOR MULTI-STEMMED OR EVERGREEN TREES, SHALL BE RETAINED, PRESERVED AND PROTECTED DURING CONSTRUCTION.
28. ALL EXISTING TREES TO REMAIN ON-SITE, LOCATED WITHIN 50 FEET OF THE LIMITS OF CONSTRUCTION, MUST BE TREE PROTECTED IN ACCORDANCE WITH THE CITY SITE REGULATIONS (CHAPTER 33.02 OF THE NEWPORT NEWS CODE OF ORDINANCES).
29. THE PROPERTY OWNER/DEVELOPER, AS APPLICABLE, SHALL BE RESPONSIBLE FOR THE PERPETUATION AND MAINTENANCE OF ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPING, REQUIRED BY THE CITY SITE REGULATIONS (CHAPTER 33.02 OF THE NEWPORT NEWS CODE OF ORDINANCES) AND AS SHOWN ON THE APPROVED PLAN.
30. TREES MAY NOT BE SEVERELY TRIMMED BEYOND THE ANSI A300 STANDARDS FOR TREE CARE OPERATIONS AS AMENDED. IF TREES ARE SEVERELY PRUNED IN SUCH A WAY TO REMOVE 50% OR MORE OF THEIR HEIGHT/SPREAD, THEY WILL BE CONSIDERED DAMAGED AND SHALL BE REPLACED WITH TREES MEETING THE REQUIREMENTS OF CHAPTER 33.02 OF THE NEWPORT NEWS CODE OF ORDINANCES.

LIGHTING

31. FOR THE FOLLOWING SITE USES: EDUCATIONAL, CHURCH, PARKS, RESIDENTIAL, MANUFACTURING OR INDUSTRIAL THE FOLLOWING LIGHTING NOTE MUST BE INCLUDED ON THE PLAN, “EXTERIOR LIGHTING MUST PROVIDE A MINIMUM ILLUMINATION LEVEL OF 0.6 FOOT-CANDLES FOR PARKING/DRIVING AREAS, 1.1 FOOT-CANDLES FOR OPEN WALKWAYS AND 4.3 FOOT-CANDLES FOR ENCLOSED WALKWAYS. LIGHTING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CURRENT NEWPORT NEWS REGULATIONS. LIGHTING SHALL BE DIRECTED INWARD TO THE SITE AND SHIELDED SO AS NOT TO ILLUMINATE OR PRODUCE GLARE ONTO ADJACENT PROPERTIES AND/OR ONTO THE CITY RIGHT OF WAY.”
32. FOR ALL OTHER USES INCLUDING BUT NOT LIMITED TO: MEDICAL, OFFICE PARK, SHOPPING, WHOLESALE AND RETAIL THE FOLLOWING LIGHTING NOTE MUST BE INCLUDED ON THE PLAN, “EXTERIOR LIGHTING MUST PROVIDE A MINIMUM ILLUMINATION LEVEL OF 0.9 FOOT-CANDLES FOR PARKING/DRIVING AREAS, 2.2 FOOT-CANDLES FOR OPEN WALKWAYS AND 4.3 FOOT-CANDLES FOR ENCLOSED WALKWAYS. LIGHTING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CURRENT NEWPORT NEWS REGULATIONS. LIGHTING SHALL BE DIRECTED INWARD TO THE SITE AND SHIELDED SO AS NOT TO ILLUMINATE OR PRODUCE GLARE ONTO ADJACENT PROPERTIES AND/OR ONTO THE CITY RIGHT OF WAYS.”

PERMITS AND PRE-CONSTRUCTION

33. FOR ANY LAND DISTURBING ACTIVITIES GREATER THAN 2,500 SQUARE FEET A LAND DISTURBANCE/VSMP PERMIT IS REQUIRED FROM THE DEPARTMENT OF PLANNING.
34. FOR ANY LAND DISTURBANCE GREATER THAN 1 ACRE A CONSTRUCTION GENERAL PERMIT (CGP) IS REQUIRED. THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) AUTHORITY, NEWPORT NEWS, SHALL ISSUE THE LAND DISTURBANCE/VSMP PERMIT PRIOR TO ANY WORK. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED FOR THE PROJECT AND A HARD COPY BE PRESENTED TO THE ENVIRONMENTAL SERVICES INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
35. PRIOR TO CONSTRUCTION WITHIN ANY CITY RIGHT OF WAY, THE CONTRACTOR SHALL OBTAIN A RIGHT OF WAY PERMIT FROM THE DEPARTMENT OF PLANNING. THE OWNER/DEVELOPER OR THEIR REPRESENTATIVE SHALL SUBMIT AN ITEMIZED COST LIST OF THE WORK WITHIN THE CITY RIGHT OF WAY. A TEMPORARY TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
36. ALL TEMPORARY PAVEMENT MARKINGS, SIGNAGE AND OTHER TRAFFIC CONTROL DEVICES SHALL MEET THE FABRICATION AND/OR INSTALLATION REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
37. PRIOR TO ANY MOBILIZATION OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL REQUEST AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE DEPARTMENT OF ENGINEERING’S CONSTRUCTION INSPECTOR AND THE ENVIRONMENTAL SERVICES INSPECTOR. TO REQUEST THE MEETING CALL 757-933-2311.
38. PRIOR TO INSTALLATION OF THE LANDSCAPING MATERIALS, AN INSPECTION WITH THE LANDSCAPE PLANNER IS REQUIRED. PLEASE CONTACT THE PLANNING DEPARTMENT AT 757-926-8761.
39. PLANS FOR AUTOMATIC SPRINKLER SYSTEMS SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT OF CODES COMPLIANCE PRIOR TO INSTALLATION.
40. SIGNS ARE REVIEWED AND APPROVED UNDER A SEPARATE SUBMITTAL AND REVIEW BY THE DEPARTMENT OF CODES COMPLIANCE.
41. THE CITY MANAGER, OR DESIGNEE, CAN STOP SITE CONSTRUCTION, IMPROVEMENTS AND/OR ALTERATIONS IN THE EVENT OF ANY DEVIATION FROM THE APPROVED PLAN OR ON THE DISCOVERY OF UNEXPECTED ADVERSE IMPACTS OF THE DEVELOPMENT ACTIVITY ON ADJACENT PROPERTY OR PUBLIC FACILITIES.

HDR US-A Ulliman Schutte – Alberici Joint Venture
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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

CITY OF NEWPORT NEWS GENERAL NOTES

0 1" 2"

FILENAME C9000.DWG
SCALE NOT TO SCALE

DWG NO. C9000

10/3/2021 9:39 AM

PROJECT DESCRIPTION

THE PROJECT INCLUDES CONSTRUCTION OF THE ADVANCED NUTRIENT REDUCTION IMPROVEMENTS (ANRI) FOR THE WASTEWATER FACILITIES, ADVANCED WATER TREATMENT FACILITIES FOR SUSTAINABLE WATER INITIATIVE FOR TOMORROW (SWIFT), MANAGED AQUIFER RECHARGE (MAR) WELLS AND ASSOCIATED MAR DISTRIBUTION PIPING. THE ANRI PROJECT INCLUDES CONSTRUCTION OF WASTEWATER TREATMENT FACILITIES, YARD PIPING IMPROVEMENTS AND ELECTRICAL POWER DISTRIBUTION UPGRADES, NEW ADMINISTRATION / MAINTENANCE BUILDING, MODIFICATIONS TO THE ADJACENT GYMNASTICS CENTER ENTRANCE AND PARKING, MODIFICATIONS TO THE ADJACENT CITY OF NEWPORT NEWS DOG PARK AND TEMPORARY FACILITIES FOR THE DESIGN-BUILDER'S OFFICE COMPLEX, PARKING, LAYDOWN, ETC.

THE WORK WILL BE CONSTRUCTED THROUGH TWO WORK PACKAGES; WORK PACKAGE 1 AND WORK PACKAGE 2. WORK PACKAGE 1 WILL INCLUDE SITE PREPARATION AND CONSTRUCTING PILE SUPPORTS FOR THE ANRI AND SWIFT FACILITIES, THE GYMNASTICS CENTER ENTRANCE/PARKING MODIFICATIONS, DOG PARK MODIFICATIONS AND AN ALTERNATE ACCESS ROAD, AND ESTABLISHING THE DESIGN-BUILDER'S TEMPORARY FACILITIES, CONSTRUCTION ACCESS ROADS TO THE RECHARGE WELL SITES, AND WELL INSTALLATIONS (BY OTHERS). LAND DISTURBANCE LIMITS FOR WORK PACKAGE 1 SUM TO APPROXIMATELY 31 ACRES. LAND DISTURBANCE LIMITS FOR WORK PACKAGE 2 SUM TO APPROXIMATELY 48 ACRES.

EXISTING SITE CONDITIONS

THE PROJECT IS LOCATED AT HRSD'S EXISTING JAMES RIVER TREATMENT PLANT (JRTP), LAND BEING ACQUIRED TO THE NORTH AND EAST OF JRTP, AND VARIOUS MAR WELL SITES AND PIPELINE EASEMENTS WITHIN RIVERVIEW FARM PARK AND THE CITY FARM PROPERTY. THE LIMITS OF DISTURBANCE ARE CONFINED TO WITHIN THE EXISTING PROPERTY LINES, PROPERTY LINES FOR LAND TO BE ACQUIRED PRIOR TO DISTURBANCE ACTIVITIES, WITHIN UTILITY AND CONSTRUCTION ACCESS EASEMENTS, AND WITHIN LIMITS DESIGNATED BY THE CITY OF NEWPORT NEWS FOR AREAS THAT CAN BE USED FOR TEMPORARY CONSTRUCTION FACILITIES.

ADJACENT PROPERTY

THE PROJECT BORDERS THE CITY OF NEWPORT NEWS' RIVERVIEW FARM PARK, CITY FARM, GYMNASTICS CENTER, MENCHVILLE ROAD, RIVERVIEW PARKWAY AND THE JAMES RIVER. ADJACENT PROPERTIES WILL BE PROTECTED USING APPROVED EROSION AND SEDIMENT CONTROL MEASURES TO ENCOMPASS THE PROJECT'S LIMITS OF DISTURBANCE. DESIGN-BUILDER SHALL OBTAIN RIGHT OF WAY PERMIT(S) WHERE CONSTRUCTION EXTENDS INTO THE RIGHT OF WAYS.

OFF-SITE AREAS

NOT APPLICABLE. DESIGN-BUILDER SHALL OBTAIN APPLICABLE LAND DISTURBING, EROSION AND SEDIMENT CONTROL, ETC. PERMITS IF ANY OFF-SITE LAND DISTURBING ACTIVITIES OCCUR.

SOILS

THE FOLLOWING SOIL SERIES ARE WITHIN THE PROJECT LIMITS IN THE CITY OF NEWPORT NEWS.

THE BETHERA-URBAN LAND COMPLEX SOILS CONSIST OF POORLY DRAINED SOILS. THIS SOIL IS FOUND IN MARINE TERRACES. TYPICALLY, THE SURFACE LAYER OF THIS SOIL IS SILTY LOAM ABOUT 12 INCHES THICK. THE SUBSURFACE LAYER IS CLAY LOAM TO AN APPROXIMATE DEPTH 72 INCHES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES. THE NATURAL DRAINAGE CLASS IS POORLY DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW TO MODERATELY HIGH. THE ERODIBILITY FACTOR (K) IS 0.06 TO 0.20 IN/HR. THE HYDROLOGICAL GROUP IS C/D.

THE CRAVEN-URBAN LAND COMPLEX SOILS CONSIST OF MODERATELY WELL DRAINING SOILS. THIS SOIL IS FOUND IN MARINE TERRACES. TYPICALLY, THE SURFACE LAYER OF THIS SOIL IS LOAM ABOUT 10 INCHES THICK. THE SUBSURFACE LAYER IS CLAY TO AN APPROXIMATE DEPTH OF 45 INCHES. THE SUBSOIL CONSISTS OF CLAY LOAM TO AN APPROXIMATE DEPTH OF 70 INCHES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES. THE NATURAL DRAINAGE CLASS IS MODERATELY WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW TO MODERATELY HIGH. THE ERODIBILITY FACTOR (K) IS 0.06 TO 0.20 IN/HR. THE HYDROLOGICAL GROUP IS D.

THE NEVARC-UCHEE COMPLEX SOILS CONSIST OF MODERATELY WELL DRAINING SOILS. THIS SOIL IS FOUND IN MARINE TERRACES. TYPICALLY, THE SURFACE LAYER OF THIS SOIL IS SANDY LOAM ABOUT 11 INCHES THICK. THE SUBSURFACE LAYER IS CLAY TO AN APPROXIMATE DEPTH 54 INCHES. THE SUBSOIL CONSISTS OF FINE SANDY LOAM TO AN APPROXIMATE DEPTH OF 72 INCHES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES. THE NATURAL DRAINAGE CLASS IS MODERATELY WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW TO MODERATELY HIGH. THE ERODIBILITY FACTOR (K) IS 0.06 TO 0.20 IN/HR. THE HYDROLOGICAL GROUP IS D.

THE SLAGLE-URBAN LAND COMPLEX SOILS CONSIST OF MODERATELY WELL DRAINING SOILS. THIS SOIL IS FOUND IN MARINE TERRACES. TYPICALLY, THE SURFACE LAYER OF THIS SOIL IS FINE SANDY LOAM ABOUT 10 INCHES THICK. THE SUBSURFACE LAYER IS SANDY CLAY LOAM TO AN APPROXIMATE DEPTH 44 INCHES. THE SUBSOIL CONSISTS OF SANDY CLAY LOAM TO AN APPROXIMATE DEPTH OF 63 INCHES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES. THE NATURAL DRAINAGE CLASS IS MODERATELY WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW TO MODERATELY HIGH. THE ERODIBILITY FACTOR (K) IS 0.06 TO 0.57 IN/HR. THE HYDROLOGICAL GROUP IS C.

THE UDORTHENTS-DUMPS COMPLEX SOILS CONSIST OF AREAS THAT HAVE BEEN FILLED, EXCAVATED, REGRADED OR OTHERWISE DISTURBED BY HUMAN ACTIVITIES. THESE AREAS HAVE A WIDE RANGE OF SOIL PROPERTIES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES.

THE YEMASSEE-URBAN LAND COMPLEX SOILS CONSIST OF SOMEWHAT POORLY DRAINING SOILS. THIS SOIL IS FOUND IN MARINE TERRACES AND DEPRESSIONS. TYPICALLY, THE SURFACE LAYER OF THIS SOIL IS FINE SANDY LOAM ABOUT 15 INCHES THICK. THE SUBSURFACE LAYER IS SANDY CLAY LOAM TO AN APPROXIMATE DEPTH 40 INCHES. THE SUBSOIL CONSISTS OF SANDY LOAM TO AN APPROXIMATE DEPTH OF 60 INCHES. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 80 INCHES. THE NATURAL DRAINAGE CLASS IS SOMEWHAT POORLY DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH TO HIGH. THE ERODIBILITY FACTOR (K) IS 0.57 TO 1.98 IN/HR. THE HYDROLOGICAL GROUP IS B/D.

CRITICAL EROSION AREAS

WETLANDS ADJACENT TO THE CONSTRUCTION CORRIDOR ARE CRITICAL AREAS THAT COULD EXPERIENCE SERIOUS DEGRADATION FROM SEDIMENT INTRUSION. CARE SHALL BE TAKEN TO MINIMIZE DISTURBANCE IN THESE AREAS FROM CONSTRUCTION ACTIVITY OR SEDIMENT.

EROSION AND SEDIMENT CONTROL MEASURES

STRUCTURAL PRACTICES

1. INLET PROTECTION: ALL STORMWATER CULVERTS AND DROP INLETS SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF WITH A SILT FENCE SEDIMENT BARRIER PLACED AROUND THE INLET. CURB INLETS SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF WITH AN INLET FILTER OR BLOCK & GRAVEL FILTER.
2. SILT FENCE: SILT FENCE SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSTRUCTION LIMITS TO FILTER SEDIMENT-LADEN RUNOFF.
3. TREE PROTECTION: TREE PROTECTION FENCING SHALL BE INSTALLED TO PROTECT TREE AND DRIP LINE FROM CONSTRUCTION DAMAGE.
4. DEWATERING STRUCTURE: SEDIMENT-LADEN WATER SHALL PASS THROUGH A TEMPORARY SETTLING AND FILTERING DEVICE PRIOR TO BEING DISCHARGED OFF-SITE.
5. TEMPORARY STONE CONSTRUCTION ENTRANCE: A CONSTRUCTION ENTRANCE WITH A WASH RACK WILL BE NEEDED AT ALL INGRESS/EGRESS LOCATIONS TO THE CONSTRUCTION AND STOCKPILE AREAS TO CLEAN THE TIRES OF VEHICLES AND EQUIPMENT DURING WET CONDITIONS. DURING WET CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE ENTERING THE ROADWAY.
6. SOIL STABILIZATION BLANKETS & MATTING: SOIL STABILIZATION BLANKETS SHALL BE INSTALLED ON SLOPED AREAS ALONG ANY DITCHES THAT ARE DISTURBED BY CONSTRUCTION TO STABILIZE THE SOIL UNTIL VEGETATION BECOMES ESTABLISHED.

VEGETATIVE PRACTICES

7. TEMPORARY SEEDING: TEMPORARY SEEDING SHALL BE INSTALLED AND MAINTAINED AS OUTLINED IN CITY OF NEWPORT NEWS STANDARDS.

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND BE PROTECTED DURING ESTABLISHMENT WITH STRAW MULCH.

STORMWATER RUNOFF CONSIDERATIONS

TEMPORARY CONSTRUCTION: RUNOFF IN AREAS OF TEMPORARY CONSTRUCTION WILL BE MANAGED BY SILT FENCE AND SEDIMENT TRAPS. TEMPORARY BASINS AND SWALES THAT ARE ULTIMATELY PART OF THE FINAL BUILD OUT WILL BE UTILIZED TO REDUCE RUNOFF AND POLLUTANTS FROM LEAVING THE SITE.

PERMANENT CONSTRUCTION: CURRENTLY MOST OF THE DRAINAGE FROM THE EXISTING SITE FLOWS INTO THE JAMES RIVER. WITH THE ADDITION OF IMPERVIOUS AREA MEASURES WILL BE TAKEN TO INCREASE INFILTRATION AND REDUCE RUNOFF. A SERIES OF PERMANENT BASINS AND SWALES WILL BE USED TO REDUCE RUNOFF AND POLLUTANTS FROM EXISTING THE SITE. THERE ARE SOME EXISTING DRAINAGE OUTLETS AND SWALES THAT ARE EXPERIENCING EROSION, AND THESE WILL BE REINFORCED TO MITIGATE FURTHER EROSION.

SEQUENCE OF CONSTRUCTION FOR EROSION AND SEDIMENT CONTROL

1. OBTAIN SITE PLAN APPROVAL AND APPLICABLE PERMITS, INCLUDING BUT NOT LIMITED TO A LAND DISTURBANCE PERMIT.
2. INSTALL SILT FENCE AROUND THE LIMITS OF DISTURBANCE AND CURB/DRAIN INLET PROTECTION AS INDICATED ON THE SITE PLAN DRAWINGS PRIOR TO ANY LAND DISTURBANCE.
3. INSTALL TREE PROTECTION AS INDICATED ON THE DRAWINGS.
4. ESTABLISH CONSTRUCTION ENTRANCE(S) PRIOR TO ANY OTHER LAND DISTURBANCE IN THAT AREA OF CONSTRUCTION. MINIMIZE DISTURBANCE, WHICH SHALL BE LIMITED TO CONSTRUCTION ENTRANCE INSTALLATION.
5. BEGIN GRADING TO SUPPORT STORMWATER MANAGEMENT DURING CONSTRUCTION AS SOON AS POSSIBLE. MINIMIZE LAND DISTURBANCE TO THE EXTENT POSSIBLE WHILE TEMPORARY DRAINAGE PROVISIONS AND STORMWATER/SEDIMENT MANAGEMENT FEATURES ARE BEING CONSTRUCTED. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS CONSTRUCTION OF THE TEMPORARY DRAINAGE AND STORMWATER/SEDIMENT MANAGEMENT CONSTRUCTION PROGRESSES.
6. PERFORM SITE PREPARATION (CLEARING/GRUBBING, GRADING, CONSTRUCTION ACCESS ROADS, ETC.) AS INDICATED ON THE DRAWINGS.
7. TEMPORARY SEEDING/STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE PROVIDED FOR ANY AREAS THAT WILL REMAIN DORMANT FOR MORE THAN 1 YEAR.
8. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION (WORK PACKAGE 1 AND WORK PACKAGE 2).
9. PERMANENT SEEDING SHALL BE APPLIED IN ACCORDANCE WITH THE PERMANENT SEEDING SCHEDULE AND WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED.
10. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE DISTURBED AREAS HAVE BEEN DEVELOPED INTO THEIR FINAL CONDITION AND HAVE STABILIZED (TO THE DISCRETION OF THE ENGINEER AND/OR CITY OF NEWPORT NEWS.)

EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT LAWS AND REGULATIONS OF THE CITY OF NEWPORT NEWS AND THE COMMONWEALTH OF VIRGINIA, AND AS DEEMED NECESSARY BY THE DIRECTOR OF ENGINEERING BEFORE, DURING AND AFTER CONSTRUCTION ON THE SITE. ALL MINIMUM STANDARDS AND SPECIFICATIONS REGARDING THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FOLLOWED BY THE CONTRACTOR.
2. A LAND DISTURBANCE PERMIT IS REQUIRED FOR THE PROJECT AND SHALL BE OBTAINED IN THE PLANNING DEPARTMENT, 2ND FLOOR OF CITY HALL. A RESPONSIBLE LAND DISTURBER SHALL BE IDENTIFIED ON ALL LAND DISTURBANCE PERMITS. FAILURE TO COMPLY WITH ANY OF THESE REQUIREMENTS IDENTIFIED HERE WILL INITIATE A NOTICE TO COMPLY (NTC), NOTICE OF VIOLATION (NOV), STOP WORK ORDERS (SWO), CIVIL PENALTIES OR NULLIFY THE PERMIT.
3. ALL STORMWATER BEST MANAGEMENT PRACTICES NEED TO BE CONSTRUCTED AND INSTALLED AS PER THE APPROVED PLAN. THE CONTRACTOR OR OWNER MUST CONTACT THE CITY'S ENVIRONMENTAL INSPECTION STAFF AT (757) 933-2311 TO SCHEDULE A PRE-CONSTRUCTION MEETING 48 HOURS IN ADVANCE OF LAND DISTURBANCES.
4. ALL APPROPRIATE EROSION CONTROL MEASURES SUCH AS, BUT NOT LIMITED TO, TREE PROTECTION, SILT FENCE, CONSTRUCTION ENTRANCE, AND INLET PROTECTION SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION, AND MUST BE REVIEWED AND APPROVED BY A CITY INSPECTOR BEFORE ANY CLEARING OPERATIONS BEGIN. THE CONTRACTOR OR OWNER MUST CONTACT THE CITY'S ENVIRONMENTAL INSPECTION STAFF AT (757) 933-2311 TO SCHEDULE ALL INSPECTIONS.
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND LAND DISTURBANCE PERMIT MUST BE MAINTAINED AT THE SITE FOR THE DURATION OF ALL CONSTRUCTION AND LAND-DISTURBING ACTIVITIES.
6. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL APPROVED MEASURES AS SHOWN ON THE APPROVED PLANS. ANY ADDITIONAL MEASURES DEEMED REQUIRED BY THE CITY, DUE TO FIELD CONDITIONS, SHALL BECOME PART OF THE EROSION AND SEDIMENT CONTROL PLAN FOR THE PROPERTY. ALL FIELD CHANGES MUST BE APPROVED BY EITHER THE CITY'S INSPECTOR OR ENGINEER PRIOR TO INSTALLATION. ALL APPROVED FIELD CHANGES SHALL BE SENT TO THE PLANNING DEPT. TO BE ATTACHED TO THE APPROVED PLAN.
7. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
8. THE CONTRACTOR MAY NOT CHANGE OR ALTER ANY OF THE APPROVED MEASURES WITHOUT FIRST NOTIFYING THE CITY'S INSPECTOR OR ENGINEER. FAILURE TO DO SO MAY RESULT IN A NOV, SWO, CIVIL PENALTIES AND/OR REVOCATION OF THE LAND DISTURBANCE PERMIT.
9. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL MEASURES TO PREVENT SOIL FROM ERODING ONTO ADJACENT PROPERTY, STREETS, DRAINAGE SYSTEMS AND WATERWAYS. ALL DEVICES SHALL BE CLEANED OF SEDIMENT, MUD, DEBRIS, AND OTHER ERODED MATERIAL DURING THE SITE CLEARING AND DEVELOPMENT. INSPECTION OF ALL DEVICES SHALL BE AT A MINIMUM EVERY TWO (2) WEEKS AND REQUIRED AFTER EVERY RUNOFF PRODUCING EVENT. ALL INSPECTION AND MAINTENANCE ACTIVITIES SHALL BE DOCUMENTED AND AVAILABLE FOR REVIEW AT THE CITY'S REQUEST.
10. TEMPORARY AND PERMANENT SEEDING OPERATIONS SHALL BE INITIATED WITHIN SEVEN (7) DAYS AFTER REACHING FINAL GRADE OR UPON SUSPENSION OF GRADING OPERATIONS FOR AN ANTICIPATED DURATION OF GREATER THAN FOURTEEN (14) DAYS OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIC AREA.
11. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE KEPT IN PLACE FOR THE DURATION OF THE CLEARING AND CONSTRUCTION OPERATIONS AND AT MAXIMUM FOR THE SPECIFIED TIME FOR EACH MEASURE AS IDENTIFIED IN THE VESC HANDBOOK, OR WHEN FULL STABILIZATION HAS OCCURRED FOR THE ENTIRE SITE. A FINAL INSPECTION BY THE CITY INSPECTOR SHALL DETERMINE WHEN THIS FACT IS ACCOMPLISHED AND ALL TEMPORARY MEASURES AND DEVICES CAN BE REMOVED.
12. THE CONTRACTOR SHALL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST AND OTHER AIR POLLUTANTS, INCLUDING BUT NOT LIMITED TO USING WATER OR CHEMICALS, LIMITING THE NUMBER OF VEHICLES ALLOWED ONSITE, MINIMIZING THE OPERATING SPEED OF ALL VEHICLES, ETC. ALSO, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DAILY SWEEPING OF PUBLIC RIGHT-OF-WAY SHOULD SEDIMENT ACCUMULATE ON PAVED SURFACES.
13. CONTRACTOR SHALL SUBMIT A SEPARATE EROSION AND SEDIMENT CONTROL PLAN FOR ANY OFF-SITE AREAS ASSOCIATED WITH THE LAND DISTURBANCE AND SOIL REMOVAL IDENTIFIED HEREIN. A SEPARATE SUBMITTAL IS NOT NECESSARY FOR THE FOLLOWING SITUATIONS:
    A. NO MATERIAL WILL BE HAULED OR TRANSPORTED OFF-SITE AND APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED AROUND ALL STOCKPILES AND STORAGE AREAS, OR
    B. ALL MATERIAL TO BE HAULED OR TRANSPORTED OFF-SITE WILL BE DEPOSITED AT A FEDERAL, STATE, AND LOCALLY APPROVED SITE. THE CONTRACTOR SHALL IDENTIFY ON THE PLANS WHAT DISPOSAL SITE WILL BE USED.
14. FOR ALL PROPOSED LAND DISTURBING ACTIVITIES THAT ARE ONE ACRE OR GREATER IN TOTAL AREA, A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT MUST FIRST BE OBTAINED FROM THE CITY OF NEWPORT NEWS; THE "VSMP AUTHORITY", PRIOR TO ANY ACTUAL SOIL DISTURBANCE TAKING PLACE. FAILURE TO DO SO WILL RESULT IN ISSUANCE OF A NOTICE-OF-VIOLATION. IT IS THE OWNER'S AND/OR CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CITY OF NEWPORT NEWS, DEPARTMENT OF PLANNING, FOR PERMIT DETAILS, APPLICATION, AND APPROVALS.
15. APPROVAL OF AN EROSION AND SEDIMENT CONTROL PLAN AND ACQUISITION OF A LAND DISTURBING PERMIT DOES NOT RELIEVE THE OWNER/DEVELOPER FROM OBTAINING APPLICABLE FEDERAL, STATE AND OTHER LOCAL PERMITS OR FROM COMPLYING WITH PERTINENT FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
16. A CONSTRUCTION RECORD DRAWING FOR PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE SUBMITTED TO THE CITY OF NEWPORT NEWS FOR ACCEPTANCE. THE CONSTRUCTION RECORD DRAWING SHALL BE APPROPRIATELY SEALED AND SIGNED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA CERTIFYING THAT THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENT CONTROL GENERAL NOTES

0 1" 2"

FILENAME C9010.DWG
SCALE NOT TO SCALE

DWG NO. C9010

10/3/2021 9:39 AM

EROSION AND SEDIMENT CONTROL 9VAC25-840-40 MINIMUM STANDARDS

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN FOURTEEN (14) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. SEE PLANS AND CALCULATIONS FOR DETAILS OF REQUIRED STRUCTURES.

   a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE (3) ACRES.
   b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE (3) ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERATIONAL DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME, OR AS SPECIFIED IN THESE DRAWING SPECIFICATIONS.
   b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
   f. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

17. WHERE CONSTRUCTION VEHICLES ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FORM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

   a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSIS AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
   b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
      (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
      (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A 2-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
      (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A 2-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
   c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
      (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A 2-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED OR THE BANKS; OR
      (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
      (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 2-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
      (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENTS, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
   d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
   e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.
   f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE/SHE SHALL OBTAIN APPROVAL FROM THE VESCP AUTHORITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
   g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
   h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
   i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
   j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
   k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL, AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
   l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.
   m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING IN 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT SHALL APPLY, OR (II) ARE EXEMPT PURSUANT TO § 62.1-44.15:34 C 7 OF THE ACT.
   n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENT CONTROL GENERAL NOTES 2

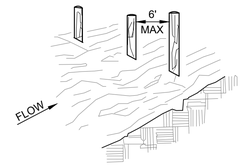
0 1" 2"

FILENAME	C9011.DWG
SCALE	NOT TO SCALE

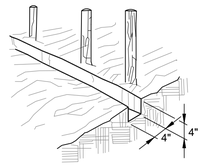
DWG NO. C9011

10/3/2021 9:40 AM

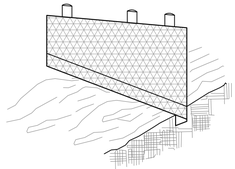
1. SET THE STAKES



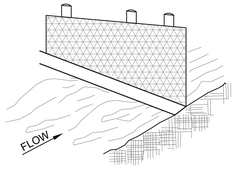
2. EXCAVATE A 4"x4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.



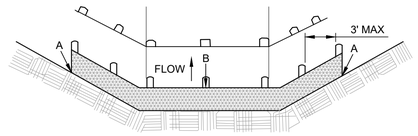
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)



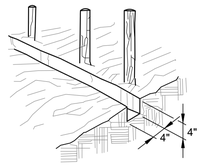
NOTE: POINTS A SHOULD BE HIGHER THAN POINT B

DRAINAGEWAY INSTALLATION (FRONT ELEVATION)

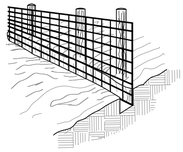
1 CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

SCALE: NTS

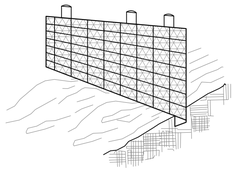
1. SET POSTS AND EXCAVATE A 4"x4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



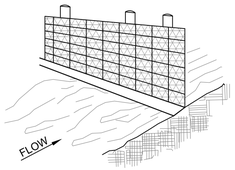
2. STAPLE WIRE FENCING TO THE POSTS.

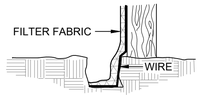


3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

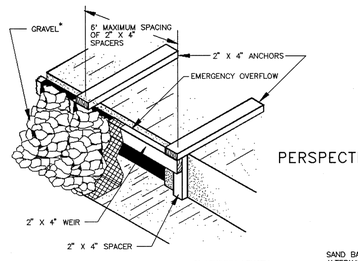




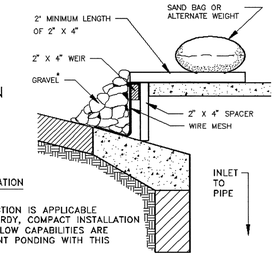
EXTENSION OF FABRIC AND WIRE INTO THE TRENCH

2 SILT FENCE WITH WIRE SUPPORT

SCALE: NTS



PERSPECTIVE VIEW



SIDE ELEVATION

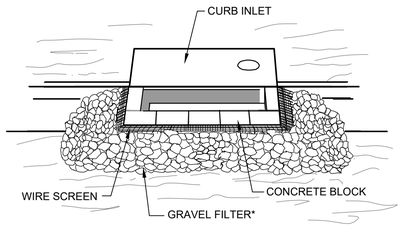
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE TO CURB INLETS WHERE A STURDY, COMPACT INSTALLATION IS DESIRED. EMERGENCY OVERFLOW CAPABILITIES ARE MINIMAL, SO EXPECT SIGNIFICANT PONDING WITH THIS MEASURE.

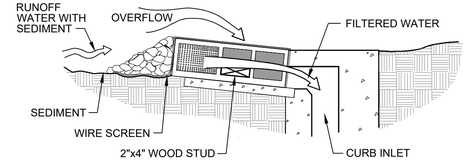
*GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, #357 OR #5

3 CURB INLET PROTECTION WITH WITH 2-INCH X 4-INCH WOODEN WEIR

SCALE: NTS



* GRAVEL SHALL BE VDOT NO. 3, NO. 357 OR NO. 5 COARSE AGGREGATE

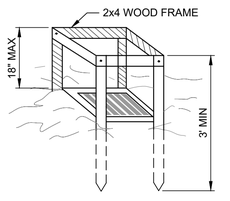


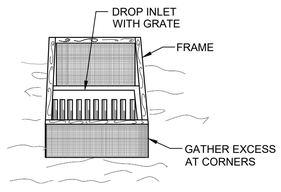
NOTE: THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

SPECIAL APPLICATION

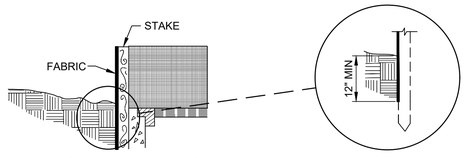
4 BLOCK & GRAVEL CURB INLET SEDIMENT FILTER

SCALE: NTS





PERSPECTIVE VIEWS



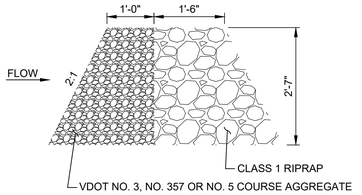
ELEVATION OF STAKE & FABRIC INSTALLATION — DETAIL A

NOTE: THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

SPECIFIC APPLICATION

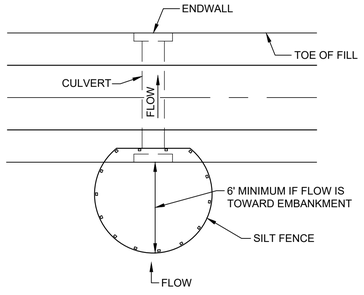
5 SILT FENCE DROP INLET PROTECTION

SCALE: NTS



VDOT NO. 3, NO. 357 OR NO. 5 COURSE AGGREGATE TO REPLACE SILT FENCE IN "HORSESHOE" WHEN HIGH VELOCITY FLOW IS EXPECTED

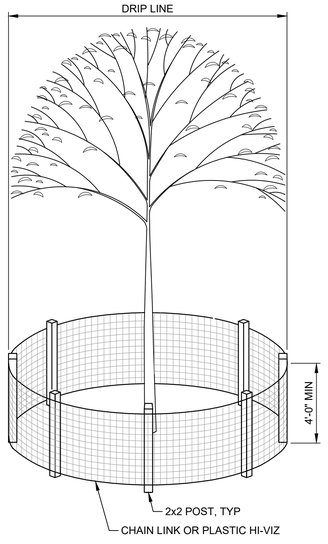
OPTIONAL STONE COMBINATION



SILT FENCE CULVERT INLET PROTECTION

6 CULVERT INLET PROTECTION

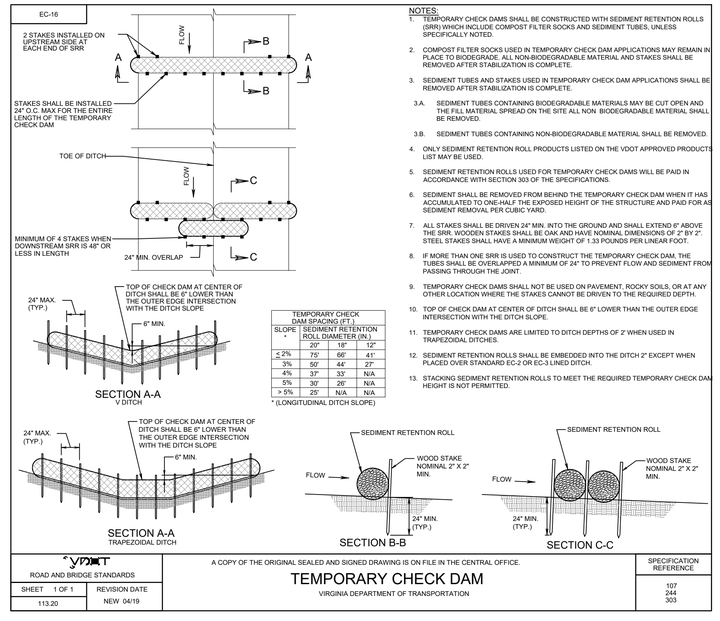
SCALE: NTS



NOTE: PLACE TREE PROTECTION FENCING 5' OUTSIDE THE DRIP LINE IN ACCORDANCE WITH CITY OF NEWPORT NEWS STANDARDS

7 STANDARD TREE PROTECTION

SCALE: NTS



TEMPORARY CHECK DAM SPACING (FT.)			
SLOPE *	SEDIMENT RETENTION ROLL DIAMETER (IN.)		
	20"	18"	12"
≤ 2%	75'	66'	41'
3%	50'	44'	27'
4%	37'	33'	N/A
5%	30'	26'	N/A
> 5%	25'	N/A	N/A

* (LONGITUDINAL DITCH SLOPE)

NOTES:
1. TEMPORARY CHECK DAMS SHALL BE CONSTRUCTED WITH SEDIMENT RETENTION ROLLS (SRR) WHICH INCLUDE COMPOST FILTER SOCKS AND SEDIMENT TUBES, UNLESS SPECIFICALLY NOTED.
2. COMPOST FILTER SOCKS USED IN TEMPORARY CHECK DAM APPLICATIONS MAY REMAIN IN PLACE TO BIODEGRADE. ALL NON-BIODEGRADABLE MATERIAL AND STAKES SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
3. SEDIMENT TUBES AND STAKES USED IN TEMPORARY CHECK DAM APPLICATIONS SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
3.A. SEDIMENT TUBES CONTAINING BIODEGRADABLE MATERIALS MAY BE CUT OPEN AND THE FILL MATERIAL SPREAD ON THE SITE ALL NON BIODEGRADABLE MATERIAL SHALL BE REMOVED.
3.B. SEDIMENT TUBES CONTAINING NON-BIODEGRADABLE MATERIAL SHALL BE REMOVED.
4. ONLY SEDIMENT RETENTION ROLL PRODUCTS LISTED ON THE VDOT APPROVED PRODUCTS LIST MAY BE USED.
5. SEDIMENT RETENTION ROLLS USED FOR TEMPORARY CHECK DAMS WILL BE PAID IN ACCORDANCE WITH SECTION 303 OF THE SPECIFICATIONS.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE TEMPORARY CHECK DAM WHEN IT HAS ACCUMULATED TO ONE-HALF THE EXPOSED HEIGHT OF THE STRUCTURE AND PAID FOR AS SEDIMENT REMOVAL PER CUBIC YARD.
7. ALL STAKES SHALL BE DRIVEN 24" MIN. INTO THE GROUND AND SHALL EXTEND 6" ABOVE THE SRR. WOODEN STAKES SHALL BE OAK AND HAVE NOMINAL DIMENSIONS OF 2" BY 2". STEEL STAKES SHALL HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT.
8. IF MORE THAN ONE SRR IS USED TO CONSTRUCT THE TEMPORARY CHECK DAM, THE TUBES SHALL BE OVERLAPPED A MINIMUM OF 24" TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE JOINT.
9. TEMPORARY CHECK DAMS SHALL NOT BE USED ON PAVEMENT, ROCKY SOILS, OR AT ANY OTHER LOCATION WHERE THE STAKES CANNOT BE DRIVEN TO THE REQUIRED DEPTH.
10. TOP OF CHECK DAM AT CENTER OF DITCH SHALL BE 6" LOWER THAN THE OUTER EDGE INTERSECTION WITH THE DITCH SLOPE.
11. TEMPORARY CHECK DAMS ARE LIMITED TO DITCH DEPTHS OF 2' WHEN USED IN TRAPEZOIDAL DITCHES.
12. SEDIMENT RETENTION ROLLS SHALL BE EMBEDDED INTO THE DITCH 2" EXCEPT WHEN PLACED OVER STANDARD EC-2 OR EC-3 LINED DITCH.
13. STACKING SEDIMENT RETENTION ROLLS TO MEET THE REQUIRED TEMPORARY CHECK DAM HEIGHT IS NOT PERMITTED.

VDOT
ROAD AND BRIDGE STANDARDS
SHEET 1 OF 1 | REVISION DATE
113.20 | NEW 04/19

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

TEMPORARY CHECK DAM
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE: 107, 244, 303

8 TEMPORARY CHECK DAM

SCALE: NTS

10/3/2021 9:40 AM

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

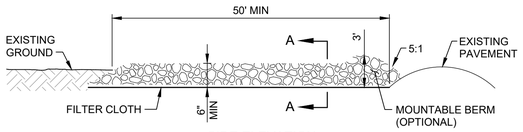
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENT CONTROL STANDARD DETAILS 1

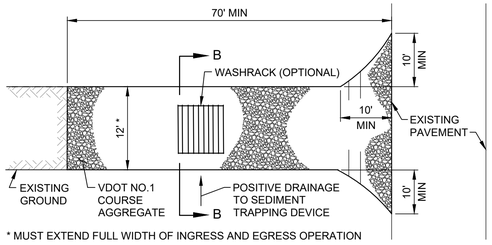
0 1" 2"

FILENAME C9012.DWG
SCALE AS NOTED

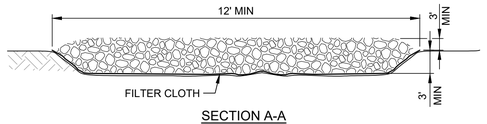
DWG NO. C9012



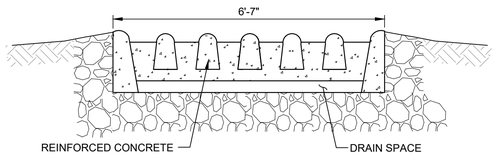
SIDE ELEVATION



PLAN VIEW



SECTION A-A



SECTION B-B

NOTES:

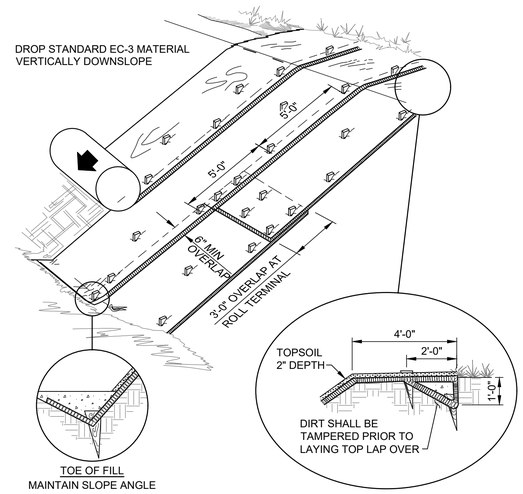
1. STONE CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS AND CONSTRUCTED TO THE MINIMUM WIDTH, LENGTH AND THICKNESS DIMENSIONS SHOWN.
2. FOR INSTALLATION ON CLAYEY OR POORLY DRAINED SOILS, A GEOTEXTILE FABRIC UNDERLAYMENT, OF A TYPE RECOMMENDED FOR SUCH APPLICATIONS BY THE MANUFACTURER, SHALL BE USED.
3. WASHING: WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA WITH STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
4. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE, AS CONDITIONS DEMAND, AND REPAIR AND CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENTS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
5. LOCATION: SEE THE SITE RESTORATION AND EROSION AND SEDIMENT CONTROL PLAN FOR PROPOSED LOCATIONS. THE CONTRACTOR MAY SUBMIT ALTERNATE LOCATIONS TO THE ENGINEER FOR APPROVAL.

1 - STONE CONSTRUCTION ENTRANCE

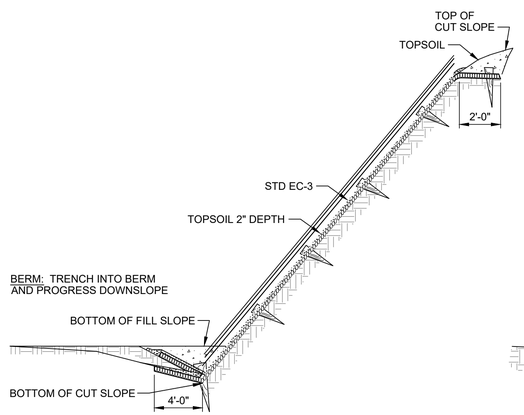
SCALE: NTS

NOTES:

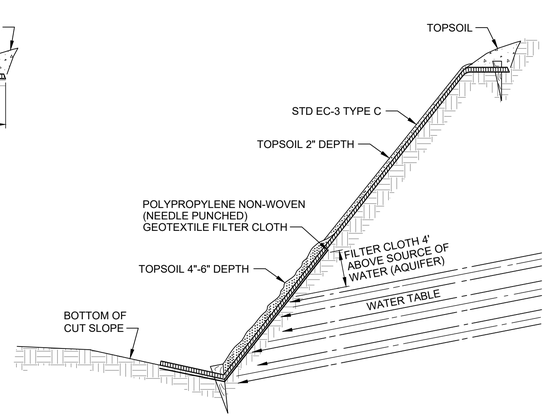
1. SLOPE SURFACE SHALL BE SMOOTH AND FREE OF ROCKS, LUMPS OF DIRT, GRASS, AND STICKS. MAT SHALL BE PLACED FLAT ON SURFACE FOR PROPER SOIL CONTACT.
2. STAKES SHALL BE WOOD OR METAL AS RECOMMENDED BY THE MANUFACTURER AND SHALL BE A MINIMUM OF 18 INCHES IN LENGTH.
3. SOIL STABILIZATION MAT TYPE C SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCT LIST.
4. TOPSOIL SHALL BE SPREAD TO A UNIFORM THICKNESS PRIOR TO APPLICATION OF SEED AND MULCH.
5. FOR SOURCES OF APPROVED MATERIALS SEE VDOT'S APPROVED PRODUCTS LIST FOR STANDARD EC-3, TYPE C MATERIALS.
6. SLOPES 1-1/2:1 AND FLATTER SHALL BE BACKFILLED WITH TOPSOIL AT 2 INCH DEPTH. SEED SHALL BE APPLIED TO THE TOPSOIL AND MULCHED WITH TYPE I MULCH.
7. SLOPES STEEPER THAN 1-1/2:1 SHALL BE SEEDED IMMEDIATELY PRIOR TO INSTALLATION OF STANDARD EC-3 TYPE C MATERIAL.



FILL SLOPE SECTION



SLOPE LINING - DRY SLOPE



SLOPE LINING - WET SLOPE

2 - SOIL STABILIZATION MAT - SLOPE INSTALLATION TYPE C

SCALE: NTS

10/3/2021 9:40 AM

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

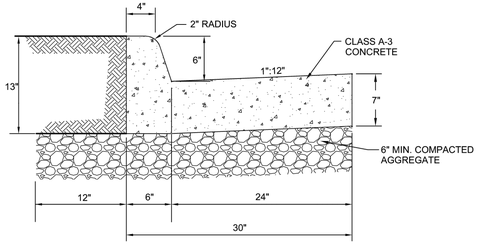
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

EROSION AND SEDIMENT CONTROL STANDARD DETAILS 2

0 1" 2"

FILENAME C9013.DWG
SCALE AS NOTED

DWG NO. C9013



NOTES:

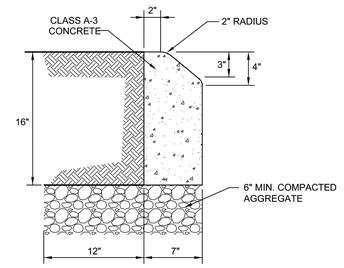
1. CRACK CONTROL JOINTS TO BE PROVIDED AT 10 FT. INTERVALS BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES TO 1-1/2 INCH DEPTH.
2. EXPANSION JOINTS TO BE INSTALLED PER SPECIFICATIONS SECTION 502.
3. AS SOON AS CONCRETE WILL NOT SLUMP, FACE FORMS ARE TO BE REMOVED, IRREGULARITIES REMOVED, A LIGHT BROOM FINISH GIVEN, AND LIQUID MEMBRANE SEAL OR OTHER APPROVED CURING MEDIUM APPLIED.
4. THE CONTRACTOR SHALL PREVENT THE TEMPERATURE AT THE SURFACE OF THE CONCRETE FROM FALLING BELOW 40°F DURING THE FIRST 72 HOURS IMMEDIATELY FOLLOWING CONCRETE PLACEMENT. PROTECTIVE MATERIAL SHALL BE LEFT IN PLACE FOR AN ADDITIONAL 48 HOURS IF FREEZING AIR TEMPERATURES ARE EXPECTED TO CONTINUE.

30" CURB & GUTTER

NOT TO SCALE

1 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_02



NOTES:

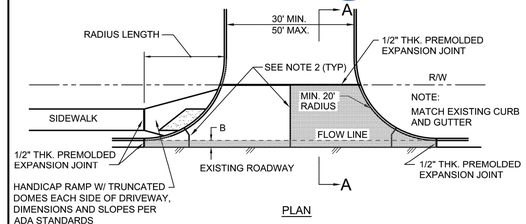
1. CRACK CONTROL JOINTS TO BE PROVIDED AT 10 FT. INTERVALS BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES TO 1-1/2 INCH DEPTH.
2. EXPANSION JOINTS TO BE INSTALLED PER SPECIFICATIONS SECTION 502.
3. AS SOON AS CONCRETE WILL NOT SLUMP, FACE FORMS ARE TO BE REMOVED, IRREGULARITIES REMOVED, A LIGHT BROOM FINISH GIVEN, AND LIQUID MEMBRANE SEAL OR OTHER APPROVED CURING MEDIUM APPLIED.
4. THE CONTRACTOR SHALL PREVENT THE TEMPERATURE AT THE SURFACE OF THE CONCRETE FROM FALLING BELOW 40°F DURING THE FIRST 72 HOURS IMMEDIATELY FOLLOWING CONCRETE PLACEMENT. PROTECTIVE MATERIAL SHALL BE LEFT IN PLACE FOR AN ADDITIONAL 48 HOURS IF FREEZING AIR TEMPERATURES ARE EXPECTED TO CONTINUE.

MOUNTABLE CURB

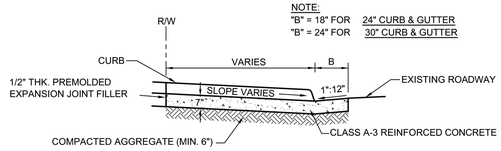
NOT TO SCALE

2 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_04



PLAN



SECTION A-A

NOTES:

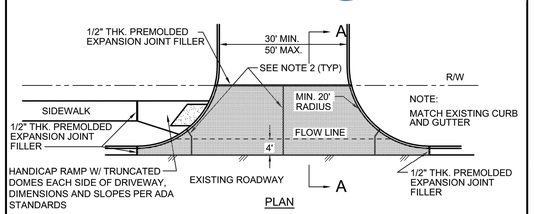
1. STREET APPROACH TO BE POURED MONOLITHICALLY WITH RADIAL CURB.
2. CRACK CONTROL JOINTS TO BE PROVIDED AT ENTRANCE MIDDLE AND AT ENTRANCE DIAGONALS BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES TO 1-1/2 INCH DEPTH.
3. FOR CURBED STREETS WITHOUT SIDEWALKS OR FOR USE WITH OPTIONAL HANDICAP RAMP WHEN DIRECTED BY LOCALITY.
4. WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR APRON UNLESS AUTHORIZED BY OWNER.
5. CONCRETE REINFORCEMENT METHOD PER CONTRACT DOCUMENTS.

STANDARD COMMERCIAL ENTRANCE

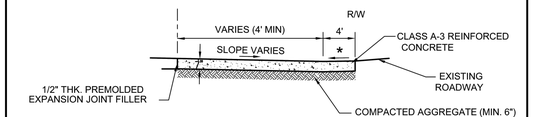
NOT TO SCALE

3 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_05



PLAN



SECTION A-A

* TO MATCH 24" CURB & GUTTER, SLOPE = 1" : 32"
TO MATCH 30" CURB & GUTTER, SLOPE = 1" : 24"

NOTES:

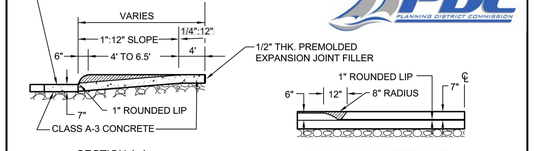
1. FOR USE ON STREETS HAVING A 45 MPH OR GREATER SPEED LIMIT.
2. CRACK CONTROL JOINTS TO BE PROVIDED AT ENTRANCE MIDDLE AND AT ENTRANCE DIAGONALS BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES TO 1-1/2 INCH DEPTH.
3. STREET APPROACH TO BE POURED MONOLITHICALLY WITH RADIAL CURB.
4. FOR CURBED STREETS WITHOUT SIDEWALKS OR FOR USE WITH A HIGH VOLUME ENTRANCE WITH OPTIONAL HANDICAP RAMP WHEN DIRECTED BY LOCALITY.
5. WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR APRON UNLESS AUTHORIZED BY OWNER.
6. CONCRETE REINFORCEMENT METHOD PER CONTRACT DOCUMENTS.

HIGH TRAFFIC SPEED COMMERCIAL ENTRANCE

NOT TO SCALE

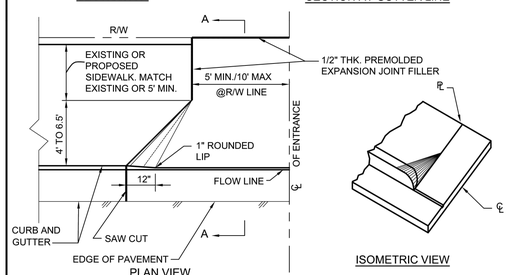
4 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_06



SECTION A-A

SECTION AT GUTTER LINE



PLAN VIEW

(SYMMETRICAL ABOUT ℄ OF ENTRANCE)

ISOMETRIC VIEW

NOTES:

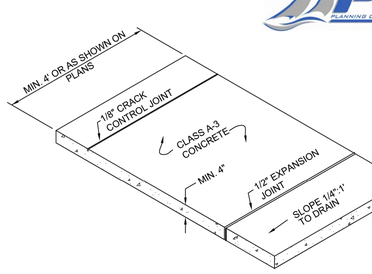
1. IF AN EXISTING SIDEWALK IS AFFECTED BY THIS INSTALLATION, IT MUST BE REMOVED TO THE NEAREST JOINT AND REPLACED WITH CLASS A-3 CONCRETE, SEVEN INCHES THICK.
2. A SLOPE OF 1/4":12" (UPWARD) IS REQUIRED FROM TOP OF CURB TO RIGHT-OF-WAY LINE, (ON ENTRANCE OR ON SIDEWALK).
3. ENTRANCES WITHIN TWO FEET OF EACH OTHER, MEASURED AT THE CURB LINE, MAY CONNECT TO SHARE A WIDER APRON DESIGN.
4. WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR APRON UNLESS AUTHORIZED BY OWNER.

RESIDENTIAL CONCRETE ENTRANCE W/ CURB & GUTTER

NOT TO SCALE

5 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_07



NOTES:

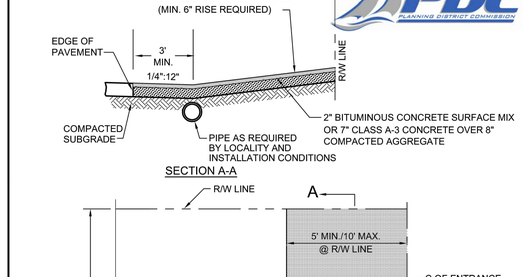
1. CRACK CONTROL JOINTS TO BE PROVIDED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES AND SHALL EXTEND INTO THE CONCRETE TO 1/4 OF THE DEPTH.
2. EXPANSION JOINTS TO BE INSTALLED AT INTERVALS NOT EXCEEDING 50', AND AT JUNCTION POINTS OF CURBS AND ENTRANCES, AND ON BOTH SIDES OF ALL SIDEWALK SECTIONS CONTAINING UTILITIES. PREMOLDED, 1/2" JOINT FILLER IS TO BE USED EXTENDING FROM BOTTOM OF SLAB TO 1/4" OF ITS TOP SURFACE.
3. AS SOON AS CONCRETE WILL NOT SLUMP, FACE FORMS ARE TO BE REMOVED, IRREGULARITIES REMOVED, A LIGHT BROOM FINISH GIVEN, AND A LIQUID MEMBRANE SEAL OR OTHER APPROVED CURING MEDIUM APPLIED.
4. SIDEWALKS ACROSS ENTRANCES SHALL HAVE A DEPTH OF SEVEN INCHES (7") WITH A MAXIMUM SLOPE OF 1":12".
5. THE CONTRACTOR SHALL PREVENT THE TEMPERATURE AT THE SURFACE OF THE CONCRETE FROM FALLING BELOW 40°F DURING THE FIRST 72 HOURS IMMEDIATELY FOLLOWING CONCRETE PLACEMENT. PROTECTIVE MATERIAL SHALL BE LEFT IN PLACE FOR AN ADDTIONAL 48 HOURS IF FREEZING AIR TEMPERATURES ARE EXPECTED TO CONTINUE.

SIDEWALK DETAIL

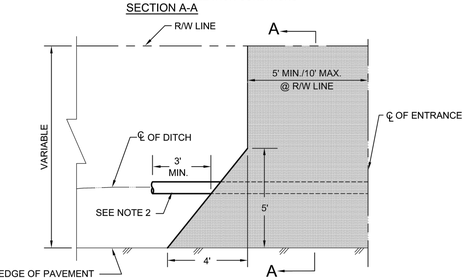
NOT TO SCALE

6 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_09



SECTION A-A



PLAN

(SYMMETRICAL ABOUT ℄ OF ENTRANCE)

NOTES:

1. PIPE LOCATION MAY VARY WITHIN THE RIGHT-OF-WAY AS NECESSARY. THE PIPE SHALL BE INSTALLED TO PROVIDE AND/OR MAINTAIN POSITIVE DRAINAGE.
2. PIPE SHALL EXTEND THREE FEET (MINIMUM) BEYOND FARTHEST OUTSIDE EDGE OF ENTRANCE AT CROSSING. PROVIDE COVER OVER PIPE AS SPECIFIED BY ENGINEER.
3. WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR APRON UNLESS AUTHORIZED BY OWNER.

RESIDENTIAL ENTRANCE W/OUT CURB & GUTTER

NOT TO SCALE

7 / -

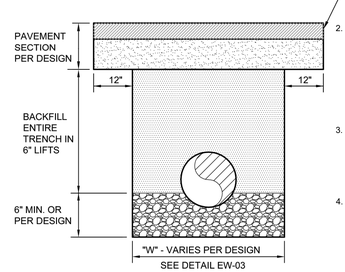
REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,502	CONCRETE ITEMS	6/16	1 OF 1	CI_08

*

TABLE 1	PAVEMENT DESIGN			
ROADSIDE CLASSIFICATION	AGGREGATE BASE VDOT TYPE 1, 21A	SURFACE MIX (SM-9.5)	BASE MIX (BM-25)	TOTAL ASPHALT DEPTH
MAJOR ARTERIAL	8"	2"	10"	12"
MAJOR ARTERIAL OR COLLECTOR STREET	8"	1.5"	4"	5.5"
MINOR ARTERIAL OR COLLECTOR STREET	8"	1.5"	2.5"	4"

* NOTES

1. MINIMUM PAVEMENT SECTIONS WILL BE AS SHOWN IN THE ATTACHED TABLE 1 - PAVEMENT DESIGN ABOVE.
2. TOTAL UTILITY PATCH ASPHALT DEPTH SHALL BE THE TOTAL ASPHALT DEPTH SHOWN IN TABLE 1 OR THE TOTAL EXISTING PAVEMENT DEPTH, WHICHEVER IS GREATER. SURFACE ASPHALT (SM-9.5) OF DEPTH SHOWN IN TABLE 1 SHALL BE PROVIDED.
3. SEE SPECIAL PROVISION SECTIONS 317.II EXECUTION 2.1 GENERAL F THRU J AND 317.II MEASUREMENT FOR PAVEMENT F FOR REQUIRED EXTENTS OF RESTORATION.
4. BACKFILL TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATIONS SECTION 303. BACKFILL SHALL BE SELECT MATERIAL TYPE I WITH MINIMUM CBR OF 20 AS SPECIFIED IN THE VDOT ROADS & BRIDGE SPECIFICATIONS.
5. BACKFILL MATERIAL PER SPECIFICATIONS SECTION 200.



NOTES:

~~1. BACKFILL TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATIONS SECTION 303 AND SECTION 305.~~

~~2. BACKFILL MATERIAL PER SPECIFICATIONS SECTION 200.~~

~~3. TACK COAT SHALL BE APPLIED ON VERTICAL SURFACES WHERE THE NEW PAVEMENT ABUTS EXISTING PAVEMENT.~~

PAVEMENT PATCHING DETAIL FOR FLEXIBLE PAVEMENT

NOT TO SCALE

* MODIFIED PER THE STANDARD DETAIL MODIFICATIONS IN THE SPECIAL PROVISIONS

8 / -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,303,309,310,313,315	ROADWAY CONSTRUCTION	6/16	1 OF 1	RC_01

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

10/3/2021 9:41 AM

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

HRPDC GENERAL DETAILS 1

0 1" 2"

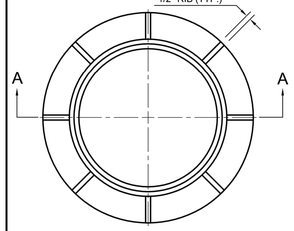
FILENAME C9020.DWG

SCALE AS NOTED

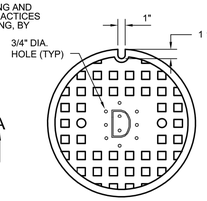
DWG NO. **C9020**

NOTES:

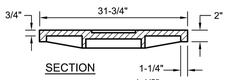
1. CASTING AND COVER TO BE SUPPLIED BY CAPITAL FOUNDRY OF VIRGINIA, INC. OR APPROVED EQUAL.
2. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF ASTM A-48, CLASS 30 AND SHALL BE OF UNIFORM QUALITY.
3. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
4. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.



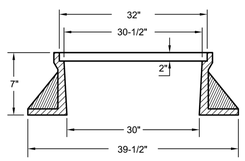
PLAN: CASTING



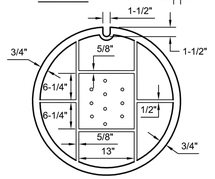
TOP VIEW: COVER



SECTION



SECTION A-A



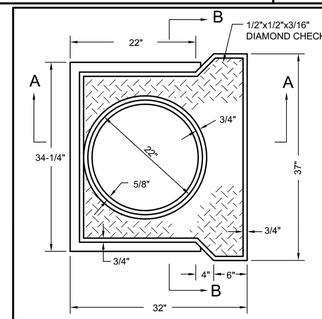
BOTTOM VIEW: COVER

STORM DRAIN CASTING & COVER (30")

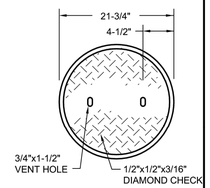
NOT TO SCALE

1 | -

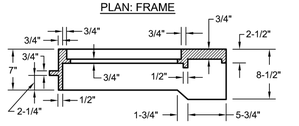
REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,302	DRAINAGE STRUCTURES	6/16	1 OF 1	DS_01



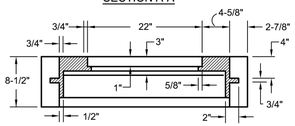
PLAN: FRAME



PLAN: COVER



SECTION A-A



SECTION B-B

NOTES:

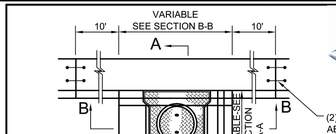
1. FRAME & COVER TO BE SUPPLIED BY CAPITAL FOUNDRY OF VIRGINIA, INC., OR APPROVED EQUAL.
2. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF ASTM A-48, CLASS 30 AND SHALL BE OF UNIFORM QUALITY.
3. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
4. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.

CURB INLET/CATCH BASIN FRAME AND COVER

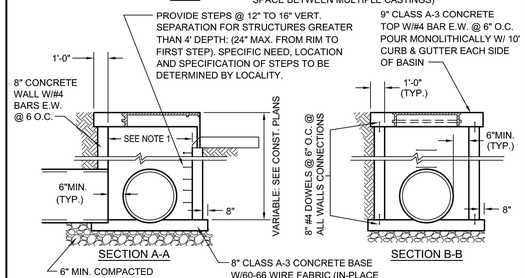
NOT TO SCALE

2 | -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,302	DRAINAGE STRUCTURES	6/16	1 OF 1	DS_03



PLAN



SECTION A-A

SECTION B-B

NOTES:

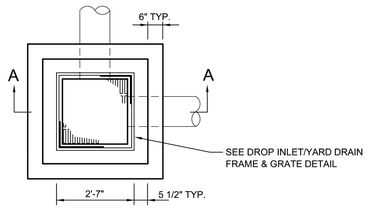
1. THE INTERIOR DIMENSIONS OF THE CATCH BASIN EQUAL 2'-6" FOR PIPE SIZES 12" THRU 18". WHERE THE PIPE SIZE IS 21" THRU 60", THE INTERIOR DIMENSIONS EQUAL 3'-0" OR THE O.D. OF THE PIPE, WHICHEVER IS GREATER, WHEN THE DEPTH DOES NOT EXCEED 4 FEET. IF THE DEPTH IS GREATER THAN 4 FEET, THE INTERIOR DIMENSIONS SHALL BE 4'-0" OR THE O.D. OF THE PIPE, WHICHEVER IS GREATER.
2. REFER TO THE VDOT ROAD AND BRIDGE STANDARDS, LATEST EDITION, - MANHOLE AND INLET SHAPING DETAIL.
3. FOR ALTERNATE PRECAST CONSTRUCTION, REFER TO SECTIONS 200 AND 302.

CURB INLET/CATCH BASIN

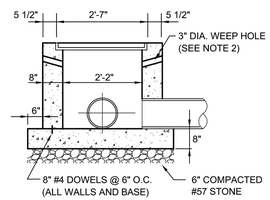
NOT TO SCALE

3 | -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,302	DRAINAGE STRUCTURES	6/16	1 OF 1	DS_04



TOP VIEW



SECTION A-A

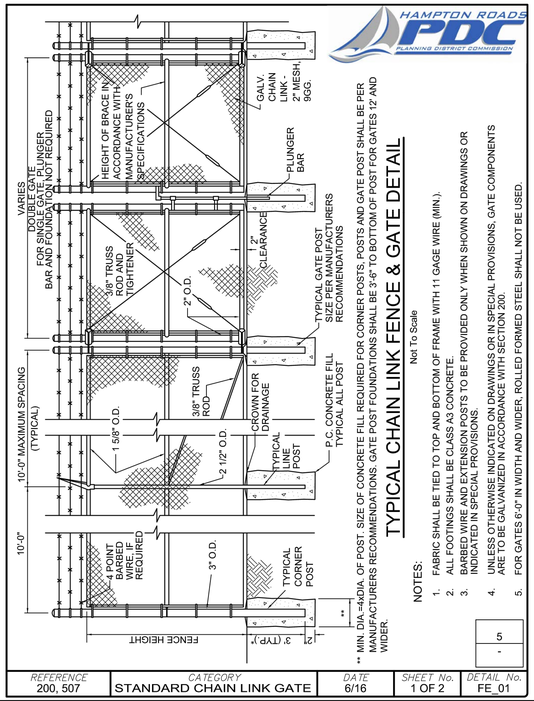
SEE DS_05, SHEET 2 OF 2 FOR NOTES.

YARD DRAIN

NOT TO SCALE

4 | -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200,302	DRAINAGE STRUCTURES	6/16	1 OF 2	DS_05



TYPICAL CHAIN LINK FENCE & GATE DETAIL

Not To Scale

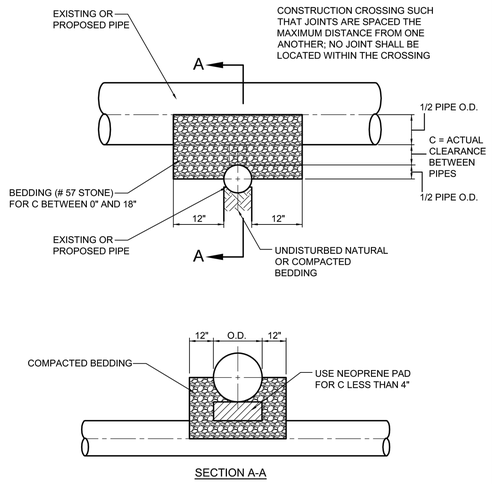
NOTES:

1. FABRIC SHALL BE TIED TO TOP AND BOTTOM OF FRAME WITH 11 GAGE WIRE (MIN.).
2. ALL FOOTINGS SHALL BE CLASS A3 CONCRETE.
3. BARBED WIRE AND EXTENSION POSTS TO BE PROVIDED ONLY WHEN SHOWN ON DRAWINGS OR INDICATED IN SPECIAL PROVISIONS.
4. UNLESS OTHERWISE INDICATED ON DRAWINGS OR IN SPECIAL PROVISIONS, GATE COMPONENTS ARE TO BE GALVANIZED IN ACCORDANCE WITH SECTION 200.
5. FOR GATES 8'-0" IN WIDTH AND WIDER, ROLLED FORMED STEEL SHALL NOT BE USED.

** MIN. DIA.=4DIA. OF POST. SIZE OF CONCRETE FILL REQUIRED FOR CORNER POSTS, POSTS AND GATE POST SHALL BE PER MANUFACTURERS RECOMMENDATIONS. GATE POST FOUNDATIONS SHALL BE 3'-6" TO BOTTOM OF POST FOR GATES 12' AND WIDER.

5 | -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200, 507	STANDARD CHAIN LINK GATE	6/16	1 OF 2	FE_01



SECTION A-A

NOTE:

1. USE OF THIS DETAIL MUST BE APPROVED BY THE LOCALITY.

PIPE CROSSING

NOT TO SCALE

6 | -

REFERENCE	CATEGORY	DATE	SHEET No.	DETAIL No.
200, 801, 802, 803	WATER & SANITARY	6/16	1 OF 1	WS_09

10/3/2021 9:41 AM

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

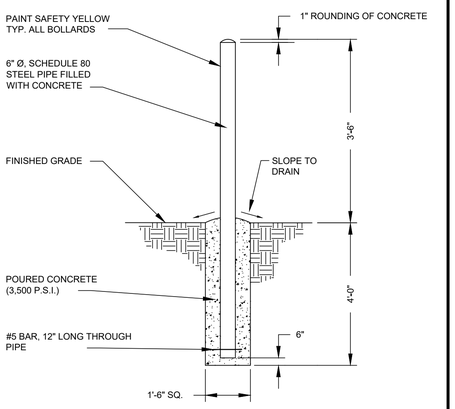
HRPDC GENERAL DETAILS 2

0 1" 2"

FILENAME C9021.DWG

SCALE AS NOTED

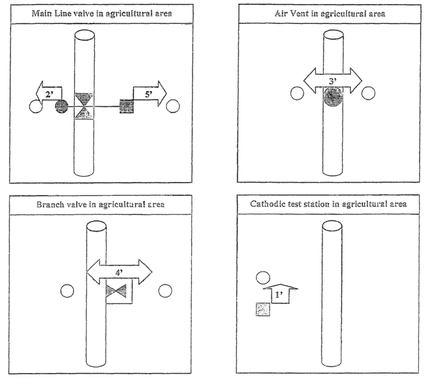
DWG NO. **C9021**



NOT TO SCALE

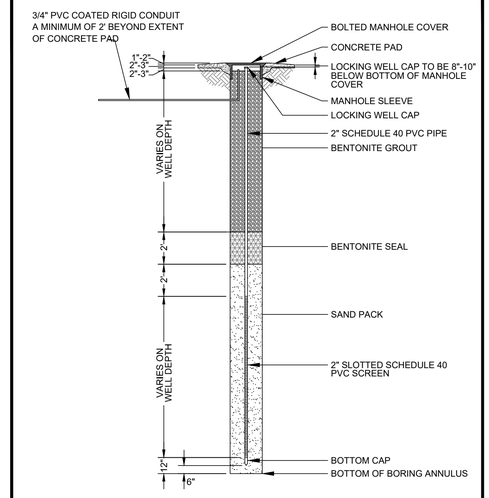
1
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 101
	EXTERIOR BOLLARD DETAIL	SHEET 1 OF 1
		DATE 1/2021



2
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 102
	BOLLARD LOCATION DETAIL	SHEET 1 OF 1
		DATE 1/2021



*SEE PAGE 2 FOR DETAIL NOTES

NOT TO SCALE

3
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 104A
	FLUSH-MOUNT GROUNDWATER MONITORING WELL	SHEET 1 OF 2
		DATE 1/2021

WELL DEPTH (FT)	PVC PIPING DIAMETER	SCREEN LENGTH* (FT)	SLOTTING SIZE	RISER PIPE LENGTH (FT)	FILTER SAND MEDIA	SEALING MEDIA	SURFACE FINISHING
VARIES	0.75 ID	VARIES	0.010	10'-15' DEPTH=2.5' 15'-20' DEPTH=3.5'	#2	BENTONITE GROUT/NEAT CEMENT	FLUSH MOUNT CASING

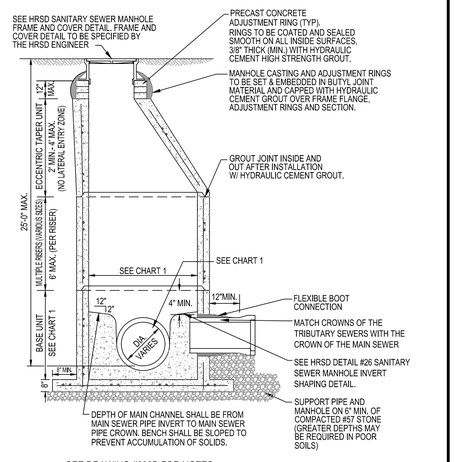
*SCREENS LENGTHS COME IN 3FT AND 5FT SECTIONS

NOTES:

1. ONCE THE SCREEN INTERVAL IS INSTALLED, A MINIMUM OF 2 FEET OF SAND SHOULD BE PLACED ABOVE THE SCREEN. ONCE INSTALLED, A MINIMUM OF ONE FOOT THICK SEAL OF BENTONITE SLURRY OR NEAT CEMENT GROUT SHOULD BE PLACED.
2. AT FINAL SURFACE GRADE, THE MONITORING WELL SHALL BE PROTECTED WITH FLUSH MOUNT RISER CASING.
3. UPON COMPLETION OF WELL INSTALLATION, THE CONTRACTOR WILL DEVELOP THE WELL TO REMOVE SILT FROM WITHIN THE SCREEN INTERVAL.

4
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 104B
	FLUSH-MOUNT GROUNDWATER MONITORING WELL	SHEET 2 OF 2
		DATE 1/2021



SEE DRAWING #200B FOR NOTES.

NOT TO SCALE

5
-

HRSD	STANDARD PRECAST CONCRETE	DRAWING NO. 200A
	MANHOLE W/EXTENDED MONOLITHIC BASE	SHEET 1 OF 2
		DATE 1/2021

CHART 1

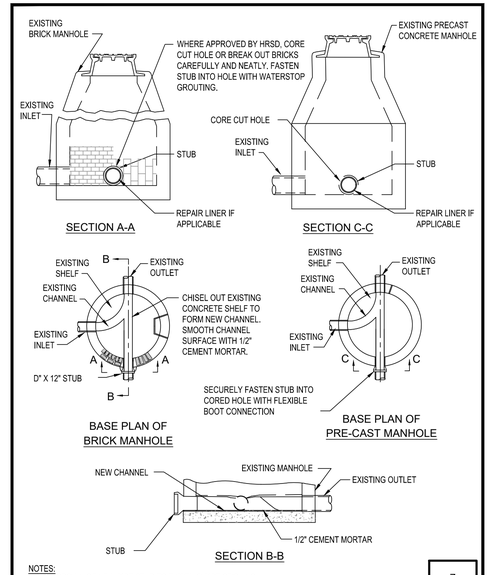
PIPE SIZE	MANHOLE DIAMETER	BASE UNIT HEIGHT	WALL THICKNESS-MIN.
< OR = 24"	48"	24"-48"	5"
27"-36"	60"	60" (MIN.)	6"
42"	72"	72" (MIN.)	7"
48"	72"	48" (MIN.)	7"

NOTES:

1. PRECAST CONCRETE MANHOLE TO BE IN COMPLIANCE WITH ASTM C-478.
2. PROVIDE A MAXIMUM OF TWO LIFT HOLES PER SECTION. PLUG LIFT HOLES WATERTIGHT WITH RUBBER PLUGS AND GROUT AFTER INSTALLATION.
3. REGARDLESS OF PIPE SIZE, INSIDE DIAMETER OF MANHOLE SHALL BE 60" (MIN.) WHEN MANHOLE DEPTH IS 12' OR GREATER. 60" DIAMETER SHALL BE CONTINUOUS UP TO CONE SECTION.
4. MAXIMUM OF FOUR LATERALS PER MANHOLE.
5. ALL MANHOLES SHALL RECEIVE CONSHIELD ADDITIVE OR APPROVED EQUAL DURING CASTING.
6. CONCRETE USED TO FORM THE BENCH SHALL RECEIVE THE CONSHIED ADDITIVE, OR APPROVED EQUAL.
7. COAT EXTERIOR OF MANHOLE IN ACCORDANCE WITH THE HRSD COATINGS MANUAL, CURRENT REVISION, COATING SYSTEM E-2-C. COATING SHALL BE FIELD APPLIED.

6
-

HRSD	STANDARD PRECAST CONCRETE	DRAWING NO. 200B
	MANHOLE W/EXTENDED MONOLITHIC BASE	SHEET 2 OF 2
		DATE 1/2021

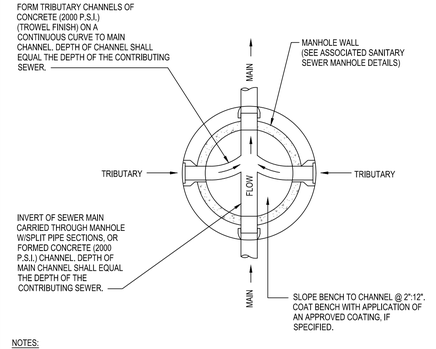


NOTES:
MATCH CROWN OF NEW PIPE STUB TO EXISTING PIPE CROWNS.

NOT TO SCALE

7
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 203
	CONNECTION INTO EXISTING MANHOLES	SHEET 1 OF 1
		DATE 1/2021



NOTES:

1. SPLIT PIPE ONLY ALLOWED IN STRADDLE MANHOLES.
2. CONCRETE USED TO FORM THE BENCH SHALL RECEIVE THE CONSHIELD ADDITIVE, OR APPROVED EQUAL.
3. BENCH SHALL BE FORMED TO ACCOMMODATE CCTV EQUIPMENT.

NOT TO SCALE

8
-

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 204
	MANHOLE INVERT SHAPING	SHEET 1 OF 1
		DATE 1/2021

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

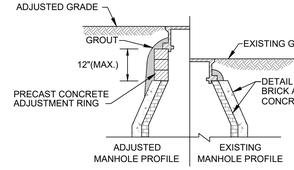
HRSD CIVIL SITE STANDARD DETAILS 1

0 1" 2"

FILENAME C9030.DWG
SCALE AS NOTED

DWG NO. **C9030**

10/3/2021 9:41 AM



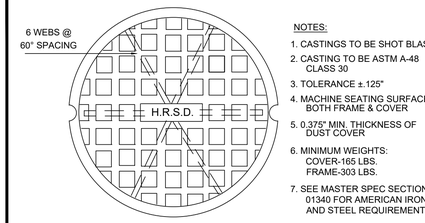
NOTES:

1. PRECAST CONCRETE ADJUSTMENT RINGS SHALL BE USED TO RAISE THE MANHOLE FRAME FROM THE CONE SECTION. JACK UP RINGS BETWEEN THE FRAME AND COVER ARE NOT ACCEPTABLE.
2. GROUT MIX SHALL BE 1:3 CEMENT:SAND MORTAR. CAP EXTERIOR WITH GROUT OVER FRAME FLANGE, ADJUSTMENT RING(S), AND THE TOP 18" OF THE CONE SECTION. COAT INSIDE SURFACE OF THE ADJUSTMENT RINGS AND SEAL SMOOTH WITH 3/8" THICK GROUT.
3. IN LIEU OF PRECAST CONCRETE, ADJUSTMENT RINGS MAY BE COURSES OF HARD, SOUND, COMMON BRICK LAID RADIALLY AND FULLY SUPPORTING THE FRAME FLANGE. BRICK SHALL BE LAID WITH 1:3 CEMENT:SAND MORTAR WITH SHAVED JOINTS NOT TO EXCEED 3/8" THICKNESS. CAP WITH GROUT OVER FRAME FLANGE, ADJUSTMENT RING(S), AND THE TOP 18" OF THE CONE SECTION (AS SHOWN ABOVE).
4. TOTAL HEIGHT BETWEEN THE TOP OF THE CONE AND THE BOTTOM OF THE FRAME FLANGE SHALL NOT EXCEED 12" (OR 3 OF COURSES OF BRICK) AFTER THE ADJUSTMENT. IF, ON A PRECAST MANHOLE, THE TOTAL HEIGHT IS >12" BEFORE THE ADJUSTMENT, OR IF RAISING THE TOTAL HEIGHT TO 12" PROVIDES INSUFFICIENT ADJUSTMENT, INSERT AN ADDITIONAL PRECAST CONCRETE STANDARD MANHOLE SECTION BETWEEN THE CONE SECTION AND THE UPPER MOST BARREL SECTION. THE NEW SECTION SHALL HAVE RECEIVED THE CONSHIELD ADDITIVE DURING CASTING. IF, ON A BRICK MANHOLE, THE TOTAL HEIGHT IS >12" BEFORE THE ADJUSTMENT, OR IF RAISING THE TOTAL HEIGHT TO 12" PROVIDES INSUFFICIENT ADJUSTMENT, CONTACT THE HRSD ENGINEER FOR DIRECTION.
5. THE EXISTING BARREL SECTION(S), FOUNDATION, FOOT PAD, AND MANHOLE PIPES SHALL NOT BE DISTURBED.
6. MANHOLES TO BE LOWERED MAY BE LOWERED BY REMOVING EXISTING ADJUSTMENT RINGS. IF ADJUSTMENT RINGS ARE NOT PRESENT BETWEEN THE FRAME AND THE CONE SECTION, OR IF THEIR REMOVAL PROVIDES INSUFFICIENT ADJUSTMENT, CONTACT THE HRSD ENGINEER.

1

NOT TO SCALE

HRSD	STANDARD PRECAST CONCRETE SANITARY SEWER MANHOLE ADJUSTMENT	DRAWING NO. 208 · SHEET 1 OF 1 · DATE 1/2021



NOTES:

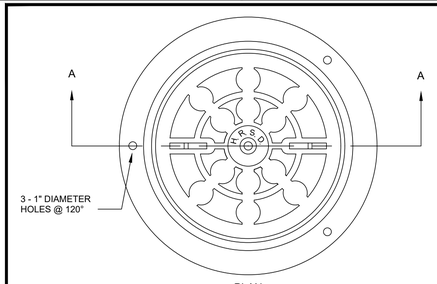
1. CASTINGS TO BE SHOT BLASTED
2. CASTING TO BE ASTM A-48 CLASS 30
3. TOLERANCE ±.125"
4. MACHINE SEATING SURFACE ON BOTH FRAME & COVER
5. 0.375" MIN. THICKNESS OF DUST COVER
6. MINIMUM WEIGHTS: COVER-165 LBS. FRAME-303 LBS.
7. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

* USE WHERE 24" WATERTIGHT M.H. MAY NOT BE APPLICABLE.

2

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL STANDARD MANHOLE FRAME AND COVER	DRAWING NO. 227 · SHEET 1 OF 1 · DATE 1/2021



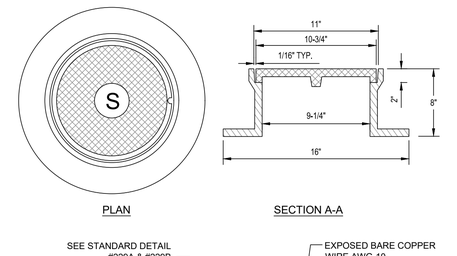
NOTES

1. CASTINGS TO BE SHOT BLASTED.
2. CASTINGS SHALL MEET OR EXCEED ASTM A-48-76 CLASS 30-B.
3. TOLERANCE 0"±125".
4. MACHINE SEATING SURFACE ON BOTH FRAME & COVER.
5. FRAME & COVER TO BE DEWEY BROS. INC. MH-RCR-3000W (WATERTIGHT) OR EQUAL.
6. MINIMUM WEIGHTS: COVER-170 LBS. FRAME-262 LBS.
7. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

3

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL MANHOLE FRAME AND COVER-WATERTIGHT	DRAWING NO. 228 · SHEET 1 OF 1 · DATE 1/2021



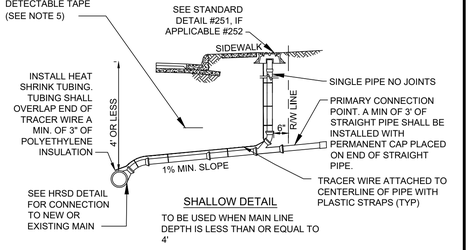
NOTES:

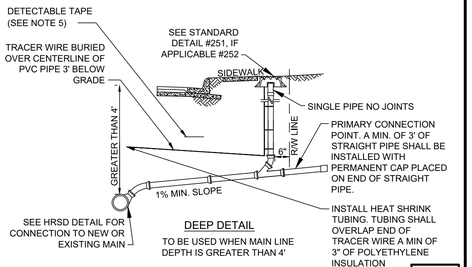
1. CLEAN OUT FRAME & COVER HIGHWAY LOAD RATED FOR USE IN DRIVEWAYS, PARKING LOTS, ETC.
2. CLEAN OUT FRAME & COVER TO BE PART NUMBER VB-9"S SUPPLIED BY CAPITAL FOUNDRY OF VIRGINIA, INC. OR APPROVED EQUAL.
3. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF ASTM A-48, CLASS 30 AND SHALL BE OF UNIFORM QUALITY.
4. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±
5. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.
6. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

4

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL SANITARY SEWER SERVICE CLEAN OUT FRAME AND COVER (TRAFFIC RATED)	DRAWING NO. 252 · SHEET 1 OF 1 · DATE 1/2021





*SEE SHEET 2 FOR NOTES

5

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL SANITARY SERVICE LATERAL INSTALLATION	DRAWING NO. 229A · SHEET 1 OF 2 · DATE 1/2021

NOTES:

1. TYPICAL LATERAL LAYOUT:
   - 1.1. SHALL ONLY UTILIZE THE PRIMARY CONNECTION POINT WHEN TYING TO AN EXISTING LATERAL.
   - 1.2. THE CONNECTION POINT TO THE PRIVATE LATERAL AND TO THE SANITARY SERVICE LATERAL CLEANOUT SHALL BE MADE WITH SOLID SLEEVES.
   - 1.3. FERNCO COUPLINGS OR EQUIVALENTS ARE NOT PERMITTED ON THE LATERAL CONNECTION OR AT THE CONNECTION POINT TO THE PRIVATE LATERAL. UNLESS THE PRIVATE LATERAL IS VCP (VITRIFIED CLAY PIPE). CONNECTIONS WILL NOT BE ALLOWED IF THE PRIVATE LATERAL PIPE MATERIAL IS ORANGEBURG PIPE (BITUMINIZED FIBER SEWER PIPE).
   - 1.4. RC STRONG BACK FERNCO COUPLINGS SHALL BE ENCASED IN CONCRETE AND SHALL ONLY BE ALLOWED ON VITRIFIED CLAY PIPE (VCP). CONCRETE SHALL BE DIRT FORMED IN A 6" BOX TO ENCOMPASS THE ENTIRE FITTING.
   - 1.5. CLEANOUT RISER ASSEMBLY AND FITTING SHALL BE SAME MATERIAL AS THE SEWER LATERAL
2. CLEANOUT RISER ASSEMBLY, LATERAL CLEANOUT AND TRACER WIRE SHALL BE INSTALLED PRIOR TO FINAL INSPECTION/ACCEPTANCE, LOCATION OF WYE AND CLEANOUT MAY BE VARIED BY HRSD STAFF IF NECESSARY DUE TO UNUSUAL DEPTH OR CONDITIONS, MINIMUM COVER OF 3.0 FEET REQUIRED FOR SERVICE.
3. LATERAL MATERIAL SHALL BE POLYVINYLCHLORIDE (P.V.C.), ASTM D-3034 SDR 26, AWWA C900-CLASS 150 (DR-18) OR ASTM D-1785 SCHEDULE 40. FOR DEPTHS LESS THAN 2' OR GREATER THAN 10' CONTACT HRSD FOR PIPE MATERIAL.
4. TRACER WIRE SHALL BE AWG 10 SOLID COPPER WIRE WITH POLYETHYLENE INSULATION. THE TRACER WIRE SHALL BE ATTACHED TO THE LATERAL PIPE WHEN THE DEPTH IN NO GREATER THAN 4.0 FEET. THE WIRE SHALL BE BURIED OVER THE CENTERLINE OF THE LATERAL PIPE AT 3.0 FEET BELOW GRADE WHEN THE LATERAL DEPTH IS GREATER THAN 4.0 FEET.
5. INSTALL DETECTABLE WARNING TAPE CONTINUOUSLY FROM THE MAIN TO THE HRSD CLEANOUT 1' ABOVE TOP OF TRACER WIRE. TAPE SHALL BE GREEN IN COLOR AND STATE " CAUTION BURIED SEWER LINE BELOW"
6. CONTRACTOR SHALL UTILIZE NO MORE THAN FOUR (4) FITTINGS FROM THE HRSD CONNECTION POINT TO THE HRSD CLEANOUT.

6

HRSD	STANDARD DESIGN DETAIL SANITARY SERVICE LATERAL INSTALLATION	DRAWING NO. 229B · SHEET 2 OF 2 · DATE 1/2021

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

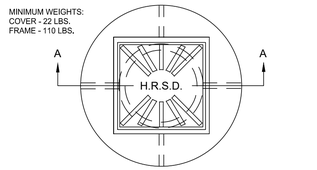
HRSD CIVIL SITE STANDARD DETAILS 2

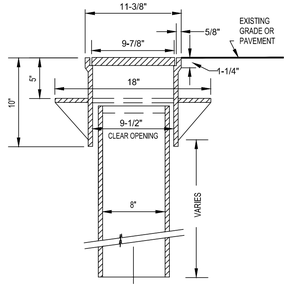
0 1" 2"

FILENAME C9031.DWG · SCALE AS NOTED

DWG NO. **C9031**

10/3/2021 9:41 AM





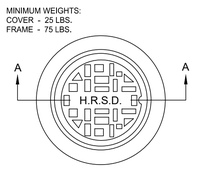
SECTION A-A

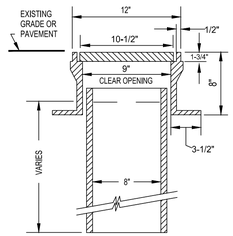
NOTES:
1. RISER TO BE 8" C900 PVC OR 8" SCH. 80 PVC. (ONE PIECE). BELL END PIECE SHALL NOT BE ALLOWED.
2. TOLERANCE TO BE +\-.125" FOR ALL DIMENSIONS.
3. CASTING TO BE SHOT BLASTED.
4. CASTING TO BE ASTM A-48 CLASS 30.
5. JACK UP RINGS NOT ACCEPTABLE.
6. TOP OF RISER PIPE SHALL BE 5" BELOW THE LIP FOR THE CASTING LID.
7. RISER SHALL BE CENTERED ON THE FORCE MAIN AND SHALL BE PLUMB AND STRAIGHT.
8. SEE MASTER SPEC SECTION 0134 FOR AMERICAN IRON AND STEEL REQUIREMENT.

NOT TO SCALE

1 | -

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 328
		SHEET 1 OF 1
	VALVE BOX & RISER FOR MAINLINE VALVE	DATE 1/2021





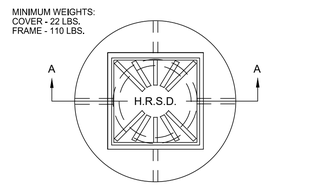
SECTION A-A

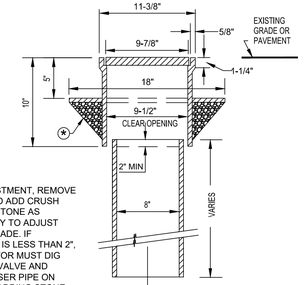
NOTES:
1. RISER TO BE 8" C900 PVC OR 8" SCH. 80 PVC. (ONE PIECE). BELL END PIECE SHALL NOT BE ALLOWED.
2. TOLERANCE TO BE +\-.125" FOR ALL DIMENSIONS.
3. CASTING TO BE SHOT BLASTED.
4. CASTING TO BE ASTM A-48 CLASS 30.
5. JACK UP RINGS NOT ACCEPTABLE.
6. TOP OF RISER PIPE SHALL BE 5" BELOW THE LIP FOR THE CASTING LID.
7. RISER SHALL BE CENTERED ON THE NUT AND SHALL BE PLUMB AND STRAIGHT.
8. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

NOT TO SCALE

2 | -

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 329
		SHEET 1 OF 1
	VALVE BOX & RISER FOR BYPASS VALVES	DATE 1/2021





(*) FOR ADJUSTMENT, REMOVE FRAME AND ADD CRUSH AND RUN STONE AS NECESSARY TO ADJUST TOP TO GRADE. IF INSERTION IS LESS THAN 2", CONTRACTOR MUST DIG DOWN ON VALVE AND ADJUST RISER PIPE ON VALVE BY ADDING STONE OR NEW 8" PIPE OF APPROPRIATE LENGTH.

SECTION A-A

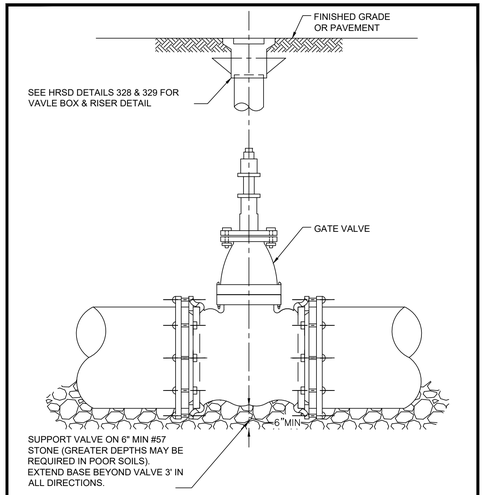
FOR USE ON MAINLINE OR CONNECTION VALVES

NOTES:
1. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

NOT TO SCALE

3 | -

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 330
		SHEET 1 OF 1
	VALVE RISER ADJUSTMENT	DATE 1/2021

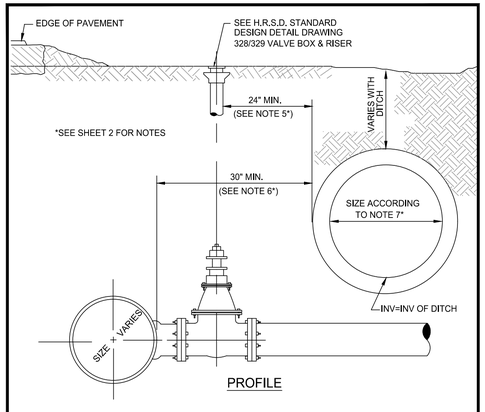


NOTE:
1. SEE SPECIFICATIONS FOR HORIZONTAL OR VERTICAL POSITION AND BYPASS REQUIREMENT.
2. EXTENSION SYSTEMS ARE NOT ACCEPTABLE.
3. INSTALL CRIBBING AS NECESSARY.
4. THIS DETAIL ONLY APPLICABLE FOR VALVES 14" AND SMALLER.
5. MINIMUM VALVE SIZE SHALL BE 8".

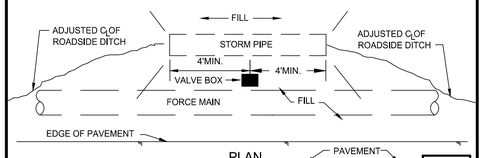
NOT TO SCALE

4 | -

HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 327
		SHEET 1 OF 1
	VERTICAL GATE VALVE	DATE 1/2021



PROFILE



PLAN

NOT TO SCALE

5 | -

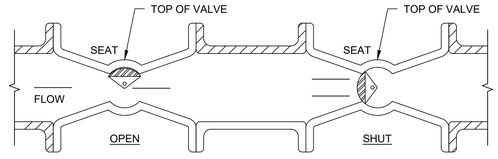
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 331A
		SHEET 1 OF 2
	ROADSIDE DITCH-VALVE BOX	DATE 1/2021

NOTES:
1. VALVE BOXES ARE TO BE ALIGNED TRUE AND SQUARE WITH EDGE OF PAVEMENT.
2. STORM PIPE SHALL EXTEND A MINIMUM OF FOUR (4) FEET TO EITHER SIDE OF VALVE BOX.
3. FILL MATERIAL SHALL CONFORM TO RIGHT OF WAY PERMIT REQUIREMENTS.
4. SLOPE FILL MATERIAL TO DRAIN AWAY FROM VALVE BOX TOWARDS DITCH.
5. MAINTAIN 24 INCH MINIMUM HORIZONTAL DISTANCE BETWEEN STORM PIPE AND VALVE RISER PIPE.
6. WHEN VALVE FACES AWAY FROM DITCH, MAINTAIN 30 INCH MINIMUM HORIZONTAL DISTANCE BETWEEN STORM PIPE AND FORCE MAIN.
7. STORM PIPE SHALL BE SIZED IN ACCORDANCE WITH RIGHT OF WAY PERMIT.
8. UPON COMPLETION OF VALVE BOX AND STORM PIPE INSTALLATION, CONTACT HRSD INSPECTOR FOR FINAL INSPECTION.

6 | -

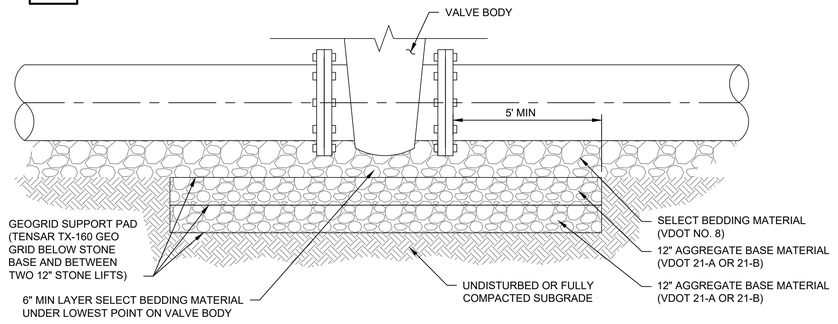
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 331B
		SHEET 2 OF 2
	ROADSIDE DITCH-VALVE BOX	DATE 1/2021

NOTE: INSTALL SEAT IN UPSTREAM ORIENTATION.



7 | - PLUG VALVE ORIENTATION

SCALE: NTS



NOTES:
1. GEO GRID SUPPORT PAD REQUIRED FOR ALL VALVES, 20" SIZE AND LARGER.
2. EXTEND PAD ALONG THE FORCE MAIN, 5' MIN. BEYOND VALVE.

8 | - VALVE SUPPORT DETAIL

SCALE: NTS

10/3/2021 9:42 AM

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

HRSD CIVIL SITE STANDARD DETAILS 3

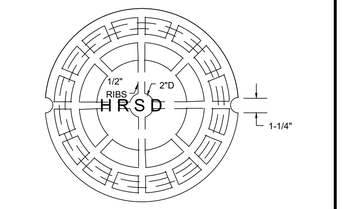
0 1" 2"

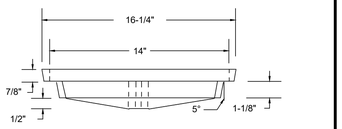
FILENAME C9032.DWG
SCALE AS NOTED

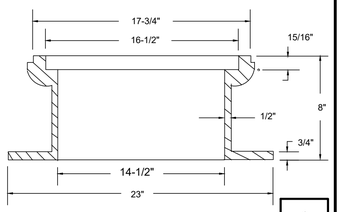
DWG NO. **C9032**

NOTES

1. MACHINE ALL SEATING SURFACES ON BOTH COVER & FRAME
2. TOLERANCE TO BE ±0.125" FOR ALL DIMENSIONS.
3. CASTING TO BE SHOT BLASTED.
4. CASTING TO BE ASTM A-48 CLASS 30.
5. MINIMUM WEIGHTS: FRAME- 114 LBS. COVER- 50 LBS.
6. JACK UP RINGS NOT ACCEPTABLE.
7. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.







NOT TO SCALE

1
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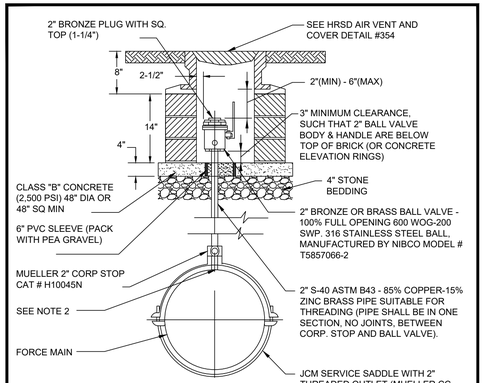
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 354
	AIR VENT FRAME & COVER	SHEET 1 OF 1
		DATE 1/2021



NOTE: HANDLE AS SHOWN IS VALVE INSTALLED IN OPEN POSITION

NOTES:
1. CONSTRUCT AIR VENT USING REQUIRED NUMBER OF COURSES OF HARD SOUND COMMON BRICK LAID ON EDGE OR CONCRETE ELEVATION RINGS AS MANUFACTURED BY NANSEMOND PRE-CAST CONCRETE CO. INC. MODEL AV-ER-CH AND AV-BS.
2. 2" TAP FOR AIR VENT SHALL BE STANDARD SADDLE TAP.
3. SERVICE SADDLE COATING SHALL BE FUSION BONDED EPOXY. SADDLE STRAPS AND HARDWARE SHALL BE STAINLESS STEEL. STAINLESS STEEL SHALL BE MINIMUM 304.
4. JACK UP RINGS BETWEEN THE FRAME AND COVER NOT ACCEPTABLE.
5. PARGE BRICK WORK OR CONCRETE ELEVATION RINGS WITH GROUT INSIDE AND OUT, CONTINUE ONTO CASTING.

NOT TO SCALE

2
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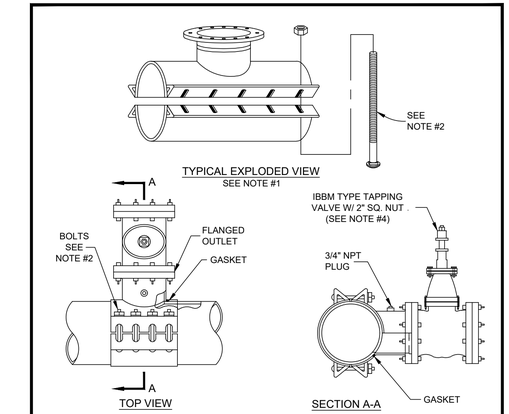
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 351
	MANUAL AIR VENT	SHEET 1 OF 1
		DATE 1/2021



NOTES:
1. FULL BACK SADDLES ONLY, EXCEPT IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS FOR SP-5 AND SP-12 (SEE H.R.S.D. STANDARD DESIGN DETAIL #377 - TAPPING SADDLE FOR CONC. CYLINDER PIPE).
2. THE NUMBER, SPACING, SIZE AND INSTALLATION OF BOLTS SHALL BE IN ACCORDANCE WITH SADDLE MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL SUPPLY TO HAMPTON ROADS SANITATION DISTRICT SYSTEMS ENGINEER THREE (3) CLEAR COPIES OF TAPPING SADDLE MANUFACTURER'S CATALOG CUT AND INSTALLATION INSTRUCTIONS 14 DAYS PRIOR TO INSTALLATION OF SADDLE.
4. TAPPING VALVE TO MEET ANSI/AWWA STANDARDS C500, C509 OR C515.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
6. SADDLE COATING SHALL BE FUSION BONDED EPOXY.
7. TAPPING SADDLE MANUFACTURER SHALL BE SMITH-BLAIR STYLE 622 OR HRSD APPROVED EQUAL.

NOT TO SCALE

3
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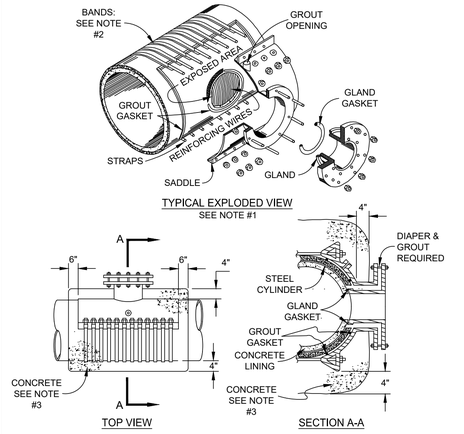
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 376
	TAPPING SADDLE FOR CAST IRON PIPE, DUCTILE IRON, RC, & PVC PIPE	SHEET 1 OF 1
		DATE 1/2021



NOTES:
1. BANDED TAPPING SADDLES ONLY ACCEPTED ON SP-5 & SP-12 PIPE PER PIPE MANUFACTURER'S RECOMMENDATIONS (SEE STANDARD DESIGN DETAIL #12 - STANDARD TAPPING SADDLE FOR CAST IRON PIPE, DUCTILE IRON, RC, & PVC PIPE).
2. THE NUMBER, SPACING, SIZE AND INSTALLATION OF BANDS SHALL BE IN ACCORDANCE WITH SADDLE MANUFACTURER'S RECOMMENDATIONS.
3. ALL TAPPING SADDLES SHALL RECEIVE 4", 3000 PSI CONCRETE COVER WITH 6"x6"x6" GAUGE WELDED WIRE REINFORCEMENT.
4. CONTRACTOR SHALL SUPPLY TO HAMPTON ROADS SANITATION DISTRICT SYSTEMS ENGINEER THREE (3) CLEAR COPIES OF TAPPING SADDLE MANUFACTURER'S CATALOG CUT AND INSTALLATION INSTRUCTIONS 14 DAYS PRIOR TO INSTALLATION OF SADDLE.
5. TAPPING SADDLE MANUFACTURER SHALL BE SMITH-BLAIR STYLE 625 OR JCM STYLE 415.

NOT TO SCALE

4
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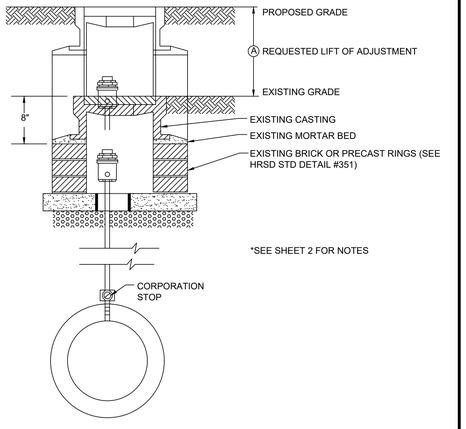
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 377
	TAPPING SADDLE FOR CONCRETE CYLINDER PIPE	SHEET 1 OF 1
		DATE 1/2021



NOT TO SCALE

5
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HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 352A
	AIR RELEASE VALVE BOX ADJUSTMENT	SHEET 1 OF 2
		DATE 1/2021

GENERAL ADJUSTMENT NOTES:
1. REFER TO HRSD STD. DETAIL #351 FOR TYPICAL AIR VENT VALVE BOX CONSTRUCTION.
2. REFER TO HRSD STD. DETAIL #354 FOR AIR VENT VALVE BOX CASTING LID AND FRAME (IF CASTING ON SITE IS NOT AS SHOWN IN DETAIL #354, NOTIFY HRSD ENGINEER).
3. TOP OF VALVE'S BRONZE PLUG SHALL BE NO CLOSER TO BOTTOM OF FRAME THAN TWO (2") INCHES NOR FARTHER THAN SIX (6") INCHES.
4. BED CAST IRON FRAME SOUNDLY IN MORTAR GROUT.
5. PARGE ENTIRE VALVE BOX (INSIDE & OUT) WITH GROUT.

LOWERING TO GRADE:
6. EXCAVATE TO CORPORATION STOP AND CLOSE IT.
7. REMOVE AND REPLACE BALL VALVE AND RISER PIPE.
8. OPEN CORPORATION STOP 100%. MODIFY/RECONSTRUCT BOX AS REQUIRED.

RAISING OF GRADE:
9. WHEN ADJUSTMENT "A" DOES NOT VIOLATE NOTE #3, ABOVE, CASTING MAY BE LIFTED BY REMOVING EXISTING MORTAR BED AND ADDING COURSES OF HARD, SOUND, COMMON BRICK OR CONCRETE ELEVATION RINGS.
10. WHEN ADJUSTMENT "A" VIOLATES NOTE #3, FOLLOW STEPS 6-8 ABOVE.

6
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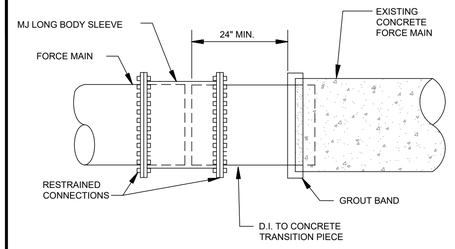
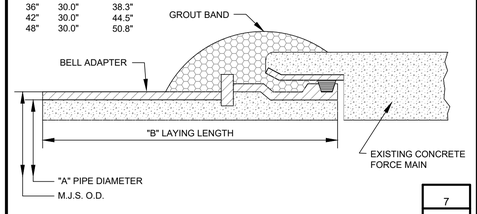
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 352B
	AIR RELEASE VALVE BOX ADJUSTMENT	SHEET 2 OF 2
		DATE 1/2021



A	B	M.J.S. O.D.
16"	30.0"	17.4"
18"	30.0"	19.5"
20"	30.0"	21.6"
24"	30.0"	25.8"
30"	30.0"	32.0"
36"	30.0"	38.3"
42"	30.0"	44.5"
48"	30.0"	50.8"



NOT TO SCALE

7
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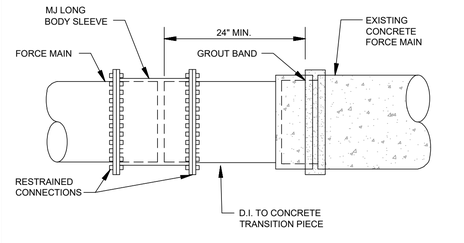
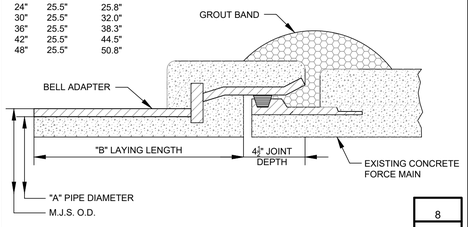
HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 379
	D.I. M.J. SPIGOT TO CONCRETE TRANSITION ADAPTER (MALE)	SHEET 1 OF 1
		DATE 1/2021



A	B	M.J.S. O.D.
16"	25.5"	17.4"
18"	25.5"	19.5"
20"	25.5"	21.6"
24"	25.5"	25.8"
30"	25.5"	32.0"
36"	25.5"	38.3"
42"	25.5"	44.5"
48"	25.5"	50.8"



NOT TO SCALE

8
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HRSD	STANDARD DESIGN DETAIL	DRAWING NO. 380
	D.I. M.J. SPIGOT TO CONCRETE TRANSITION ADAPTER (FEMALE)	SHEET 1 OF 1
		DATE 1/2021

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

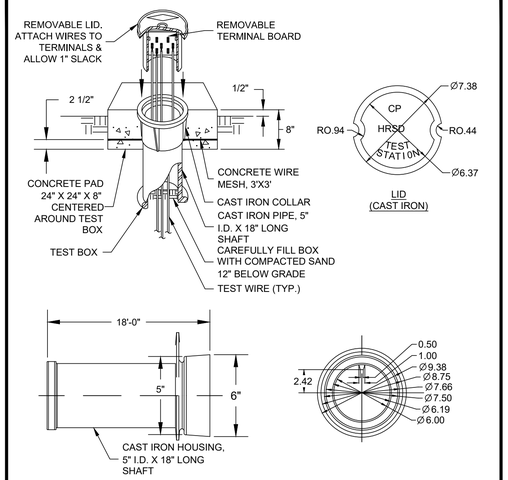
HRSD CIVIL SITE STANDARD DETAILS 4

0 1" 2"

FILENAME C9033.DWG
SCALE AS NOTED

DWG NO. **C9033**

10/3/2021 9:42 AM

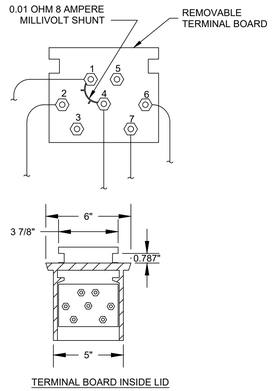


NOTES:
1. MATERIAL, CAST IRON, GRADE TO BE SPECIFIED ON PURCHASE ORDER.
2. ALL RADII SHALL BE 1/16" MINIMUM.
3. ESTIMATED WEIGHT 37#.

1
-

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL CATHODIC PROTECTION TEST STATION AND TERMINAL BOARD WIRING	DRAWING NO. 500A SHEET 1 OF 2 DATE 1/2021



TERMINAL BOARD INSIDE LID

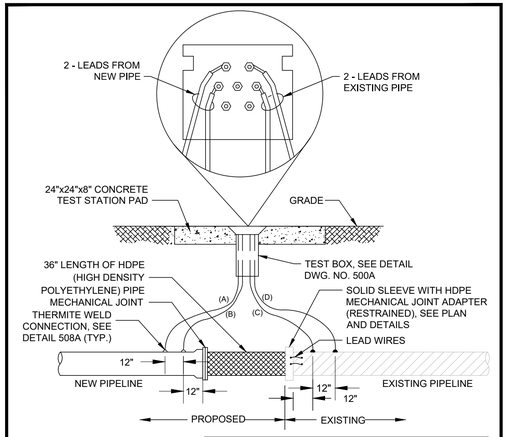
WIRE INSULATION DETAILS				
SHUNT	DESCRIPTION	SIZE #	COLOR THEME	INSULATION
1	ANODE HEADER	#10	RED	THHN
2	ANODE HEADER	#10	RED	THHN
4	STRUCTURE WIRE TO PIPELINE	#10	BLACK	THHN
6	COPPER COPPER SULFATE REFERENCE ELECTRODE	#14	BLUE	HMWPE
7	STRUCTURE WIRE TO PIPELINE	#10	BLACK	THHN

NOTE: TEST BOARD SHOULD NOT BE CONNECTED TO THE UNDER SIDE OF THE TEST STATION LID.

2
-

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL CATHODIC PROTECTION TEST STATION AND TERMINAL BOARD WIRING	DRAWING NO. 500B SHEET 2 OF 2 DATE 1/2021



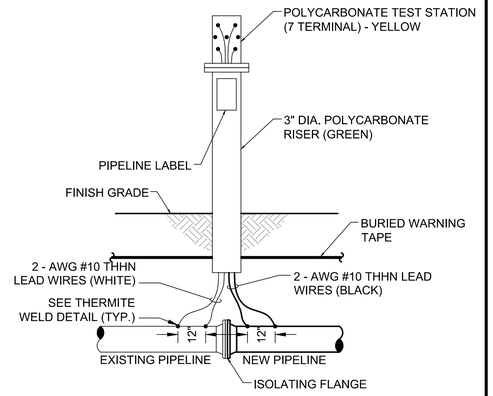
NOTES:
1. WHEN TEST STATION IS OUT OF THE ROAD, USE A GREEN RISER PROTECTED BY BOLLARDS.
2. HDPE SHALL BE DR-17, UNLESS NOTED OTHERWISE ON PLANS OR SPECIFICATIONS.

WIRE INSULATION DETAILS				
WIRE	DESCRIPTION	SIZE #	COLOR THEME	INSULATION
A	NEW PIPE TEST LEAD	#10	WHITE	THHN
B	NEW PIPE TEST LEAD	#10	WHITE	THHN
C	EXISTING PIPE TEST LEAD	#10	BLACK	THHN
D	EXISTING PIPE TEST LEAD	#10	BLACK	THHN

3
-

NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL ISOLATION FLANGE TEST STATION	DRAWING NO. 505 SHEET 1 OF 1 DATE 1/2021



NOTES:
1. WHEN TEST STATION IS OUT OF THE ROAD, USE A GREEN RISER PROTECTED BY BOLLARDS.

4
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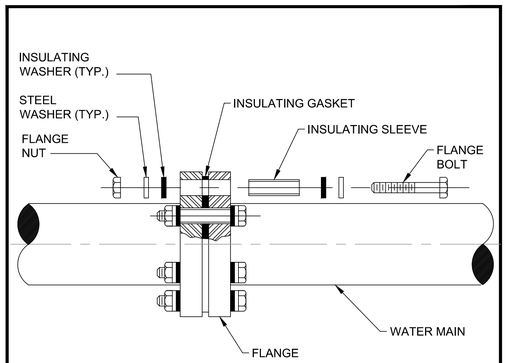
NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL ISOLATION FLANGE TEST STATION (WITH RISER)	DRAWING NO. 506 SHEET 1 OF 1 DATE 1/2021



NOTES:
1. AFTER ASSEMBLY, TEST TO VERIFY THAT ISOLATION IS EFFECTIVE. IF ISOLATION IS NOT EFFECTIVE, REPAIR AS NECESSARY AND RETEST. THIS PROCESS SHALL CONTINUE UNTIL ISOLATION IS VERIFIED AS EFFECTIVE.
2. AFTER VERIFYING EFFECTIVE ISOLATION, COAT THE ENTIRE FLANGE AND ALL EXPOSED METAL INCLUDING BOLTS, NUTS, AND WASHERS WITH FOUR COMPONENTS OF DENSO OR TRENTON WAX TAPE COATING SYSTEM. COATING SYSTEM SHALL EXTEND A MINIMUM OF 12 INCHES ON EITHER SIDE OF FLANGE.
3. ALL INSULATING FLANGES TO BE PROVIDED WITH TEST STATIONS.

5
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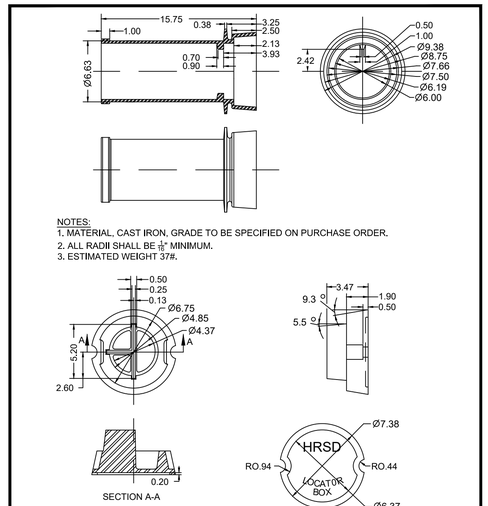
NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL ISOLATING FLANGE KIT	DRAWING NO. 509 SHEET 1 OF 1 DATE 1/2021



NOTES:
1. MATERIAL, CAST IRON, GRADE TO BE SPECIFIED ON PURCHASE ORDER.
2. ALL RADII SHALL BE 1/16" MINIMUM.
3. ESTIMATED WEIGHT 37#.

NOTES:
1. ALL INTERNAL EDGES SHALL HAVE A 1/16" RADIUS.
2. ALL EXTERNAL RADII 1/16" TO 1/8" AS NEEDED FOR CASTING RELIEF.
3. MATERIAL, CAST IRON, GRADE TO BE SPECIFIED ON PURCHASE ORDER.
4. ESTIMATED WEIGHT 12#.
5. RISER TO BE FILLED WITH PEA GRAVEL.
6. SEE MASTER SPEC SECTION 01340 FOR AMERICAN IRON AND STEEL REQUIREMENT.

6
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NOT TO SCALE

HRSD	STANDARD DESIGN DETAIL TRACER WIRE LOCATOR BOX	DRAWING NO. 253 SHEET 1 OF 1 DATE 1/2021

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

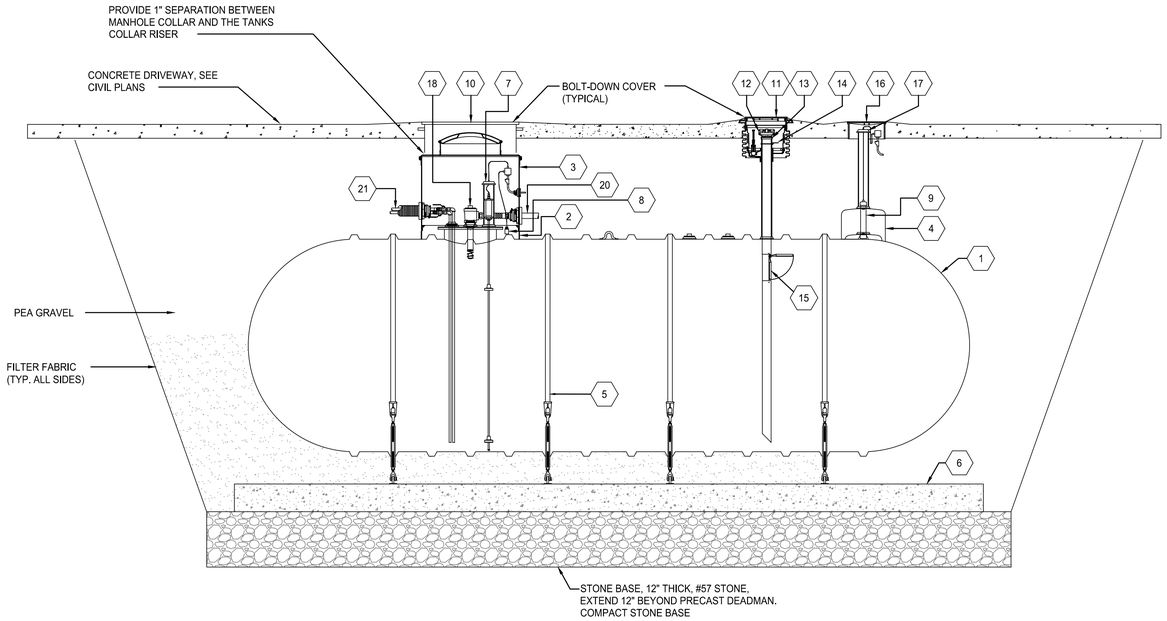
HRSD CIVIL SITE STANDARD DETAILS 5

0 1" 2"

FILENAME C9034.DWG
SCALE AS NOTED

DWG NO. **C9034**

10/3/2021 9:42 AM



UNDERGROUND FUEL TANK INSTALLATION DETAIL

PARTS LIST

NO.	DESCRIPTION
1	DOUBLE WALL FIBERGLASS STORAGE TANK (1,000 GALLONS)
2	42" FIBERGLASS ATTACHED COLLAR
3	42" WATERTIGHT FIBERGLASS ATTACHED COLLAR RISER
4	INTERSTITIAL FUEL LEAK MONITORING SYSTEM
5	FIBERGLASS HOLD DOWN STRAP W/ TURNBUCKLE ASSEMBLY
6	PRECAST CONCRETE ANCHOR BY TANK MANUFACTURER
7	LEVEL PROBE
8	NON-DESCRIMINATING TYPE LEAK SENSOR
9	DRY INTERSTITIAL DISCRIMINATING TYPE LEAK SENSOR
10	LARGE ROUND MANHOLE W/H20 RATED BOLT-DOWN COVER
11	5-GAL SPILL/FILL MANHOLE W/H20 RATED BOLT-DOWN COVER
12	FILL CAP
13	FILL ADAPTER
14	PRODUCT LABEL MARKER
15	OVERFILL PREVENTION VALVE
16	MONITORING MANHOLE W/H20 RATED BOLT-DOWN COVER
17	4" SENSOR CAP
18	EXTRACTOR ASSEMBLY
19	NOT USED
20	SINGLE WALL FIBERGLASS VENT PIPING
21	DOUBLE WALL FLEXIBLE FUEL SUPPLY/RETURN PIPING

UNDERGROUND FUEL TANK STANDARD

THE CONTRACTOR INSTALLING THE TANK AND ACCESSORIES, FUEL MONITORING SYSTEM AND PIPING SHALL BE CERTIFIED BY EACH MANUFACTURER TO INSTALL THE EQUIPMENT. THE INSTALLED SYSTEM

AGAINST DEFECTIVE MATERIALS, DESIGNS AND WORKMANSHIP. THE WARRANTY SHALL BE PROVIDED TO HRSD. THE TANK AND ALL ASSOCIATED EQUIPMENT SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST NATIONAL, STATE AND LOCAL CODES AND MANUFACTURERS AND PARTS SHALL BE WARRANTED FOR A PERIOD OF FIVE YEARS FROM DATE OF FINAL ACCEPTANCE REQUIREMENTS.

FUEL TANK

1. 1,000 GALLON FIBERGLASS DOUBLE WALL (DRY TYPE) UNDERGROUND STORAGE FUEL TANK WITH A 30-YEAR WARRANTY AS MANUFACTURED BY XERXES CORPORATION.
2. NPT FITTINGS SHALL BE FURNISHED FOR THE INTERSTITIAL LEAK SENSOR, LEVEL PROBE AND MANWAY LEAK SENSOR TO ALLOW CONDUIT AND WIRING RUN TO THE TANK'S ATTACHED COLLAR RISER AND MONITORING MANWAY.
3. TANK SHALL BE BURIED A MINIMUM OF 48" FROM TOP OF DRIVEWAY TO TOP OF TANK.
4. BACKFILL SHALL BE PEA GRAVEL, SIZE AS REQUIRED BY THE TANK MANUFACTURER. PEA GRAVEL SHALL BE WRAPPED WITH FILTER FABRIC AS SHOWN ON THE TANK INSTALLATION DETAIL.
5. A FIBERGLASS 42" ATTACHED COLLAR AND COLLAR RISER SHALL BE PROVIDED AROUND THE MANWAY TO BRING IT UP TO FINISH GRADE. A 1" SEPARATION SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE MANWAY AND TOP OF COLLAR RISER.
6. THE COLLAR RISER SHALL BE PROVIDED WITH A FLAT TOP AND A 30" OVAL WATERTIGHT COVER.
7. THE FIBERGLASS 42" ATTACHED COLLAR, COLLAR RISER AND COVER SHALL BE WATERTIGHT. THE FIBERGLASS COLLAR SYSTEM AND COVER SHALL BE INSPECTED AND TESTED.
8. NPT FITTINGS SHALL BE FURNISHED ON TOP OF THE TANK AND ATTACHED COLLAR RISER FOR SPILL/FILL BOX, EXTRACTOR ASSEMBLY, LEVEL PROBE, LEAK SENSOR, SUPPLY/RETURN FUEL LINES VENT PIPING AND SPARE.
9. A PRECAST CONCRETE ANCHOR PAD SHALL BE PROVIDED WITH THE TANK, SIZED AND FURNISHED BY THE TANK MANUFACTURER.
10. FIBERGLASS HOLD DOWN STRAPS WITH GALVANIZED TURN BUCKLES SHALL BE FURNISHED WITH THE CONCRETE ANCHOR PAD BY THE TANK MANUFACTURER.

PARTS AS MANUFACTURED BY OHIO PATTERN WORKS (OPW)

1. COMPOSITE BOLT-DOWN MANHOLE COVERS, 19" AND 44", H20 RATING, OPW CONQUISTADOR SERIES.
2. ADAPTORS AND CAPS.
3. OVERFILL PREVENTION VALVE.
4. 5-GALLON THREAD-ON SPILL CONTAINMENT MANHOLE WITH SPILL DRAIN.
5. TRANSITION ADAPTORS FROM UNDERGROUND PIPING TO ABOVE GROUND.
6. SUMP OR MANHOLE PENETRATION FITTINGS FOR CONDUIT, PIPING, ETC.
7. FLEXIBLE FUEL PIPING AND FITTINGS.
8. TRANSITION SUMP ASSEMBLY.

VEEDER-ROOT FUEL MONITORING SYSTEM

1. FUEL ALARM/MONITORING SYSTEM SHALL BE AS VEEDER-ROOT #TLS 300C CONFIGURABLE CONSOLE WITH INTEGRAL PRINTER, OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH.
2. SECONDARY CONTAINMENT PIPE LEAK SENSOR IN TRANSITION SUMP PIT AND FIBERGLASS ATTACHED COLLAR SYSTEM.
3. MAG PLUS INTAKE PROBE AMD MAG PROBE INSTALLATION KITS FOR INVENTORY AND STATIC TESTING.
4. INTERSTITIAL SENSOR FOR FIBERGLASS TANKS.

FUEL PIPING

1. UNDERGROUND FUEL PIPING SHALL BE 1/2" OR 3/4" DOUBLE WALL FLEXIBLE FUEL PIPING FLEXWORKS AS MANUFACTURED BY OPW. UNDERGROUND PIPING SHALL BE INSTALLED IN AXP SERIES ACCESS PIPE.
2. ABOVE GROUND FUEL PIPING SHALL BE 1/2" OR 3/4" BLACK IRON PIPING.
3. UNDERGROUND FUEL TANK VENT PIPING SHALL BE 2" SINGLE WALL FIBERGLASS PIPING AS MANUFACTURED BY OPW.
4. ABOVE GROUND FUEL TANK VENT PIPING SHALL BE 2" BLACK IRON PIPING. TERMINATE 12" ABOVE FINISH GRADE MINIMUM OR AS REQUIRED BY CODE.
5. PROVIDE EMERGENCY SHUT-OFF VALVE FOR ALL FUEL PIPING IN MANHOLES AND TRANSITION SUMP PIT.
6. UNDERGROUND FUEL PIPING SHALL BE INSTALLED AT DEPTHS AND SPACING AS RECOMMENDED BY THE MANUFACTURER. BACKFILL SHALL BE CLEAN MATERIAL AS REQUIRED BY THE MANUFACTURER.
7. ALL UNDERGROUND PIPING SHALL BE INSTALLED SUCH THAT THE PIPING SLOPES DOWN TO THE FUEL TANK.

1	
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HRSD

STANDARD DESIGN DETAIL

UNDERGROUND FUEL TANK

DRAWING NO. 402A
SHEET 1 OF 2
DATE 1/2021

10/3/2021 9:42 AM

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

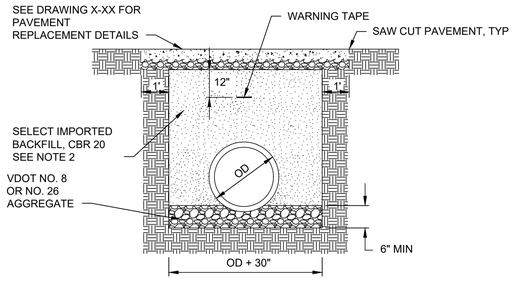
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

HRSD CIVIL SITE STANDARD DETAILS 6

0 1" 2"

FILENAME C9035.DWG
SCALE AS NOTED

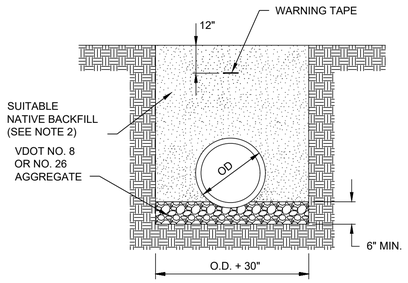
DWG NO. C9035



NOTES:
1. IN ADDITION TO LOCATIONS IN PAVEMENT, THE CONTRACTOR SHALL BED, BACKFILL AND COMPACT THE FORCE MAIN IN ACCORDANCE WITH THIS DETAIL FOR THE FOLLOWING SITUATIONS:
   a. TWO FEET BEYOND ALL CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS THAT THE PIPELINE CROSSES PERPENDICULAR UNDERNEATH.
   b. ANY TRENCH WIDTH SHOWN ABOVE THAT IS OUT OF PAVEMENT BUT UNDERNEATH EXISTING CURB AND GUTTER, SIDEWALK, OR DRIVEWAY.
   c. LOCATIONS OF FUTURE PAVEMENT INSTALLED AS PART OF PROJECT.
2. FOR COMPACTION DENSITY REQUIREMENTS, SEE SPECIFICATION SECTION XXXX.
3. TRENCH WIDTH SHOWN IS WIDTH FOR COMPUTING QUANTITIES OF SELECT BACKFILL AND BEDDING.

1 - PIPE BEDDING & BACKFILL WITHIN PAVEMENT

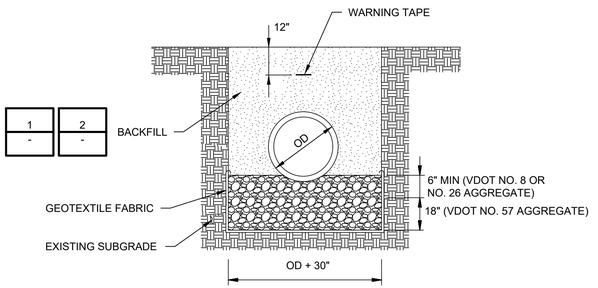
SCALE: NTS



NOTES:
1. TO BE USED AT ALL UNPAVED LOCATIONS.
2. IF NATIVE MATERIAL IS UNSUITABLE PER SPECIFICATION SECTION XXXX, CONTRACTOR SHALL USE SELECT IMPORTED BACKFILL AS DIRECTED IN SPECIFICATION SECTION XXXX.
3. FOR COMPACTION DENSITY REQUIREMENTS, SEE SPECIFICATION SECTION XXXX.
4. TRENCH WIDTH SHOWN IS WIDTH FOR COMPUTING QUANTITIES OF SELECT BACKFILL AND BEDDING.

2 - PIPE BEDDING & BACKFILL IN UNPAVED AREAS

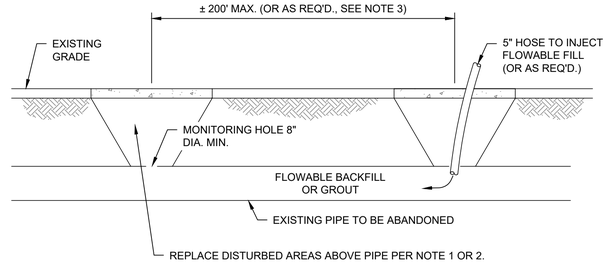
SCALE: NTS



NOTES:
1. TO BE USED AT UNDERCUT AREAS OR AS OTHERWISE DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN AN UNSUITABLE SUBGRADE IS ENCOUNTERED.
3. REFER TO SPECIFICATION SECTION XXXX FOR REQUIREMENTS.
4. TRENCH WIDTH SHOWN IS WIDTH FOR COMPUTING QUANTITIES OF UNDERCUT EXCAVATION AND BEDDING.

3 - PIPE BEDDING & BACKFILL (UNDERCUT AREAS)

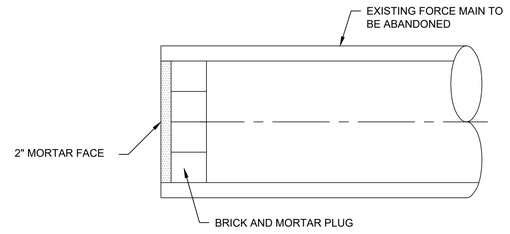
SCALE: NTS



NOTES:
1. NON-PAVED AREAS: USE ON-SITE MATERIAL AND RESTORE TO ORIGINAL CONDITION.
2. PAVED AREA: BACKFILL IN ACCORDANCE WITH SPECIFICATION SECTION XXX AND PROVIDE PAVEMENT REPLACEMENT IN ACCORDANCE WITH THE DETAILS ON SHEET X-XX.
3. ADHERE TO MAX SPACING FOR FILLING FORCEMAIN WITHIN ROAD, ROW OR RESIDENTIAL AREA. FOR FORCEMAIN WITHIN WETLANDS, CREEK AND LANDFILL LARGER SPACING BETWEEN FILL AND INJECTION POINTS MAY BE USED DEPENDING ON ACCESS.
4. REFER TO DRAWING X-XX FOR LOCATIONS AND LENGTHS OF PIPE TO BE ABANDONED WITH FLOWABLE FILL.

4 - FORCE MAIN ABANDONMENT GROUTING DETAIL

SCALE: NTS



5 - BRICK AND MORTAR PLUG

SCALE: NTS

HDR US-A
Ulliman Schutte – Alberici Joint Venture
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	10/2021	30% DESIGN SUBMITTAL

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WORK PACKAGE 2

HRSD CIVIL SITE STANDARD DETAILS 7

0 1" 2"

FILENAME C9036.DWG
SCALE AS NOTED

DWG NO. C9036

10/3/2021 9:43 AM

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GENERAL LANDSCAPING NOTES:

1. PLANTS SHALL BE INSTALLED BY A QUALIFIED LANDSCAPING CONTRACTOR HAVING A MINIMUM OF 10 YEARS OF EXPERIENCE INSTALLING COMMERCIAL/RIGHT-OF-WAY LANDSCAPING.
2. ALL EXISTING PLANTS REMOVED OR DAMAGED SHALL BE REPLACED IN KIND AND PLANTED IN ACCORDANCE WITH DETAIL 1, THIS SHEET. IF THE EXACT SPECIES IS NOT AVAILABLE, CONTRACTOR MAY SUBMIT A SIMILAR SPECIES FOR REVIEW AND APPROVAL BY THE CITY.
3. AT ANY TIME DURING CONSTRUCTION, IF A PLANT'S ROOT ZONE IS IMPACTED WITH HEAVY EQUIPMENT, CONSTRUCTION MATERIALS, OR EXCAVATION, OR ANY OTHER RESULTING TREE DAMAGE(S), THE TREE SHALL BE COMPLETELY REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CALL THE ENGINEER AND NEWPORT NEWS PARKS, RECREATION, AND TOURISM PLANNER TO DETERMINE THE PROPER TREE REPLACEMENT.
4. TREE PLANTING SHALL BE COMPLETED BETWEEN OCTOBER 1ST AND MAY 15TH PER ANNUM.
5. CITY LANDSCAPE PLANNER SHALL INSPECT AND APPROVE ALL PLANT MATERIAL PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE ONE WEEK'S NOTICE PRIOR TO INSTALLATION FOR INSPECTION OF PLANT MATERIALS. CONTRACTOR SHALL ALSO COORDINATE WITH THE CITY LANDSCAPE PLANNER TO BE ON SITE TO FIELD VERIFY LOCATIONS AND TO INSPECT NURSERY STOCK BEFORE INSTALLATION. CITY LANDSCAPE PLANNER SHALL ALSO PERFORM A FINAL INSPECTION AT THE END OF THE PROJECT.

   LANDSCAPE PLANNER: TBD PHONE NUMBER: (___) ___-____

6. THE LANDSCAPING CONTRACTOR SHALL PROVIDE A WRITTEN WATERING SCHEDULE FOR NEW PLANTINGS AND POINT OF CONTACT FOR LANDSCAPE FOLLOW UP.
7. REMOVE ALL ABOVE GROUND STAKING MATERIALS RESPONSIBLY OFF-SITE BETWEEN 6-9 MONTHS AFTER INSTALLATION OF THE TREE(S).
8. THE CONTRACTOR SHALL PROVIDE A ONE YEAR MINIMUM PLANT WARRANTY FOR ALL PLANTS REPLACED. THE WARRANTY SHALL INCLUDE, MONITORING THE PLANTS THROUGHOUT THE WARRANTY PERIOD, INSPECTING FOR OUTBREAKS OF DAMAGING PESTS, DISEASES, AND DROUGHT. RANDOM ACTS OF VANDALISM, LIGHTNING STRIKES, OR TRAFFIC ACCIDENTS WHICH RESULT IN PLANT DAMAGES WILL VOID THE CONTRACTOR'S OBLIGATION FOR REPLACEMENTS. IF TREES ARE INSTALLED DURING DORMANT MONTHS, TREES SHALL BE WARRANTED THROUGH A SUCCESSFUL SECOND SPRING SEASON EMERGENCE (MAY 15TH).
9. PLANTS THAT FAIL TO STABILIZE AND MAINTAIN AN UPRIGHT POSITION AFTER SIX MONTHS OF ACTIVE GROWING SEASON ARE DEEMED TO BE INSTALLED INCORRECTLY (USUALLY TOO DEEP) AND WILL NEED TO BE EITHER REPLACED OR RE-PLANTED CORRECTLY (IF POSSIBLE WITHOUT FURTHER DAMAGE OF THE PLANT). ANY PLANTS FAILING TO ESTABLISH WITHOUT PHYSICAL SUPPORT WILL NEED TO BE REPLACED AND WARRANTED FOR A TWO YEAR PERIOD UPON RE-PLANTING.

LANDSCAPING MATERIALS:

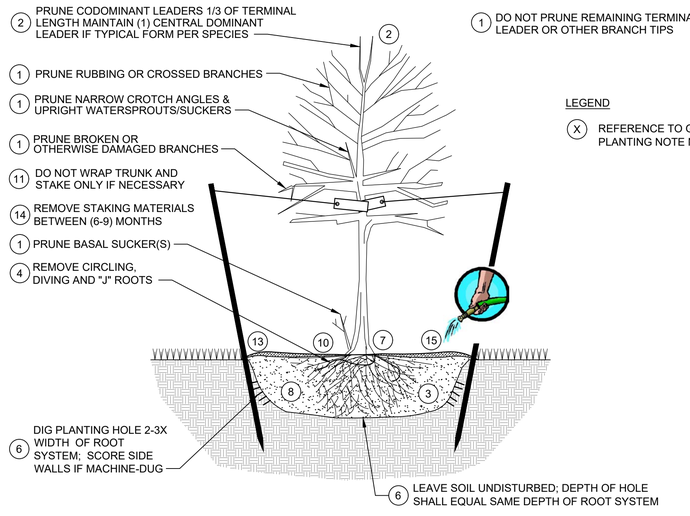
10. INSTALL 20 GALLON UPRIGHT ZIPPERED IRRIGATION BAGS FOR EACH TREE. CITY SHALL SUPPLY PRODUCT. CONTRACTOR SHALL INSTALL, REMOVE AND RETURN BAGS TO CITY AT THE END OF THE FIRST GROWING SEASON.
11. MULCHING FOR ALL TREE COLLARS SHALL CONSIST OF A 3-IN BASE OF DARK BROWN OR WALNUT COLORIZED DOUBLE SHREDDED HARDWOOD. THE SUBCONTRACTOR, THROUGH THE CONTRACTOR, SHALL PROVIDE WHEEL BARROW LOAD SAMPLE OF MULCH TO ONE OF THE BELOW NEWPORT NEWS, PARKS, RECREATION, AND TOURISM LANDSCAPING PLANNERS FOR APPROVAL. THE CONTRACTOR SHALL ALSO SPREAD MULCH TO 2-3" DEPTH AT A PRE-DETEMINED AREA ON THE PROJECT SITE FOR PRE-APPROVAL OF MULCH PRODUCT(S) BY THE CITY LANDSCAPE PLANNER.

    LANDSCAPE PLANNER: TBD PHONE NUMBER: (___) ___-____

12. ALL TURF AREAS DISTURBED SHALL BE GRADED FOR POSITIVE DRAINAGE, AUGMENTING LOW AREAS, WITH CLEAN SIFTED TOPSOIL AS NECESSARY TO ESTABLISH POSITIVE DRAINAGE, AND OVERSEEDED WITH GRASS SEED AND STARTER FERTILIZER AT LABEL RATES FOR NEW TURF ESTABLISHMENT. NO GRAVEL OR ROCK PRODUCTS SHALL RESIDE/EXIST ON TOP OF FINAL SOIL GRADE AS REMAINING ROCKS IN TURF AREAS BECOME HAZARDOUS PROJECTILES DURING SUBSEQUENT MOWING/EDGING TURF OPERATION.
13. SEEDING, FERTILIZER, AND LIME SHALL BE APPLIED IN ACCORDANCE WITH THE PERMANENT AND TEMPORARY SEEDING SCHEDULE AND SPECIFICATIONS.
14. PROVIDE AND INSTALL FIVE (5) BAYER CORETECT TREE AND SHRUB TABLETS PER TREE, ACCORDING TO MANUFACTURER'S LABEL AND DIRECTIONS.
15. PROVIDE STAKING MATERIALS AS NEEDED TO MAINTAIN TREES IN UPRIGHT VERTICAL DIRECTION. SEE TREE PLANTING DETAIL 1, THIS SHEET. IN GENERAL, CRAPE MYRTLE TREES WILL NOT BE REQUIRED TO STAKE, UNLESS THE TREE(S) FAIL TO MAINTAIN UPRIGHT, VERTICAL POSITIONING.
16. ALL SINGLE STEMMED DECIDUOUS TREE SHOULD BE STAKED AS FOLLOWS:
    A. < 2.5" IN CALIPER SHALL HAVE TWO TREE STAKES INSTALLED, 180 DEGREES RADIALLY SPACED AND PERPENDICULAR TO TRAVEL WAYS.
    B. > 2.5" IN CALIPER OR HEAVY CROWNS (I.E. LACEBARK ELMS) SHALL HAVE THREE STAKES, 120 DEGREES RADIALLY SPACED.
    C. CONTRACTOR SHALL MAINTAIN TREES IN UPRIGHT VERTICAL POSITIONS DURING THE WARRANTY PERIOD. IF TREE FAILS TO REMAIN UPRIGHT, CONTRACTOR SHALL REPLACE TREE AT NO ADDITIONAL COSTS TO THE CITY.
17. EMPTY PLANTING PIT SHALL BE BROUGHT UP TO POSITIVE FINISHED GRADE WITH SUITABLE SOIL AND RESEEDED WITH PREDOMINATE TURF-TYPE GRASS SEED.

GENERAL PLANTING NOTES FOR TREES:

1. WHILE LAYING DOWN ON SIDE, INSPECT THE TREE CROWN, AND MAKE CLEAN PRUNING CUTS AS NECESSARY TO REMOVE CO-DOMINANT LEADERS, DEAD OR BROKEN BRANCHES, AND BASAL SUCKERS. ALL ABOVE GROUND PRUNING SHALL BE MADE JUST OUTSIDE THE BRANCH COLLAR AND ALL BASAL SUCKERS BACK TO THE POINT OF ORIGIN, EVEN IF FROM THE ROOT SYSTEM.
2. MOST SHADE TREE SPECIES SHALL HAVE A STRAIGHT TRUNK WITH A CENTRAL SINGLE DOMINANT LEADER. TREES HAVING CO-DOMINATE LEADERS WITHIN THE LOWER 2/3'S OF THE CROWN SHALL BE REJECTED. REDUCTION PRUNING OF CO-DOMINATE LEADERS WILL BE LIMITED TO LIMBS LESS THAN 1.5" INCHES IN DIAMETER.
3. COMPLETELY REMOVE ALL "PACKAGING" MATERIALS TO INCLUDE BUT NOT LIMITED TO: WIRE BASKET, BURLAP, NAILS, CONTAINER, TWINE, NYLON WEBBING OR OTHER STRAPS, AND BOTTOM SOIL PLUG IF NOT INTACT WITH ROOT SYSTEM.
4. INSPECT ROOT ZONE FOR POTENTIAL STEM GIRDLING ROOTS (SGRS). DEFECTIVE ROOTS ("J" ROOTS, DIVING, OR CIRCLING) ROOTS SHALL BE PRUNED BACK TO LIVE TISSUE BEFORE/AHEAD OF THE ROOT DEFECT. IF 30% OR MORE OF THE ROOT SYSTEM IS DEFECTIVE (AS DETERMINED BY CITY AGENT), THE ENTIRE TREE SHALL BE REJECTED.
5. DISCARD ALL TRASH AND DEBRIS GENERATED DURING OPERATIONS OFF-SITE AT AN APPROPRIATE WASTE FACILITY. NO WASTE MATERIALS SHALL BE BURIED IN PLANTING HOLES/BEDS OR OTHERWISE LEFT ON-SITE.
6. PREFERABLY HAND-DIG THE PLANTING HOLE ONLY AS DEEP AS THE ROOT SYSTEM, AND 2-3 TIMES WIDER. THE PLANTING HOLE SHALL RESEMBLE A SHALLOW SAUCER WITH UNDISTURBED SOIL AT THE BOTTOM OF THE HOLE. SCORE SIDEWALLS OF PLANTING BASIN, ONLY IF PITS ARE MACHINE-DUG (AUGER, BACKHOE).
7. SOIL COVERING A ROOT STOCK GRAFT OR ON TOP OF THE ROOTBALL SHALL BE REMOVED SO THAT THE TRUNK FLARE AND THE TOP OF THE ROOT SYSTEM ARE CLEARLY VISIBLE. SET THE TREE AT 1-2" HIGHER THAN FINAL GRADE, PARTICULARLY IN SLOWLY DRAINING SOILS.
8. BEGIN BACKFILLING PLANTING HOLE USING EXISTING SOIL WITH NO SOIL AMENDMENTS (UNLESS SPECIFIED). BACKFILL HOLE HALF-WAY, TAMP SOIL AROUND ROOT ZONE, APPLY SLOW-RELEASE FERTILIZER OR OTHER PLANT NUTRIENT PRODUCTS AS SPECIFIED. CONTINUE BACKFILLING TO THE TOP OF PLANTING PIT, ENSURING ALL ROOTS ARE COVERED ADEQUATELY WITH SOIL AND THAT NO EXCESS SOIL ACCUMULATES AGAINST THE TRUNK OR ON TOP OF ROOT ZONE. EXCESS SOIL SHALL BE REMOVED FROM SITE IF IT CAN NOT BE EVENLY GRADED INTO ADJACENT LOW AREAS WITHOUT CAUSING A SURPLUS GRADE CHANGE.
9. AFTER BACKFILLING, ADD WATER SLOWLY AND PLENTIFULLY TO CREATE A SLURRY THROUGHOUT. ALLOW THE WATER TO SATURATE THE SOIL, ELIMINATING AIR POCKETS, RE-HYDRATING AND INFILTRATING THE SOIL. ALLOW HOLE TO DRAIN AND INSPECT THE TREE FOR UPRIGHT POSITION AND POSITIVE GRADE LEVEL. ADD SOIL TO FILL ANY LOOSE POCKETS/HOLES AND/OR LIFT TREE & ROOT SYSTEM AS NEEDED FROM SETTLING. BASAL TRUNK FLARE SHALL BE CLEARLY EVIDENT AT A POSITIVE GRADE LEVEL AT ALL TIMES.
10. APPLY 2-3" LAYER OF MULCH AS SPECIFIED, BEING CAREFUL TO KEEP MULCH AWAY FROM THE TRUNK BASE. PROVIDE SAMPLE OF MULCH AS SPECIFIED IN MULCH GUIDELINES.
11. STAKE TREES AS OUTLINED ON G-07, LANDSCAPE MATERIALS. IF NECESSARY, USE WOODEN STAKES, WIRE AND WEBBED TREE STRAPS WITH GROMMETS (NO HOSE) OR OTHER PRE-APPROVED GUYING MATERIALS.
12. IN BED AREAS, EXISTING SOIL AND ANY SOIL AMENDMENTS (AS SPECIFIED) SHALL BE ROTOTILLED A MINIMUM 12" DEPTH THROUGHOUT ENTIRE BED AREA TO PROMOTE A FRIABLE WORKING SOIL.THE BED AREA SHALL BE RAKED AND GRADED INTO A SMOOTH, FINAL GRADE THAT DRAINS POSITIVELY, REMOVING ALL >2" DEBRIS.
13. GENERALLY, NO WATER WELLS/SAUCERS (EXCEPT ON DOWNWARD SIDE OF SLOPED PITS) SHALL BE CONSTRUCTED WITH SUBSOIL. INSTALL IRRIGATION BAGS AS SPECIFIED. WATER TREES ROUTINELY, FILLING IRRIGATION BAGS ONCE EVERY 7-10 DAY PERIOD WITHOUT 1" OF NATURAL RAINFALL, THROUGHOUT THE WARRANTY. REMOVE IRRIGATION BAGS AT THE END OF THE FIRST FULL GROWING SEASON (IN OCTOBER) AND RETURN BAGS IF PROVIDED BY CITY.
14. SHOULD TREE STABILIZATION METHODS BE USED, ALL ABOVE-GROUND MATERIALS SHALL BE REMOVED & DISCARDED OFF-SITE AFTER FIRST FULL GROWING SEASON OR BEFORE NINE (9) MONTHS. PLANTS SHALL STAND PLUMB AND BE MAINTAINED UPRIGHT AND AT A POSITIVE GRADE THROUGHOUT THE WARRANTY PERIOD.
15. ANY WATER WELLS THAT MAY HAVE BEEN CONSTRUCTED SHALL BE TEMPORARY AND SHALL BE REMOVED AT TIME OF STAKE REMOVAL OR BEFORE NINE MONTHS AND RESULTING SOIL RESPONSIBLY DISCARDED OFF-SITE. TREE COLLARS SHALL BE WEED-FREE AND RE-MULCHED (AS ORIGINALLY SPECIFIED) AT THE END OF THE WARRANTY PERIOD.



1 - TREE PLANTING - BALLED AND BURLAPPED
SCALE: NTS

PERMANENT SEEDING PLANT MIXTURES	
MINIMUM CARE LAWN - COMMERCIAL OR RESIDENTIAL:	TOTAL LBS/ACRE
SOUTHERN BELLE PERENNIAL RYE OR TALL FESCUE***	175-200 LBS.
OR	
COMMON BERMUDA GRASS**	75 LBS.
GENERAL SLOPE 3:1 OR LESS:	TOTAL LBS/ACRE
SOUTHERN BELLE PERENNIAL RYE OR TALL FESCUE (DEPENDING ON THE TIME OF YEAR)	128 LBS.
RED TOP GRASS	2 LBS.
SEASONAL NURSE CROP*	20 LBS.
	150 LBS.

* USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:
FEBRUARY, MARCH THROUGH APRIL.....ANNUAL RYE
MAY 1ST THROUGH AUGUST.....FOXTAIL MILLET
SEPTEMBER, OCTOBER THROUGH NOVEMBER 15TH.....ANNUAL RYE
NOVEMBER 16TH THROUGH JANUARY.....WINTER RYE

** MAY THROUGH AUGUST 10th: USE UNHULLED SEED
ALL OTHER SEEDING PERIODS: USE HULLED SEED

WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS/ACRE IN MIXES.

*** SEPTEMBER THROUGH OCTOBER AND MARCH THROUGH APRIL:
USE SOUTHERN BELLE TALL FESCUE SEED.
NOVEMBER THROUGH FEBRUARY: USE SOUTHERN BELLE PERENNIAL RYE GRASS SEED

LIMING: 2 TONS/ACRE PULVERIZED OR GROUND AGRICULTURAL GRADE LIMESTONE (90 LBS/1000 SQ. FT.)

FERTILIZER: SHALL BE APPLIED AS 600 LBS/ACRE OF 15-30-15 (23 LBS PER 1000 SQ. FT.) OR EQUIVALENT NUTRIENTS. IF SOUTHERN BELLE SEED IS USED, USE SOUTHERN BELLE SEED STARTER (12-25-12) AT LABEL RATES.

MULCHING: ALL PERMANENT SEEDING SHALL BE MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION AND SHALL BE MULCHED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

TEMPORARY SEEDING PLANT MATERIALS		
PLANTING DATES	SPECIES	RATE (LBS/ACRE)
SEPTEMBER 1 - FEBRUARY 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE)	50 - 100
FEBRUARY 16 - APRIL 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60 - 100
MAY 1 - AUGUST 31	GERMAN MILLET (SETARIA ITALICA)	50

LIMING: AN EVALUATION SHOULD BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR TEMPORARY SEEDING:

pH < 4.2	3 TONS PER ACRE
pH 4.2 - 5.2	2 TONS PER ACRE
pH 5.2 - 6.0	1 TON PER ACRE

FERTILIZER: SHALL BE APPLIED AS 600 LBS/ACRE OF 10-20-10 (14 LBS PER 1000 SQ. FT.) OR EQUIVALENT NUTRIENTS. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF SOIL.

MULCHING: SEEDLINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. TEMPORARY SEEDING MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH, TO BE DETERMINED BY CITY INSPECTOR.

2 - PERMANENT AND TEMPORARY SEEDING SCHEDULE
SCALE: NTS

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
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CITY OF NEWPORT NEWS
LANDSCAPING NOTES AND DETAILS

0 1" 2"
FILENAME C9040.DWG
SCALE AS NOTED
DWG NO. **C9040**

10/3/2021 9:43 AM

City of Newport News Stormwater Site Plan Worksheet

(Must be on thePlans)
Please note this worksheet is provided for informational purposes and is not intended to exempt the developer from reviewing and complying with the latest federal, state, and local regulations.

OVERALL INFORMATION

Site Plan Title: : HRSD James River SWIFT Facility, James River Treatment Plant Advanced Nutrient Reduction Improvements and Managed Aquifer Recharge Well Ins
Plan Address: : 100 City Farm Road, Newport News, VA 23602 (Riverview Farm Park P Subdivision Name: N/A
Type of Development: New Development ☐ Redevelopment ☑ Right of Way ☐
HUC: 02080206 Latitude/ Longitude in Decimal Degrees: 37.085415, -76.534159
Discharges to (check all that apply): MS4 ☑ Wetlands ☑ River/Ditch/Stream ☑
Name of Receiving Waters: James River
Parcel Tax ID: 101 City Farm – 190000114; 201 City Fa GPIN No (If Available):
Owner of Property: 100 City Farm Road – City of Newport News; 101 City Farm Road – HRSD; 201 City Farm Road – HRSD.
Owner's Address: HRSD – 1434 Air Rail Avenue, Virginia Beach, VA 23455

SITE BREAKDOWN

Total Area of Disturbance: 40.11 acres 1747191.60 sq. ft.
List the land uses within the limits of disturbance only

	Pre Development			Post Development		
	Area (sq.ft.)	Area (acres)	Area (%)	Area (sq.ft.)	Area (acres)	Area (%)
Pervious - Forest/Open Space:	274863.60	6.31	15.73	218235.60	5.01	12.49
Pervious - Managed Turf:	1224471.60	28.11	70.08	992732.40	22.79	56.82
Pervious Surface Subtotal:	1499335.20	34.42	85.81	1210968.00	27.8	69.31
Impervious Surface Total:	247856.40	5.69	14.18	536223.60	12.31	30.69
TOTAL AREA:	1747191.60	40.11	100	1747191.60	40.11	100

Review and Check each to indicate acknowledgement:

- ☐ For developments using technical criteria IIC under the "grandfathering" clause, supporting documentation and calculations must be submitted with the initial site plan submission. A description of why the site qualifies should be included in the site's stormwater narrative on the plans.
- ☑ Development cannot cause flooding to adjacent or downstream properties. Site development must take into account current drainage patterns and the capacity of each individual site outfall discharge point, including those that are City or VDOT maintained. When evaluating discharge at an outfall point, all flow to that point must be included, such as flow from outside the disturbed area and off-site.
- ☑ The City of Newport News' General Notes, Erosion & Sediment Control General Notes, and the MS-19 Minimum Standards must be provided on all site plans. Latest editions are available on the Newport News Site & Subdivision website.
- ☑ Necessary construction permits must be obtained prior to any land disturbing activity. Failure to obtain these permits may result in a "STOP WORK" order being issued. As part of the Construction Permit process, a Stormwater Pollution Prevention Plan (if required) must be completed and submitted to the City's Engineering Department at the preconstruction meeting. This document must remain on site and be updated routinely to accurately reflect the up to date work on the site.
- ☑ Construction Record Drawings will be required as per the City's Construction Record Drawing administrative policy prior to project final acceptance and permit termination.

SITE PLAN AND WATER QUALITY REQUIREMENTS

The following items are required based on the amount of land disturbance, presence of CBPA, and type of plan. Water Quality calculations must be completed using the Virginia Runoff Reduction Method (VRRM) spreadsheet and a copy of entire spreadsheet provided in the calculations. Check each item provided:

Project Land Disturbance Area (**LDA**)	In a **CBPA**?	Part of a Common Plan of Development	**E&SC Plan** *9VAC25-840 Erosion & Sediment Control Plan*	**Water Quantity** *9VAC25-870-66*	**Water Quality** *9VAC25-870-63 select from Criteria below*	Full **SWMP** *9VAC25-870-55 Stormwater Management Plan*
☐ 2,500sf ≤ LDA ≤ 10,000sf	☐ No	☐ No	☐			
		☐ Yes	☐	☐	☐1 ☐3 ☐4 ☐5	☐
	☐ Yes	☐ No	☐	☐	☐1 ☐3 ☐4 ☐5	
		☐ Yes	☐	☐	☐1 ☐3 ☐4 ☐5	☐
☐ 10,000sf ≤ LDA ≤ 1 acre	☐ No	☐ No	☐	☐		
		☐ Yes	☐	☐	☐1 ☐3 ☐4 ☐5	☐
	☐ Yes	☐ No	☐	☐	☐1 ☐3 ☐4 ☐5	☐
		☐ Yes	☐	☐	☐1 ☐3 ☐4 ☐5	☐
☑ LDA > 1 acre	☐ No	☐ No	☐	☐	☐1 ☐2 ☐4 ☐5	☐
		☐ Yes	☐	☐	☐1 ☐2 ☐4 ☐5	☐
	☑ Yes	☑ No	☑	☐	☐1 ☐2 ☐4 ☐5	☐
		☐ Yes	☑	☑	☐1 ☐2 ☑4 ☐5	☑

Water Quality Criteria:
1 – New Development • • • • • • *Total Phosphorus (TP) load cannot exceed 0.41 lbs/ac/yr*
2 – Redevelopment – NO net increase in impervious cover, LDA ≥ 1 acre • • • • • • *Total Phosphorus must be reduced 20% below pre-dev phosphorus load*
3 – Redevelopment – NO net increase in impervious cover, LDA < 1 acre • • • • • • *Total Phosphorus must be reduced 10% below pre-dev phosphorus load*
4 – Redevelopment – NET increase in impervious cover • • • • • • *New Increased Imp. area–Criteria 1 plus Remaining area-Criteria 2 or 3 (based on total LDA)*
5 – Redevelopment – LINEAR, NET increase in impervious cover • • • • • • *Total Phosphorus must be reduced 20% below pre-developed phosphorus load[1]*

Phosphorus Removal Required for Project: 16.62 lbs/yr
Total Phosphorus Removal Achieved: 13.22 lbs/yr
Phosphorus Removal Achieved On-site: 13.22 lbs/yr **Phosphorus Removal Acquired Off-site:** lbs/yr **Excess:** 3.4 lbs/yr
Credits Purchased?: ☑ Yes *(Provide proof of credit purchase)* Name of Bank: TBD
☐ No

1 – Linear UTILITY projects can be considered maintenance when the site is returned to predeveloped conditions after completion and no change occurs in impervious area and runoff characteristics. See DEQ Guidance Memo No. 15-2003 for requirements and qualifications.

STORMWATER MANAGEMENT FACILITIES (SWMF)

The BMP Clearinghouse must be used for the design and designation of all Storm Water Management Facilities, for both water quality and quantity. Label and number each SWMF on the site plan. Provide calculations and supporting documentation for all facilities.

Stormwater Design Criteria: IIB Clearinghouse ☑ IIB Previously Permitted ☐ -Project & Date:
IIC Grandfathered ☐ IIC Previously Permitted ☐ -Project & Date:
Is Low Impact Development Implemented? Yes ☑ No ☐

SWMF INFORMATION

Include ALL facilities for WATER QUALITY and QUANTITY. List each one separately.

SWMF No. *(Label on plans)*	Type of SWMF and Level	DEQ Spec. No.	Eff. (%) RR	Eff. (%) TP	Pretreat Req'd (Y/N) *Include table below*	TP Removal (lbs/yr)	TN Removal (lbs/yr)	Water QUALITY Treatment Volume[1] (cubic ft) Required	Provided	Water QUANTITY Volume[2] (cubic ft) Required	Provided
3-1	etention Lev	9	80	50	N	1.43	10.47	3172	3172	4300	4338.8
3-2	etention Lev	9	80	50	N	2.42	17.71	5360	5360	5864	6234.3
5-1	etention Lev	9	80	50	N	1.69	12.34	3702	3702	N/A	N/A
5-2	etention Lev	9	80	50	N	1.81	13.24	3848	3848	N/A	N/A
5-3	etention Lev	9	80	50	N	4.41	32.27	9623	9623	N/A	N/A
4-1	ıd Detention	15	15	15	N	1.45	8.80	0526.05	10880	23606	32904

Area	Pre Development Pervious Area (sq.ft.)	Pre Development Imp. Area (sq.ft.)	Post Development Pervious Area (sq.ft.)	Post Development Imp. Area (sq.ft.)	Total CDA (sq ft)
Site	47218	1732	25898	26052	48950
All	206474.	29621	99752	119354	219106
Site	69807	6244	29478	47573	76051
All	206474.	29621	99752	119354	219106
Site	48885	1063	16323	33625	49948
All	595901	55321	426888	239580	966468
Site	45325	30792	48527	27650	76177
All	595901	55321	426888	239580	739580
Site	1019761	14240	91524	24692	116216
All	595901	55321	426888	239580	739580
Site	176823	58836	1746751	609464	735655
All	498326	24829	480031	48351	528382

1-WATER QUALITY VOLUME: Required treatment volume from design calculations/VRRM spreadsheet. Provided treatment volume is actual volume achieved.
2-WATER QUANTITY VOLUME: Required is the volume required to be detained for the system design storm (usually 10 yr storm). Provided volume is actual storage volume achieved above treatment volume.

Review and Check each to indicate acknowledgement:

- ☑ The BMP Clearinghouse criteria must be used for the design, construction, maintenance, and operation of all SWMF's. SWMF layouts and details should be provided and accompany any installation and long term maintenance requirements within the plan set.
- ☑ For wet and detention ponds,1 foot of freeboard is required if there is an emergency spillway and 2 feet of freeboard is required if there is no emergency spillway.
- ☑ A SWMF Maintenance Agreement must be completed and recorded prior to site plan approval.
- ☑ For each facility provide a maintenance plan, disposal information, owner contact information, and maintenance funding source information on construction record plans.
- ☑ Access is provided for SWMF maintenance.
- ☑ Soil borings must be provided for all facilities which will require separation from the ground water table and all infiltration facilities prior to site plan approval.
- ☑ Provide protection for SWMF to ensure proposed location remains undisturbed during construction and sediment from unstabilized site cannot reach facility.
- ☑ Minimum slope required on all underdrains is 0.5%.
- ☑ All stormwater systems must be analyzed for the 100-year storm to verify no adverse rise in the HGL upstream, downstream, and on the project site.

Pretreatment Information

Provide information for applicable facilities above. Show and label pretreatment on plans. Requirements from BMP Clearinghouse Specifications.

SWMF No. *(above)*	# of Pre-treat Req	Type of Pretreatment	Treatment Vol Req	Treatment Vol Act	Label on plans (Y/N)	CDA (sq. ft.)
3-1; 3-2	2	1 Forebay for 3-1	475.7	605	Y	48950
		2 Forebay for 3-2	804.1	1203	Y	7605
		3				
5-1; 5-2; 5-3	3	1 Forebay for 5-1	555.2	683.7	Y	49948
		2 Forebay for 5-2	577.2	762.6	Y	76177
		3 Forebay fot 5-3	1443.4	614.4	Y	16216
4-1	1	1 Forebay for 4-1	1578.5	4101.7	Y	35655
		2				
		3				

WATER QUANTITY - Design must satisfy one of the following:

☑ **Channel Protection (*9VAC25-870-66.B*) AND Flood Protection (*9VAC25-870-66.C*)**
☐ **Sheet Flow (*9VAC25-870-66.D*)**

WATER QUANTITY - CHANNEL PROTECTION *Refer to 9VAC25-870-66.B for instructions*

(Please provide documentation on the Plans and within the Calculations. Provide for each discharge point leaving site.)

Discharge Point from Site (Show on Plans)**	Discharge Channel ☐	OPTION A: V_2	OPTION A: V_{ALLOW}*	OPTION A: $DEPTH_{10YR}$	OPTION A: $DEPTH_{CHNL}$	OPTION B: Q_{POST}	RV_{POST}	IF	Q_{PRE}	RV_{PRE}	Q_{POST} x RV_{POST}		IF x Q_{PRE} x RV_{PRE}	OPTION C *RESTORED*: *Development functioning consistent with restored system*
POI 1	☐ Manmade ☑ Natural	(see Not	(see Not	(see Not	(see Not							≤		☐ Yes
POI 2	☐ Manmade ☐ Natural	1.2	2.5	2.1	3							≤		☐ Yes
POI 3	☐ Manmade ☑ Natural					3.91	0.23	0.8	7.41	0.47	0.90	≤	2.78	☐ Yes
POI 4	☐ Manmade ☑ Natural					10.86	0.21	0.8	14.51	0.92	2.28	≤	10.68	☐ Yes

**Allowable velocity from VESCH Table 5-14, Table 5-22, VDOT PC-1, or V_{ALLOW} = 15fps for concrete pipes and gutters*

Limits of Analysis: Required **For OPTION A above only** analyze the receiving channel at critical analysis points TO a point where: *(Provide calculations for each analysis point)* ***Use A or B***

☑ A. The site's contributing drainage area is less than or equal to 1% of the total watershed, **or**

Discharge Point (from above): POI 1
CDA to Discharge Pt: 257 acres 1% Total Watershed Area: 2.57 acres

Analysis Point	CDA	V_2	V_{ALLOW}	$DEPTH_{POST-10}$	$DEPTH_{CHNL}$
POI 1	257	A (see Note	A (see Note	A (see Note	A (see Note

Discharge Point (from above): POI2
CDA to Discharge Pt: 3.74 acres 1% Total Watershed Area: 0.0374 acres

Analysis Point	CDA	V_2	V_{ALLOW}	$DEPTH_{POST-10}$	$DEPTH_{CHNL}$
POI 2	3.74	1.22	2.5	2.1	3

☐ B. The site's peak flow rate of the 1-year storm is less than or equal to 1% of the 1-yr predevelopment peak flow rate

Discharge Point (from above): Site Peak Flow (1-yr storm): cfs 1% Pre Peak Flow (1-yr storm): cfs

Discharge Point (from above): Site Peak Flow (1-yr storm): cfs 1% Pre Peak Flow (1-yr storm): cfs

**POI 5& POI 6 Water Quantity - Channel Protection

WATER QUANTITY - CHANNEL PROTECTION *Refer to 9VAC25-870-66.B for instructions*

(Please provide documentation on the Plans and within the Calculations. Provide for each discharge point leaving site.)

Discharge Point from Site (Show on Plans)	Discharge Channel ☐	OPTION A: V_2	OPTION A: V_{ALLOW}*	OPTION A: $DEPTH_{10YR}$	OPTION A: $DEPTH_{CHNL}$	OPTION B: Q_{POST}	RV_{POST}	IF	Q_{PRE}	RV_{PRE}	Q_{POST} x RV_{POST}		IF x Q_{PRE} x RV_{PRE}	OPTION C *RESTORED*: *Development functioning consistent with restored system*
POI 5	☐ Manmade ☑ Natural					9.77	0.58	0.8	18.06	1.15	5.67	≤	16.61	☐ Yes
POI 6	☐ Manmade ☑ Natural					12.70	0.69	0.8	23	1.45	8.76	≤	26.68	☐ Yes
	☐ Manmade ☐ Natural											≤		☐ Yes
	☐ Manmade ☐ Natural											≤		☐ Yes

**Allowable velocity from VESCH Table 5-14, Table 5-22, VDOT PC-1, or V_{ALLOW} = 15fps for concrete pipes and gutters*

Note 1: Runoff from POI 1 discharged directly into James River. The site contributing drainage area is less than 1% of the total watershed. Thus, POI 1 meets channel protection compliance. No further analysis is required at POI 1.

WATER QUANTITY - FLOOD PROTECTION *Refer to 9VAC25-870-66.C for instructions*

(Please provide documentation on the Plans and within the Calculations. Provide for all discharge points leaving site.)

Discharge Point from Site (Show on Plans)	Condition	OPTION A: $Q_{SYSTEM\ CAPACITY}$	OPTION A: $Q_{POST-10}$	OPTION B: Q_{PRE-10}	OPTION B: $Q_{POST-10}$
POI 1	☑ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)		5.43		
POI 2	☑ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)		12.97		
POI 3	☑ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)		26.23		

Limits of Analysis: Required **For OPTION A above only ($Q_{POST} > Q_{PRE}$).**
-analyze the receiving channel at critical analysis points TO a point where: *(Provide calculations for each analysis point)* ***Use A, B, or C***

☐ A. The site's contributing drainage area is less than or equal to 1% of the total watershed, **or**

Discharge Point (from above):
CDA to Discharge Pt: acres 1% Total Watershed Area: acres

Analysis Point	CDA	V_{2YR}	V_{ALLOW}	$DEPTH_{10YR}$	$DEPTH_{CHNL}$

Discharge Point (from above):
CDA to Discharge Pt: acres 1% Total Watershed Area: acres

Analysis Point	CDA	V_{2YR}	V_{ALLOW}	$DEPTH_{10YR}$	$DEPTH_{CHNL}$

☐ B. The site's peak flow rate from the 10-year storm is less than or equal to 1% of the 10-yr predeveloped peak flow rate from the 10-yr storm prior to implementing control measures, **or**

Discharge Point (from above): Site Peak Flow (10-yr storm): cfs 1% Pre Peak Flow (10-yr storm): cfs

Discharge Point (from above): Site Peak Flow (10-yr storm): cfs 1% Pre Peak Flow (10-yr storm): cfs

☑ C. The stormwater conveyance system enters a mapped floodplain: Discharge Point (from above): 1,2,; Name of Mapped Floodplain: FEMA Map (see n

WATER QUANTITY - SHEET FLOW *Refer to 9VAC25-870-66.D for information*

(Please provide documentation on the Plans and within the Calculations. Provide for all discharge points leaving site.)

Sheet flow from the site must not cause erosion, sedimentation, or flooding of down gradient properties. The post development peak flow rate from the two-year 24-hour storm must not cause erosion ($V_2 < V_{ALLOW}$). Depth of flow must be less than 1 inch. If runoff is sheet flow and meets these conditions, no further water quantity controls are required.
(Channel protection & flood protection requirements are not necessary)

Discharge Point from Site (Show on Plans)	CDA	Q_{PRE-10}	$Q_{POST-10}$	$Depth_{POST-10}$	V_{2-POST}	V_{ALLOW}*

**Allowable velocity from VESCH Table 5-14 or Table 5-22*

***POI4,5&6 Water Quantity Flood Protection

WATER QUANTITY - FLOOD PROTECTION *Refer to 9VAC25-870-66.C for instructions*

(Please provide documentation on the Plans and within the Calculations. Provide for all discharge points leaving site.)

Discharge Point from Site (Show on Plans)	Condition	OPTION A: $Q_{SYSTEM\ CAPACITY}$	OPTION A: $Q_{POST-10}$	OPTION B: Q_{PRE-10}	OPTION B: $Q_{POST-10}$
POI 4	☐ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)			46.51	46.51
POI 5	☐ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)		71.63		
POI 6	☐ No Localized Flooding (Option A) ☐ Existing Localized Flooding (Option A or B)		86.63		

Note 2: As per FEMA Flood Map 5101030108D and 5101030109D, the outfalls of POI 1,2,3,5 and 6 discharge to a mapped floodplain. The outfalls are within the Flood Hazard Zone VE elevation 10ft, additional flood protection controls are not required for these POIs.

10/3/2021 9:44 AM

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249 Central Park Ave., Ste 201
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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	XXXX X. XXXX
DESIGNED BY	XXXX X. XXXX
CHECKED BY	XXXX X. XXXX
DRAWN BY	XXXX X. XXXX
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

STORMWATER SUMMARY TABLE

0 1" 2"

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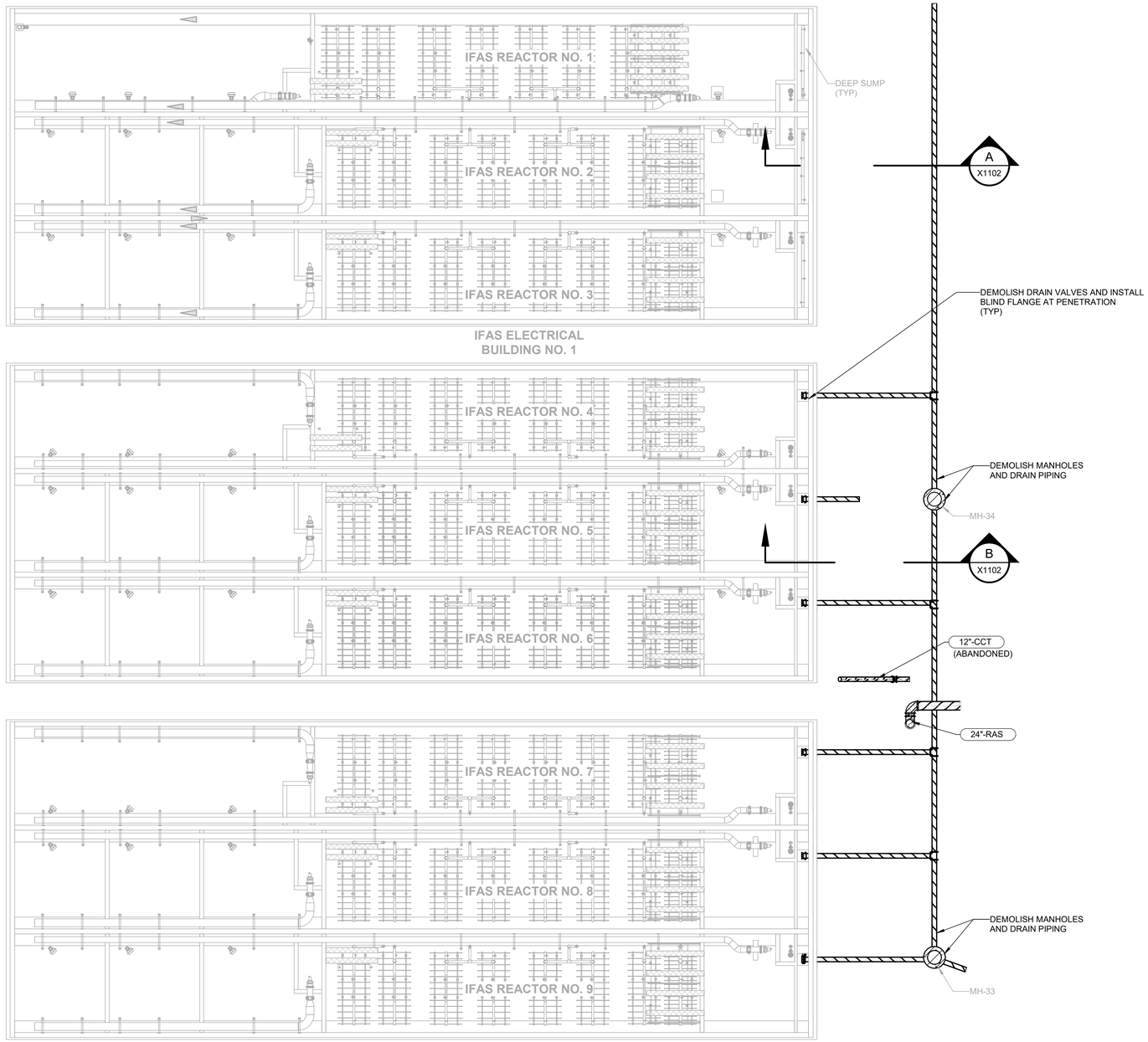
SCALE	NOT TO SCALE

DWG NO. **C9056**



PLAN AT EL. 2.79

1/16" = 1'-0"

GENERAL NOTES

1. --

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1100-IFAS-M.rvt
10/5/2021 10:20:51 AM

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. PAINTER
CHECKED BY	D. SISSON
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

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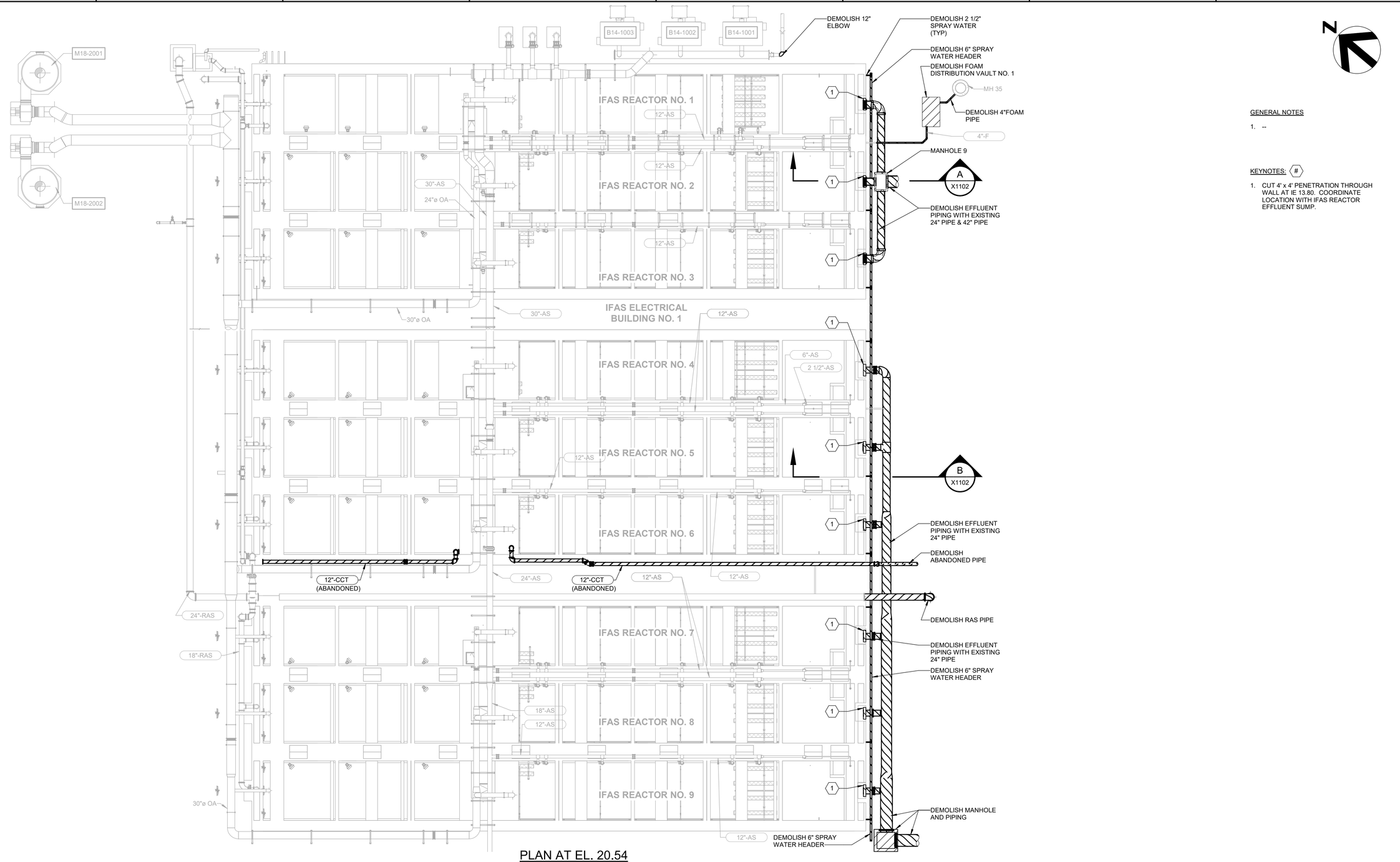
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS REACTOR NOS. 1-9 LOWER DEMOLITION PLAN

0 1" 2"

FILENAME	10292462-1100-IFAS-M.rvt
SCALE	1/16" = 1'-0"

DWG NO. **X1100**



PLAN AT EL. 20.54

1/16" = 1'-0"

GENERAL NOTES

1. --

KEYNOTES: (#)

1. CUT 4' x 4' PENETRATION THROUGH WALL AT IE 13.80. COORDINATE LOCATION WITH IFAS REACTOR EFFLUENT SUMP.

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. PAINTER
CHECKED BY	D. SISSON
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS REACTOR NOS. 1-9 UPPER DEMOLITION PLAN

0 1" 2"

FILENAME 10292462-1100-IFAS-M.rvt

SCALE 1/16" = 1'-0"

DWG NO. X1101

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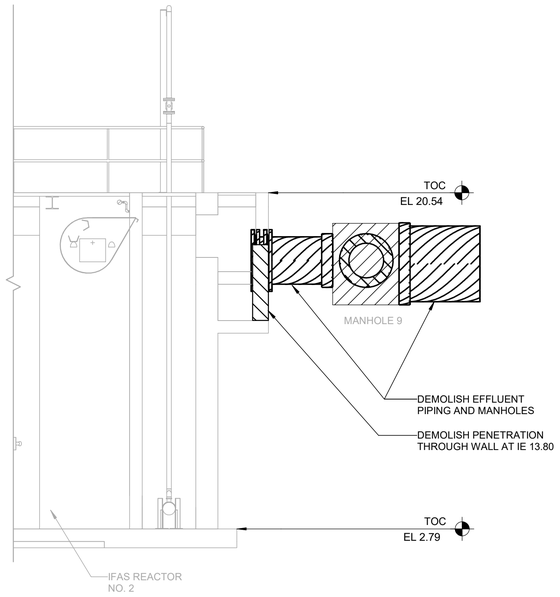
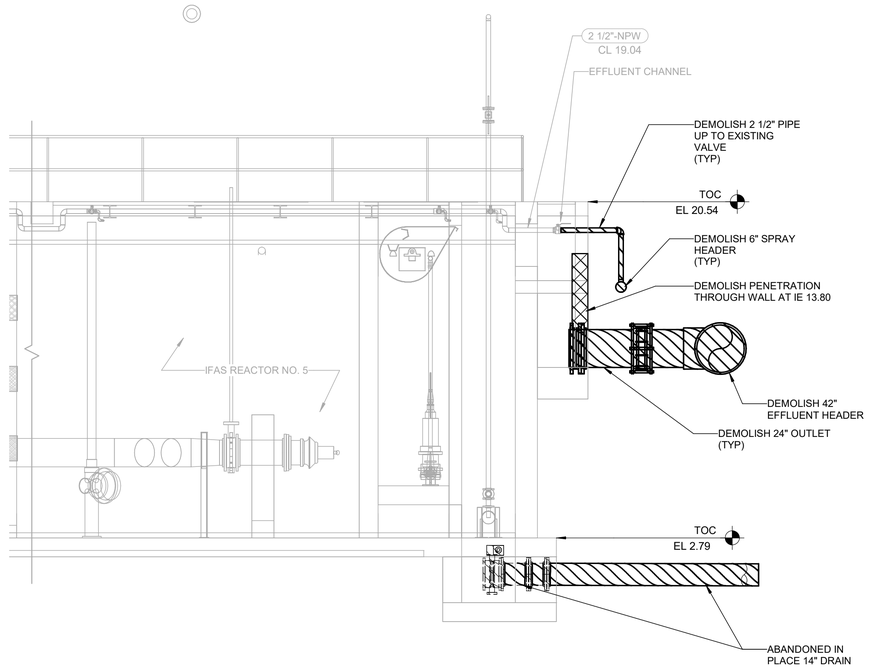
10/5/2021 10:20:57 AM

IFAS 1-3 SECTION



SECTION A
1/4" = 1'-0"
X1100

IFAS 4-9 SECTION



SECTION B
1/4" = 1'-0"
X1100

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ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. PAINTER
CHECKED BY	D. SISSON
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

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HRSD
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS REACTOR NOS. 1-9 DEMOLITION SECTIONS

0 1" 2"

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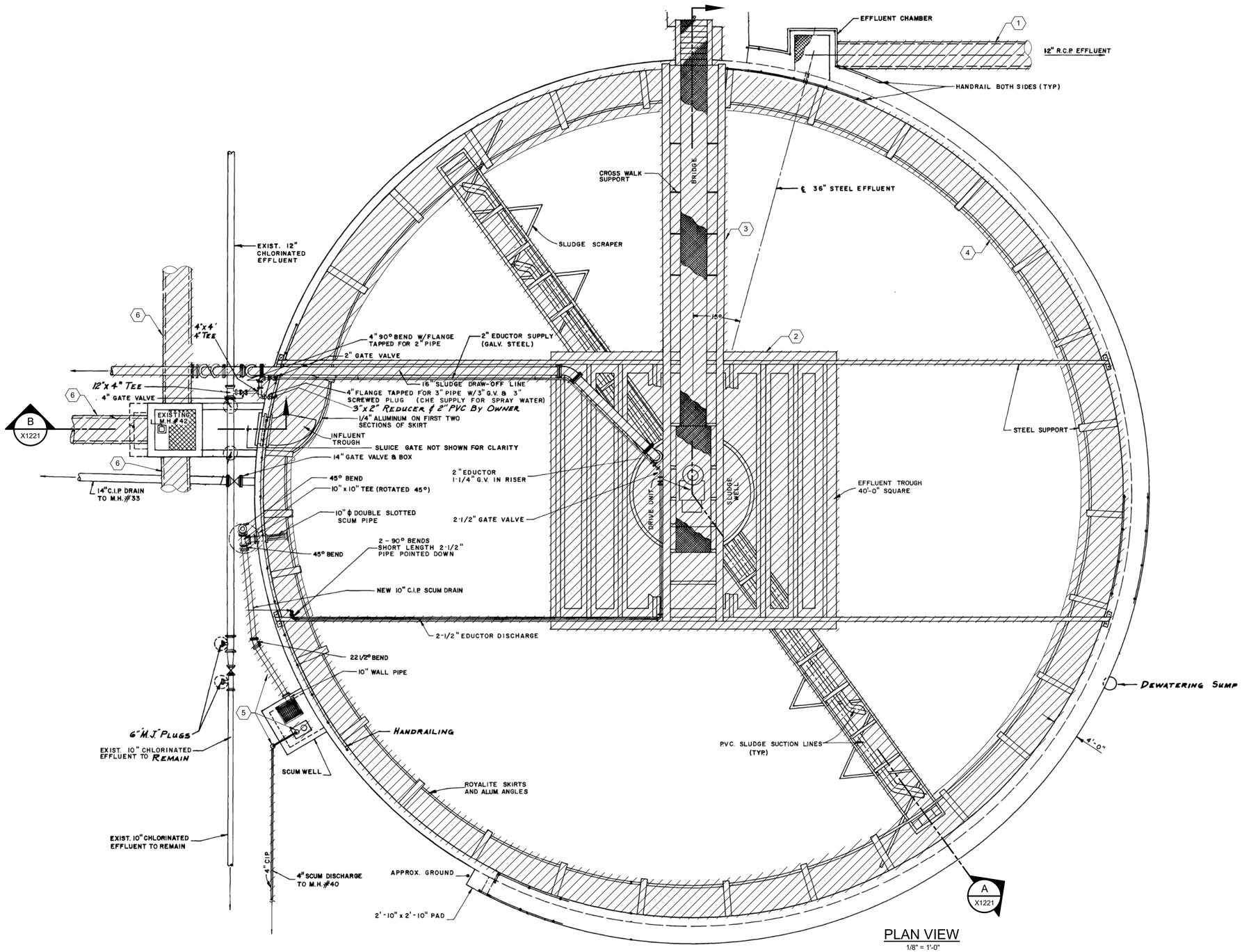
SCALE	1/4" = 1'-0"

DWG NO. X1102



PLAN VIEW
1/8" = 1'-0"

N

GENERAL NOTES

1. REFER TO SITE DEMOLITION DRAWINGS FOR DEMOLITION EXTENTS OF YARD PIPING.

KEY NOTES (#)

1. DEMOLISH EFFLUENT PIPE AND REPAIR WALL PENETRATION.
2. DEMOLISH CLARIFIER MECHANISM, WEIRS, LAUNDERS, EFFLUENT PIPE AND OTHER APPURTENANCES.
3. DEMOLISH ACCESS BRIDGE AND STAIRS.
4. DEMOLISH INFLUENT BAFFLE, INFLUENT TROUGH, SUPPORTS AND APPURTENANCES.
5. DEMOLISH SCUM PIPING, PUMPS, VALVES, CONTROLS AND RELATED EQUIPMENT.
6. DEMOLISH INFLUENT PIPING AND REPAIR PENETRATIONS AT MANHOLE 42.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. PAINTER
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SECONDARY CLARIFIER NO. 5 DEMOLITION PLAN

0 1" 2"

FILENAME 10292462-1200-SC05-M.rvt
SCALE 1/8" = 1'-0"
DWG NO. X1220

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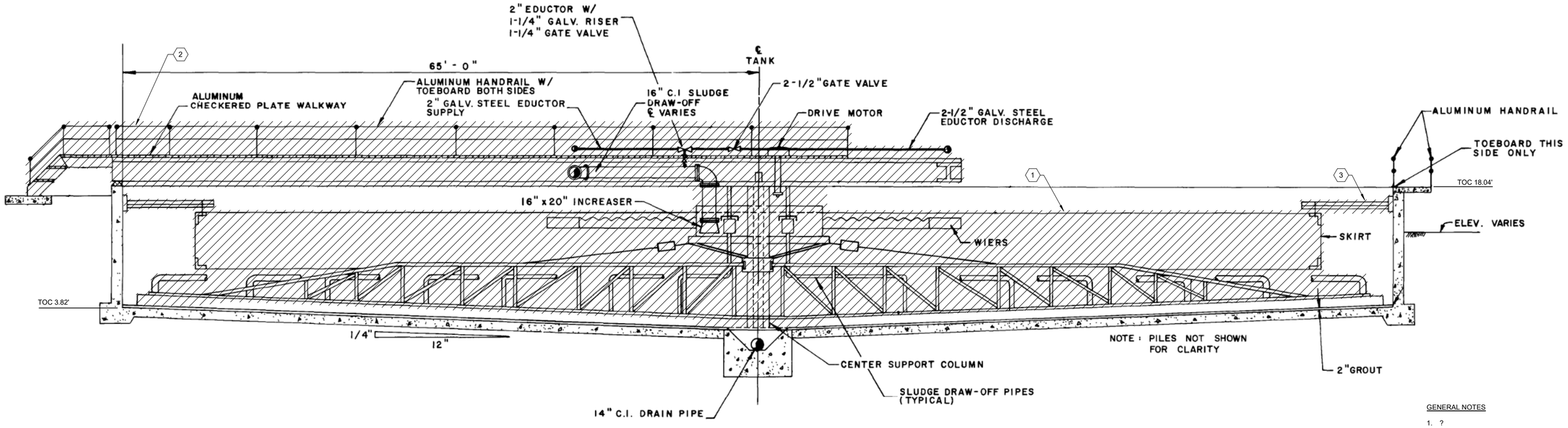

SECTION A
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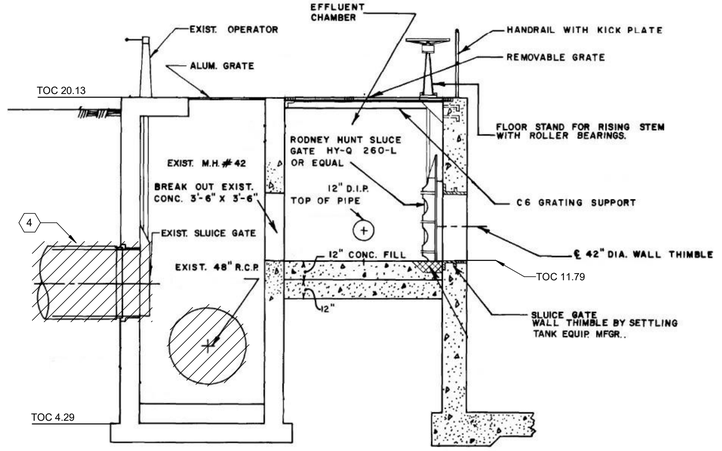
X1220



SECTION B
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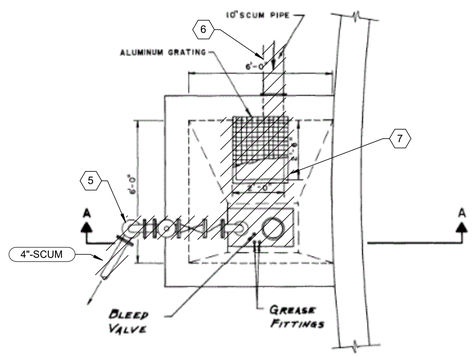
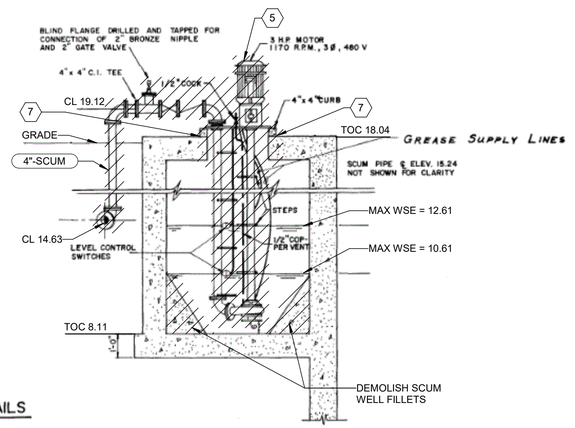
X1220



PLAN
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"

SCUM WELL DETAILS

KEY NOTES (#)

1. DEMOLISH CLARIFIER MECHANISM, WEIRS, LAUNDERS, EFFLUENT PIPE AND OTHER APPURTENANCES.
2. DEMOLISH ACCESS BRIDGE AND STAIRS.
3. DEMOLISH INFLUENT BAFFLE, INFLUENT TROUGH, SUPPORTS AND APPURTENANCES.
4. DEMOLISH INFLUENT PIPING AND REPAIR PENETRATIONS AT MANHOLE 42.
5. DEMOLISH SCUM PIPING, PUMPS, VALVES, CONTROLS AND RELATED EQUIPMENT.
6. DEMOLISH SCUM PIPING AND REPAIR PENETRATIONS AT SCUM WELL.
7. SAW CUT 4'-0" CLEAR OPENING IN TOP SLAB OF SCUM WELL.

GENERAL NOTES

1. ?

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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	C. PAINTER
CHECKED BY	D. SISSON
DRAWN BY	S. BROWN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SECONDARY CLARIFIER NO. 5 DEMOLITION SETIONS

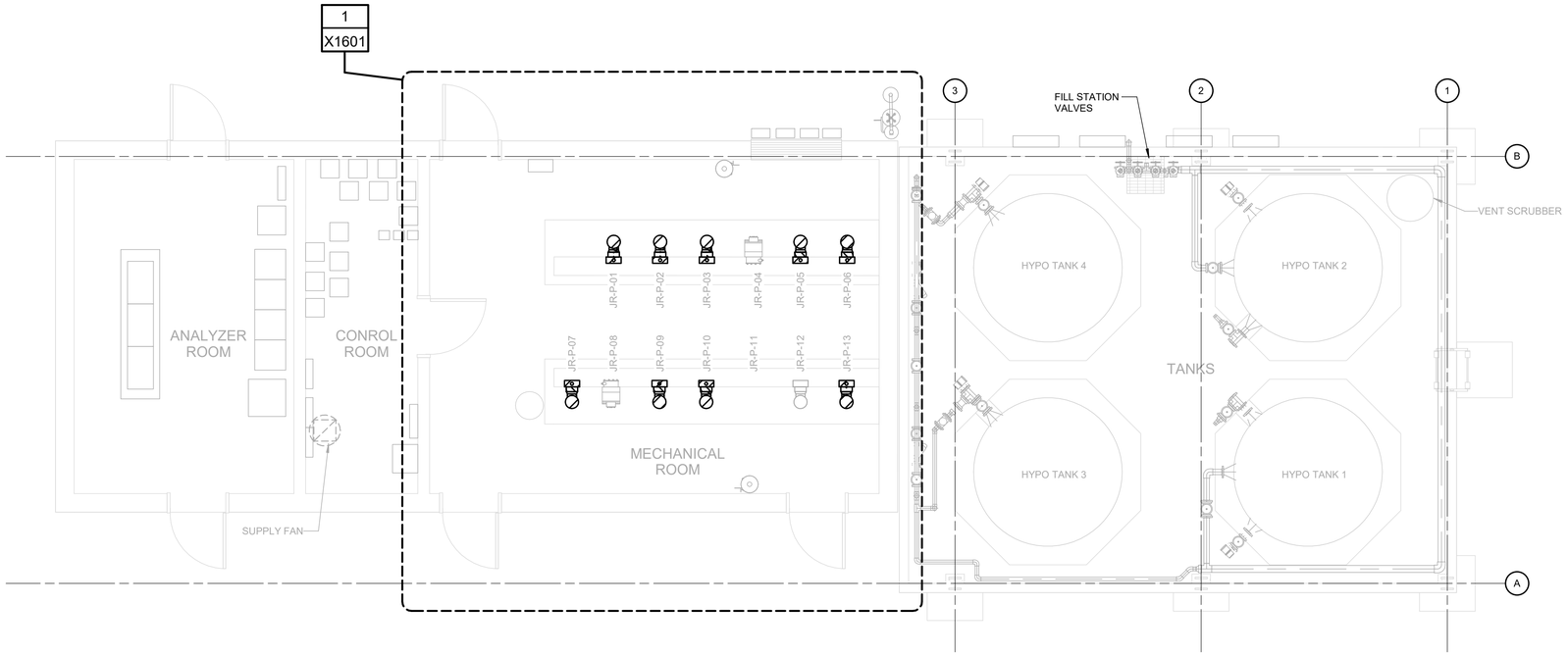
0 1" 2"

FILENAME 10292462-1200-SC05-M.rvt
SCALE As indicated

DWG NO. X1221

GENERAL NOTES

1. --



PLAN EL 15.80

1/4" = 1'-0"

HDR US-A Ulliman Schutte – Alberici Joint Venture

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY
DEMOLITION PLAN AT EL 15.80

0 1" 2"

FILENAME 10292462-1600-SHC-M.rvt

SCALE 1/4" = 1'-0"

DWG NO. **X1600**

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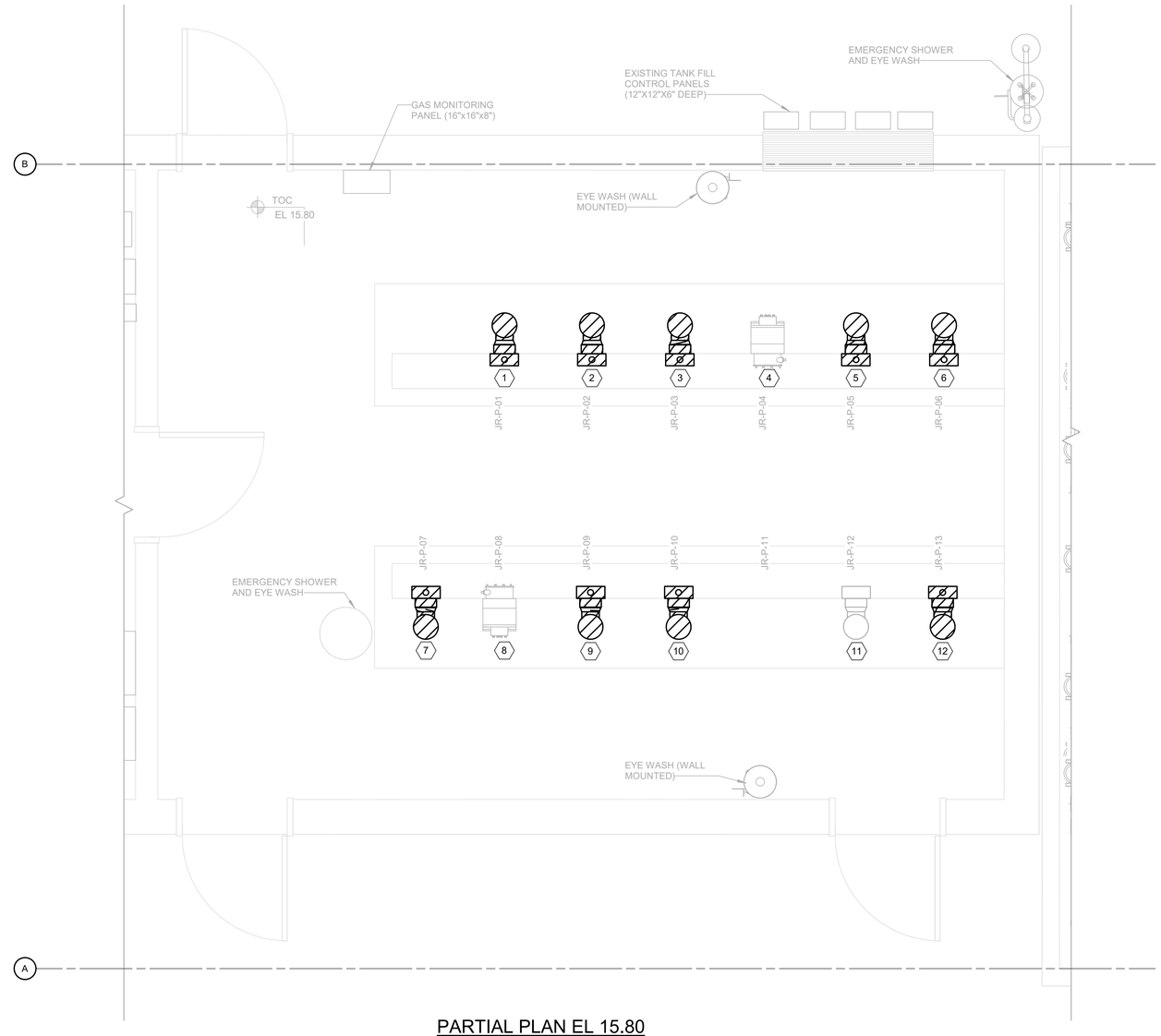

PARTIAL PLAN EL 15.80

1/2" = 1'-0"

GENERAL NOTES

1. SEE DEMOLITION SCHEMATICS ON SHEET NO. X1602 FOR ADDITION DEMOLITION DETAILS.
2. NOT ALL EXISTING PIPING SHOWN FOR CLARITY.

KEY NOTES: (#)

1. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.1. PUMP, PIPING, AND APPURTENANCES TO REMAIN.
2. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.2. PUMP, PIPING, AND APPURTENANCES TO REMAIN.
3. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.3. SELECT APPURTENANCES TO BE DEMOLISHED.
4. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.4. PUMP TO BE RELOCATED FOR ODOR CONTROL PUMP NO.1. PIPING, AND APPURTENANCES TO REMAIN.
5. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.5. PUMP, PIPING, AND APPURTENANCES TO REMAIN.
6. EXISTING DISINFECTION HYPOCHLORITE PUMP NO.6. PUMP, PIPING, AND APPURTENANCES TO REMAIN.
7. EXISTING ODOR CONTROL HYPOCHLORITE PUMP NO.1. PUMP AND SELECT APPURTENANCES TO BE DEMOLISHED.
8. EXISTING ODOR CONTROL HYPOCHLORITE PUMP NO.2. PUMP, PIPING, AND APPURTENANCES TO REMAIN.
9. EXISTING ODOR CONTROL HYPOCHLORITE PUMP NO.3. SELECT APPURTENANCES TO BE DEMOLISHED.
10. EXISTING ODOR CONTROL HYPOCHLORITE PUMP NO.4. SELECT APPURTENANCES TO BE DEMOLISHED.
11. EXISTING EMERGENCY DISINFECTION HYPO HYPOCHLORITE PUMP, SELECT APPURTENANCES TO BE RELOCATED TO JR-P-11 LOCATION.
12. EXISTING RAS HYPOCHLORITE PUMP. PUMP AND SELECT APPURTENANCES TO BE DEMOLISHED.

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757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY
PARTIAL DEMOLITION PLAN EL 15.80

0 1" 2"

FILENAME 10292462-1600-SHC-M.rvt
SCALE 1/2" = 1'-0"

DWG NO. X1601

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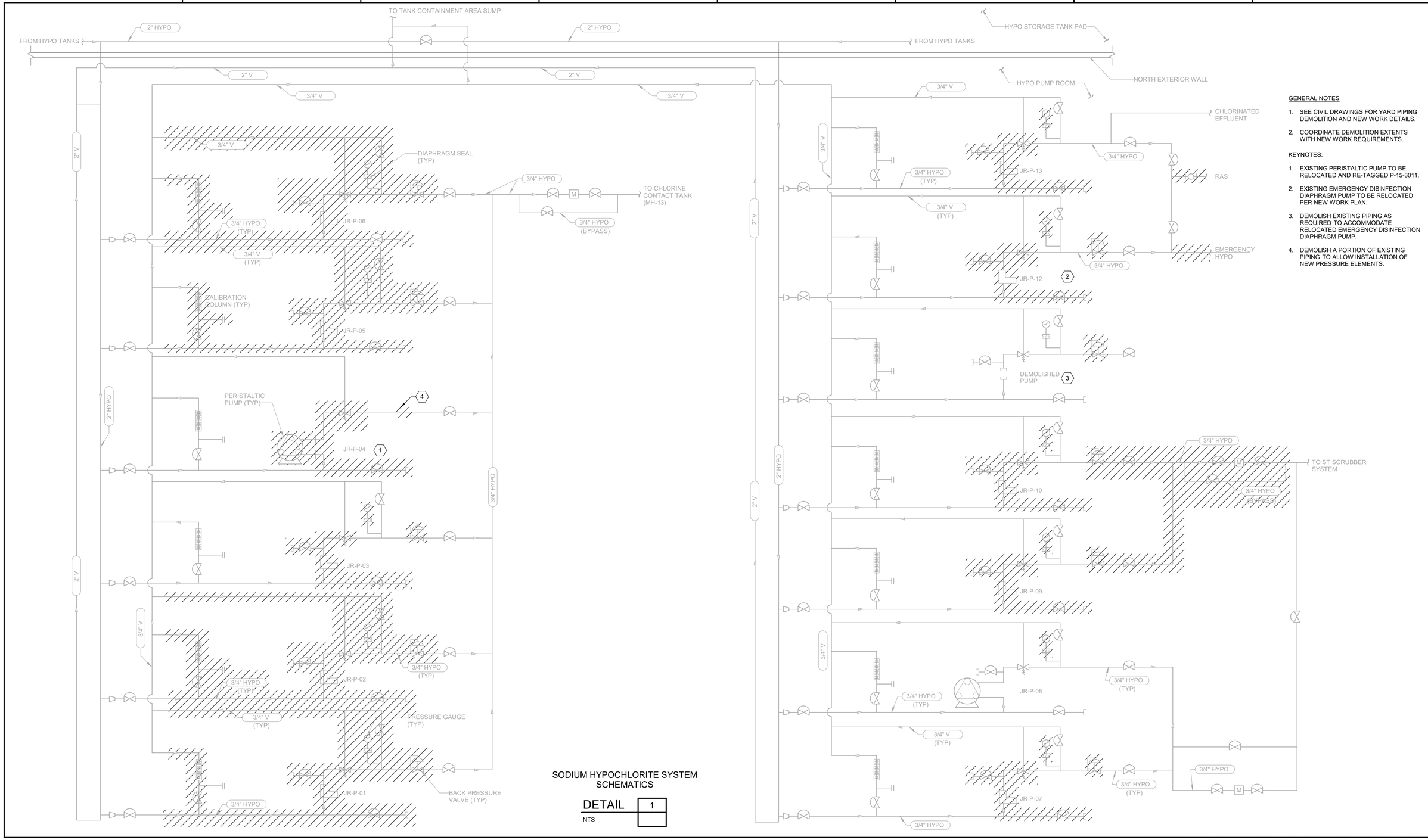

SODIUM HYPOCHLORITE SYSTEM SCHEMATICS

DETAIL 1

NTS

GENERAL NOTES

1. SEE CIVIL DRAWINGS FOR YARD PIPING DEMOLITION AND NEW WORK DETAILS.
2. COORDINATE DEMOLITION EXTENTS WITH NEW WORK REQUIREMENTS.

KEYNOTES:

1. EXISTING PERISTALTIC PUMP TO BE RELOCATED AND RE-TAGGED P-15-3011.
2. EXISTING EMERGENCY DISINFECTION DIAPHRAGM PUMP TO BE RELOCATED PER NEW WORK PLAN.
3. DEMOLISH EXISTING PIPING AS REQUIRED TO ACCOMMODATE RELOCATED EMERGENCY DISINFECTION DIAPHRAGM PUMP.
4. DEMOLISH A PORTION OF EXISTING PIPING TO ALLOW INSTALLATION OF NEW PRESSURE ELEMENTS.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM HYPOCHLORITE STORAGE AND FEED FACILITY DEMOLITION SCHEMATICS

0 1" 2"

FILENAME 10292462-1600-SHC-M.rvt

SCALE 12" = 1'-0"

DWG NO. X1602

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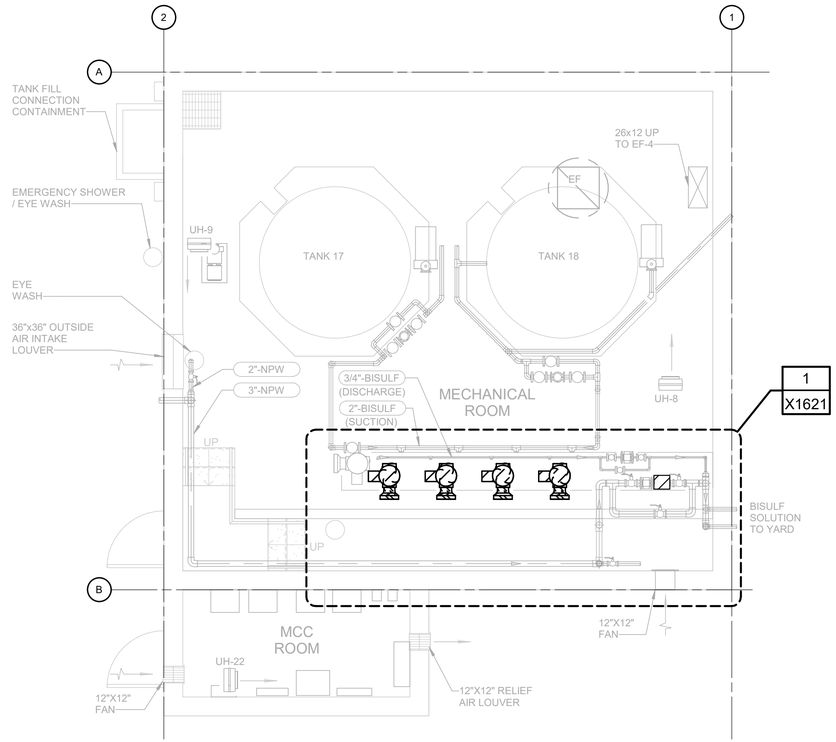

PLAN EL 21.80

1/4" = 1'-0"

GENERAL NOTES

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1620-BISUL-M.rvt
10/5/2021 11:52:41 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

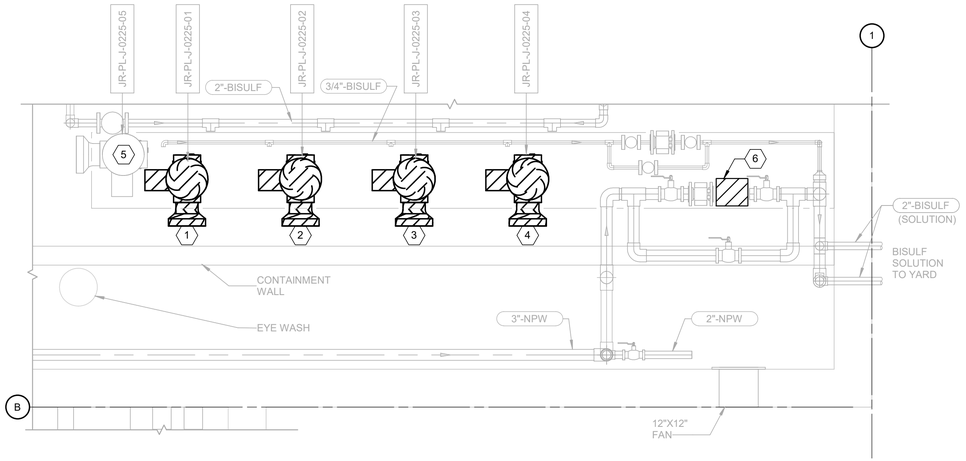
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM BISULFITE STORAGE AND FEED FACILITY OVERALL DEMOLITION PLAN

0 1" 2"

FILENAME	10292462-1620-BISUL-M.rvt
SCALE	1/4" = 1'-0"

DWG NO. **X1620**



PARTIAL PLAN EL 21.80

DETAIL 1 — 1/2" = 1'-0" — X1620

GENERAL NOTES

1. SEE DEMOLITION SCHEMATICS ON SHEET NO. X1622 FOR ADDITION DEMOLITION DETAILS.
2. NOT ALL EXISTING PIPING SHOWN FOR CLARITY.

KEYNOTES: (#)

1. EXISTING BISULFITE PUMP NO. 1. TO BE DEMOLISHED.
2. EXISTING BISULFITE PUMP NO. 2. TO BE DEMOLISHED.
3. EXISTING BISULFTIE PUMP NO. 3 AND SELECT APPURTENANCES TO BE DEMOLISHED.
4. EXISTING BISULFTIE PUMP NO. 4 AND SELECT APPURTENANCES TO BE DEMOLISHED.
5. EXISTING EMERGENCY BISULFITE PUMP. PUMP, PIPING, AND APPURTENANCES TO TO REMAIN.
6. EXISTING NPW CARRIER WATER FLOW CONTROL VALVE AND ACTUATOR TO BE DEMOLISHED.

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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM BISULFITE STORAGE AND FEED FACILITY PARTIAL DEMOLITION PLAN

0 1" 2"

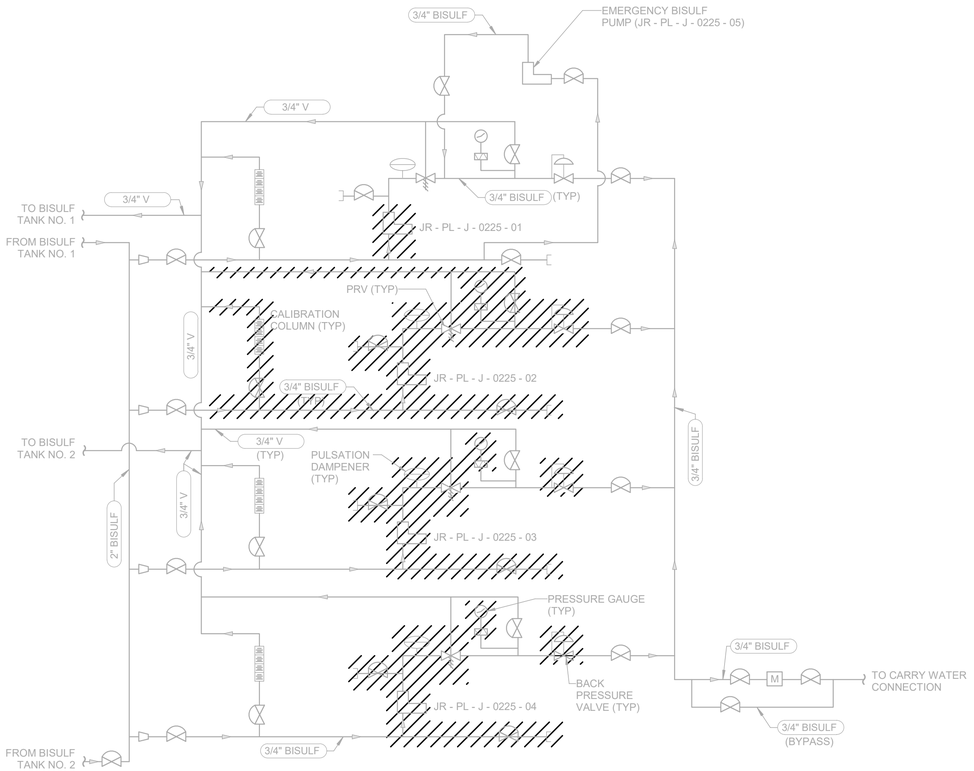
FILENAME 10292462-1620-BISUL-M.rvt
SCALE 1/2" = 1'-0"
DWG NO. X1621

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1620-BISUL-M.rvt
10/5/2021 11:52:42 AM

GENERAL NOTES

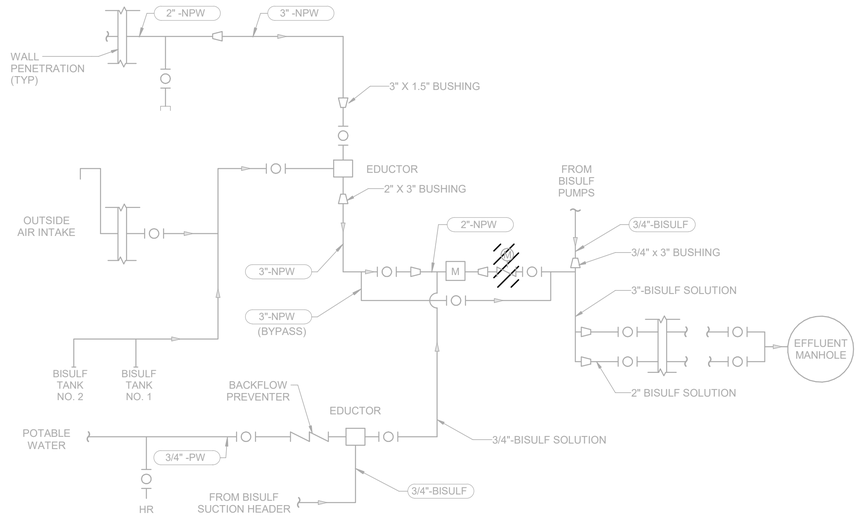
1. SEE CIVIL DRAWINGS FOR YARD PIPING DEMOLITION AND NEW WORK DETAILS.
2. COORDINE DEMOLITION EXTENTS WITH NEW WORK REQUIREMENTS.

KEYNOTES



SODIUM BISULFITE SYSTEM SCHEMATICS - DEMOLITION

DETAIL 1
NTS



SODIUM BISULFITE NPW / PW SCHEMATIC - DEMOLITION

DETAIL 2
NTS

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1620-BISUL-M.rvt
10/5/2021 11:52:42 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	S. HENNING
CHECKED BY	
DRAWN BY	M. MITCHELL
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

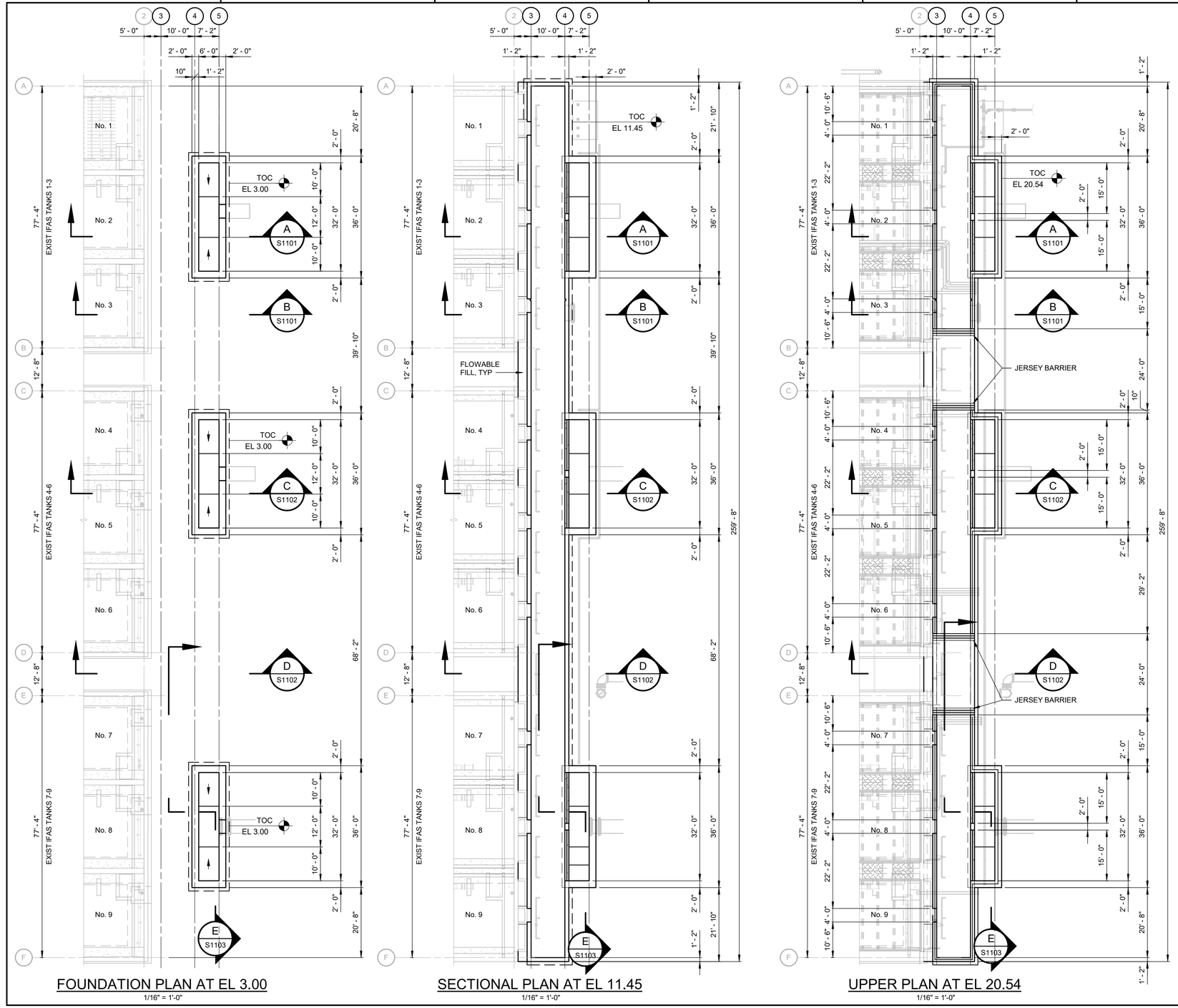
JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

SODIUM BISULFITE STORAGE AND FEED FACILITY DEMOLITION SCHEMATICS

0 1" 2"

FILENAME 10292462-1620-BISUL-M.rvt
SCALE NOT TO SCALE

DWG NO. X1622



FOUNDATION PLAN AT EL 3.00

1/16" = 1'-0"

SECTIONAL PLAN AT EL 11.45

1/16" = 1'-0"

UPPER PLAN AT EL 20.54

1/16" = 1'-0"

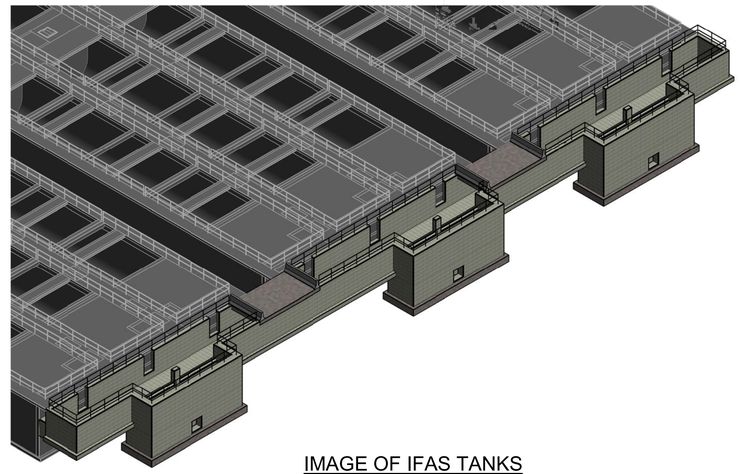


IMAGE OF IFAS TANKS

GENERAL NOTES

1. SEE SHEET S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES FOR STANDARD STRUCTURAL DETAILS.

HDR | US-A
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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS TANKS PLANS

0 1" 2"

FILENAME 10292462-1100-IFAS-S.rvt

SCALE 1/16" = 1'-0"

DWG NO. **S1100**

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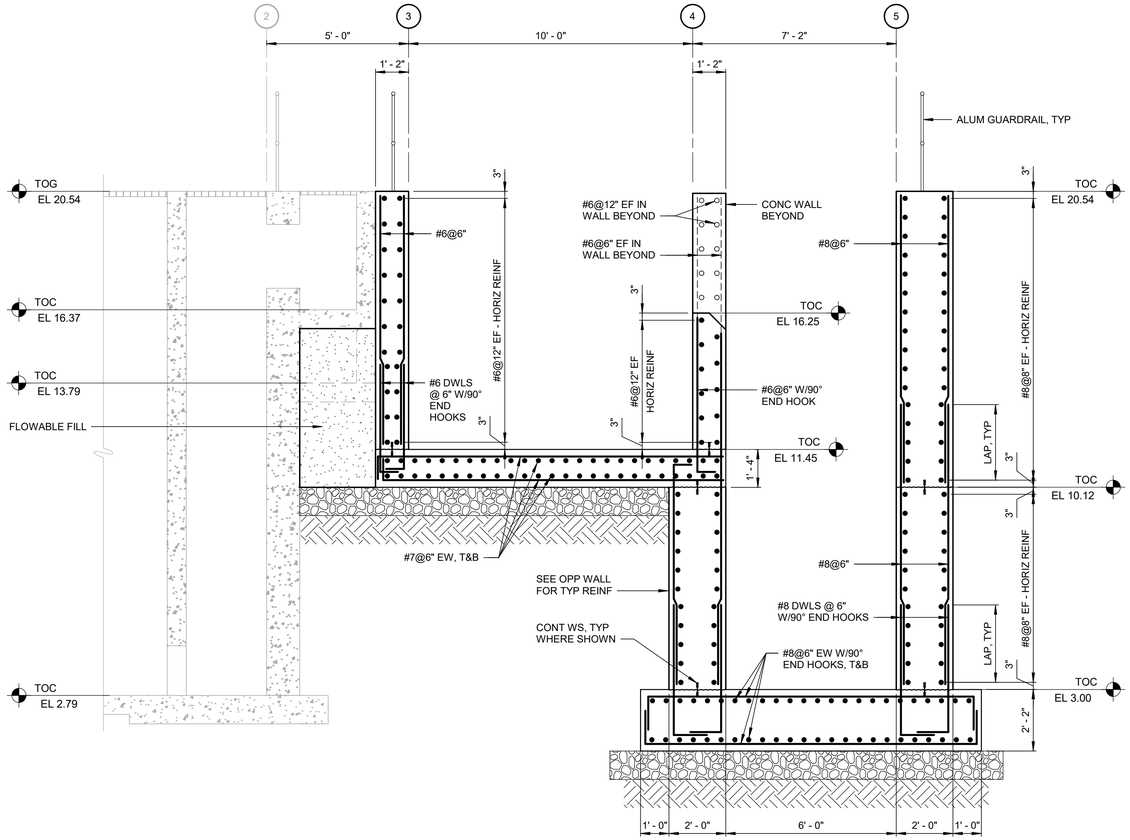
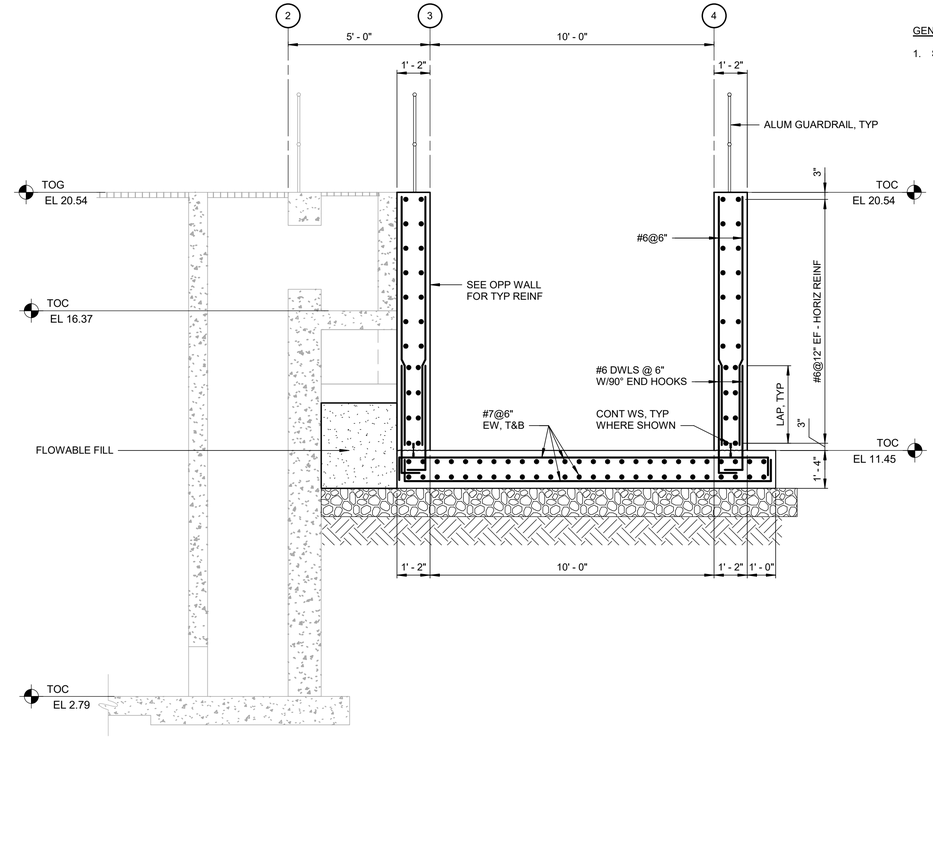


SECTION A
3/8" = 1'-0"
S1100



SECTION B
3/8" = 1'-0"
S1100

GENERAL NOTES

1. SEE SHEET S1100 FOR ADDITIONAL NOTES.

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Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS TANKS SECTIONS 1

0 1" 2"

FILENAME 10292462-1100-IFAS-S.rvt
SCALE 3/8" = 1'-0"

DWG NO. **S1101**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1100-IFAS-S.rvt
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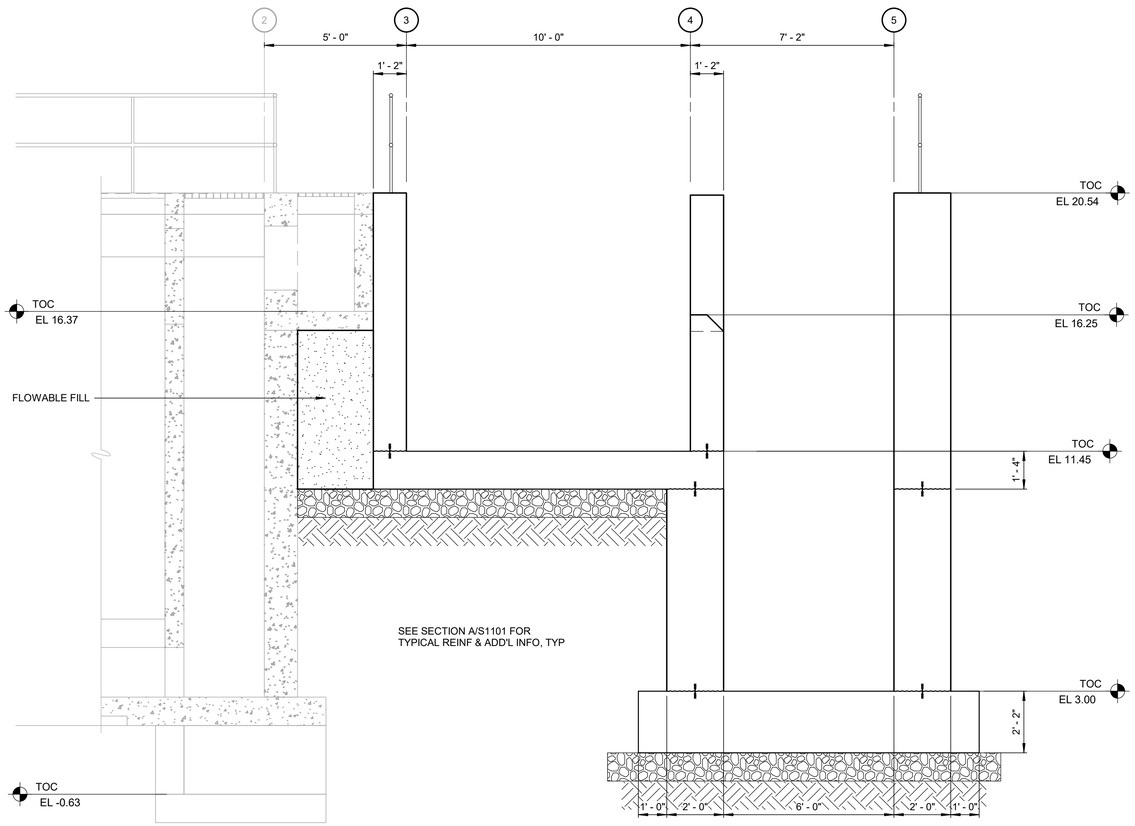
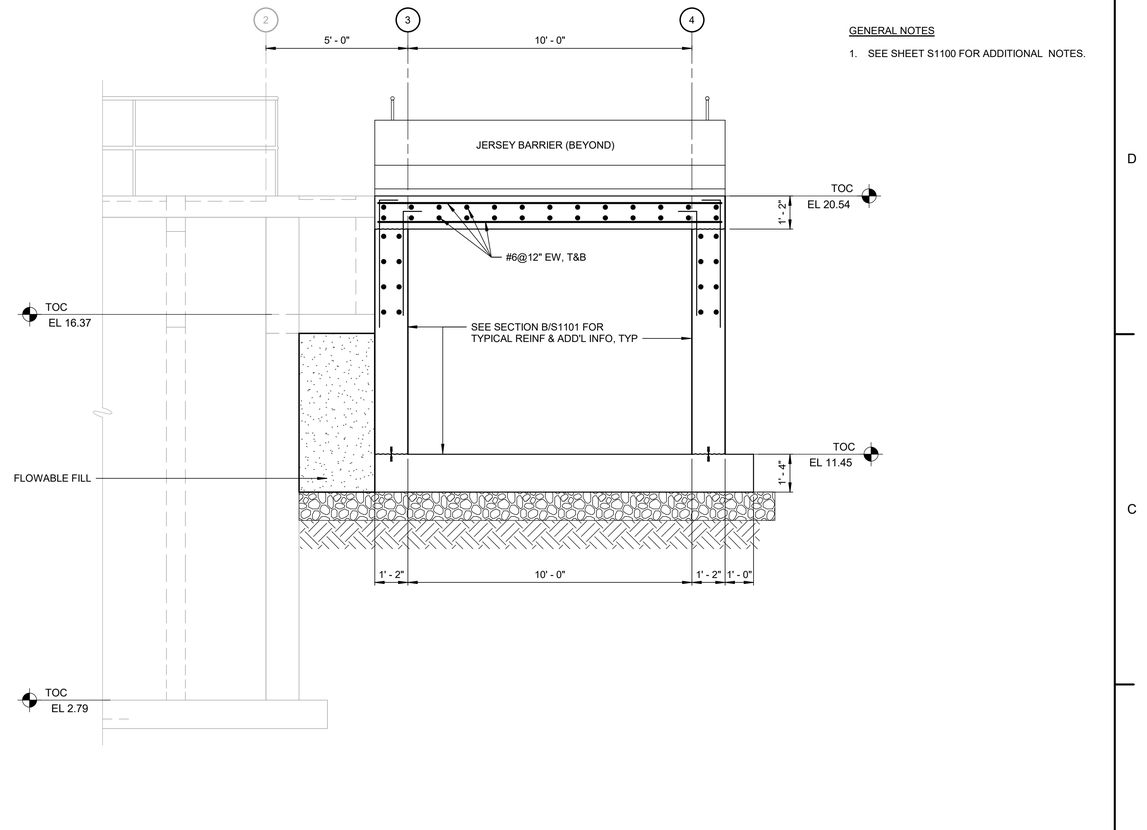


SECTION C / S1100
3/8" = 1'-0"



SECTION D / S1100
3/8" = 1'-0"

GENERAL NOTES

1. SEE SHEET S1100 FOR ADDITIONAL NOTES.

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1100-IFAS-S.rvt
10/1/2021 5:55:39 AM

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS TANKS SECTIONS 2

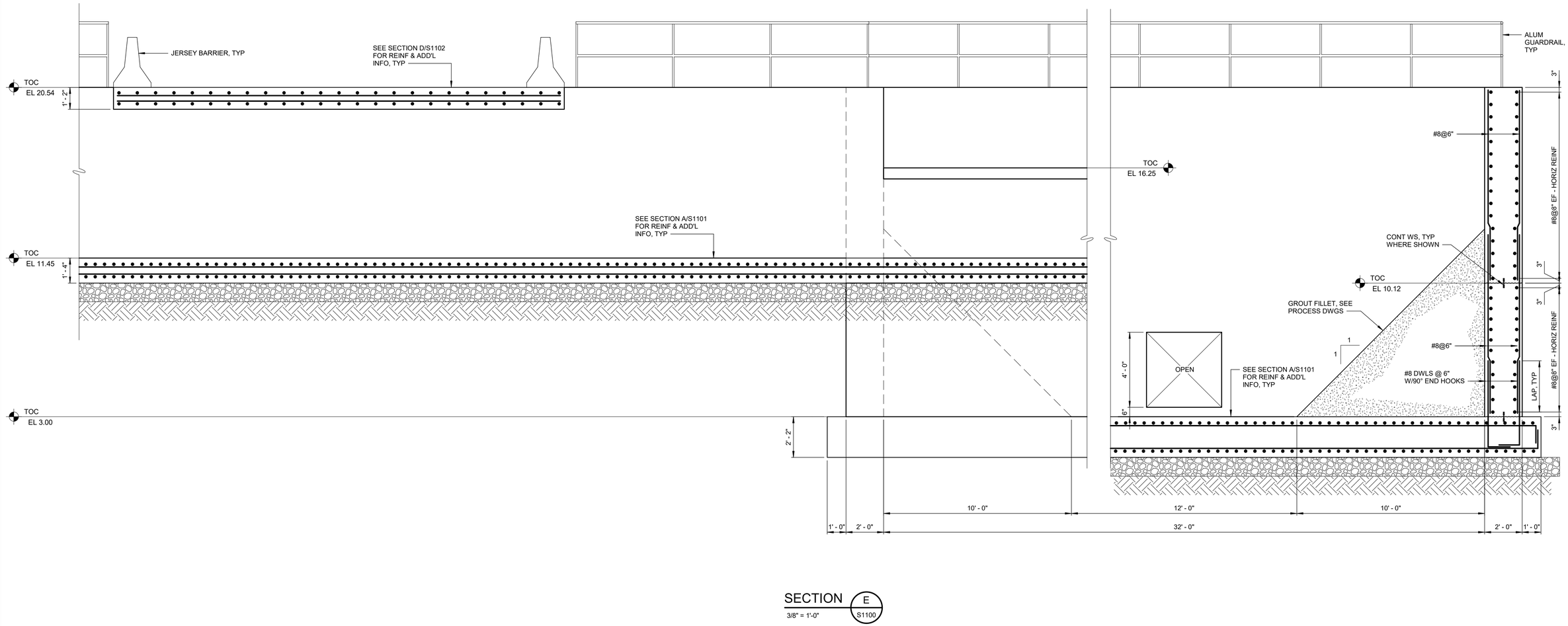
0 1" 2"

FILENAME 10292462-1100-IFAS-S.rvt
SCALE 3/8" = 1'-0"

DWG NO. **S1102**

GENERAL NOTES

1. SEE SHEET S1100 FOR ADDITIONAL NOTES.



SECTION E
3/8" = 1'-0"
S1100

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

IFAS TANKS SECTIONS 3

0 1" 2"

FILENAME 10292462-1100-IFAS-S.rvt
SCALE 3/8" = 1'-0"

DWG NO. **S1103**

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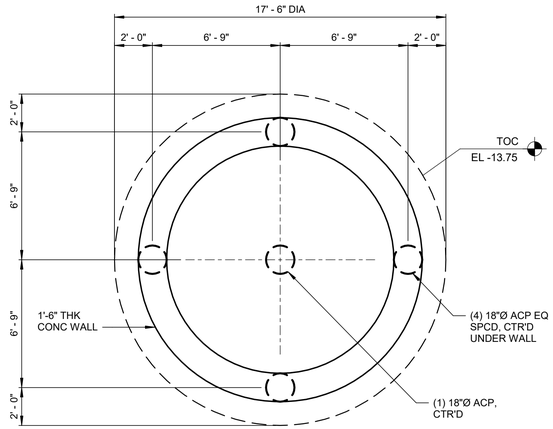
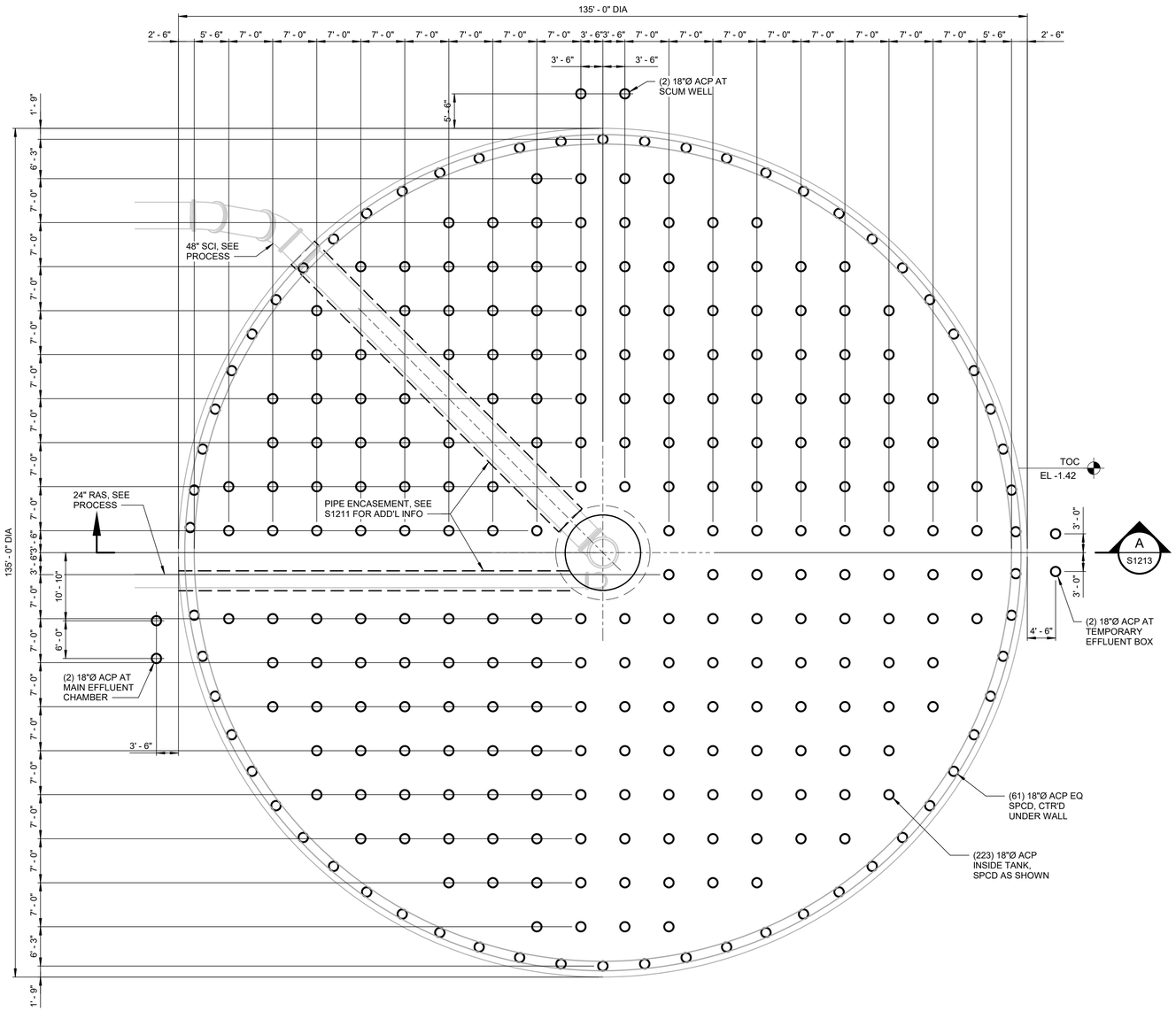


EL -13.75 (PILE PLAN)

1/4" = 1'-0"



EL -1.42 (PILE PLAN)

3/32" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES FOR STANDARD STRUCTURAL DETAILS.

PILE PLAN LEGEND:

INDICATES 18"Ø AUGER CAST-IN-PLACE PILE

ESTIMATED PILE CAPACITIES (50 FT LENGTH):
COMPRESSION:
TIP ELEVATION AT (-)1.42 SLAB: 40 TONS
TIP ELEVATION AT (-) 13.75 SLAB: 48 TONS
TENSION:
TIP ELEVATION AT (-)1.42 SLAB: 40 TONS
TIP ELEVATION AT (-) 13.75 SLAB: 31 TONS
LATERAL: 10 TONS

HDR US-A
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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

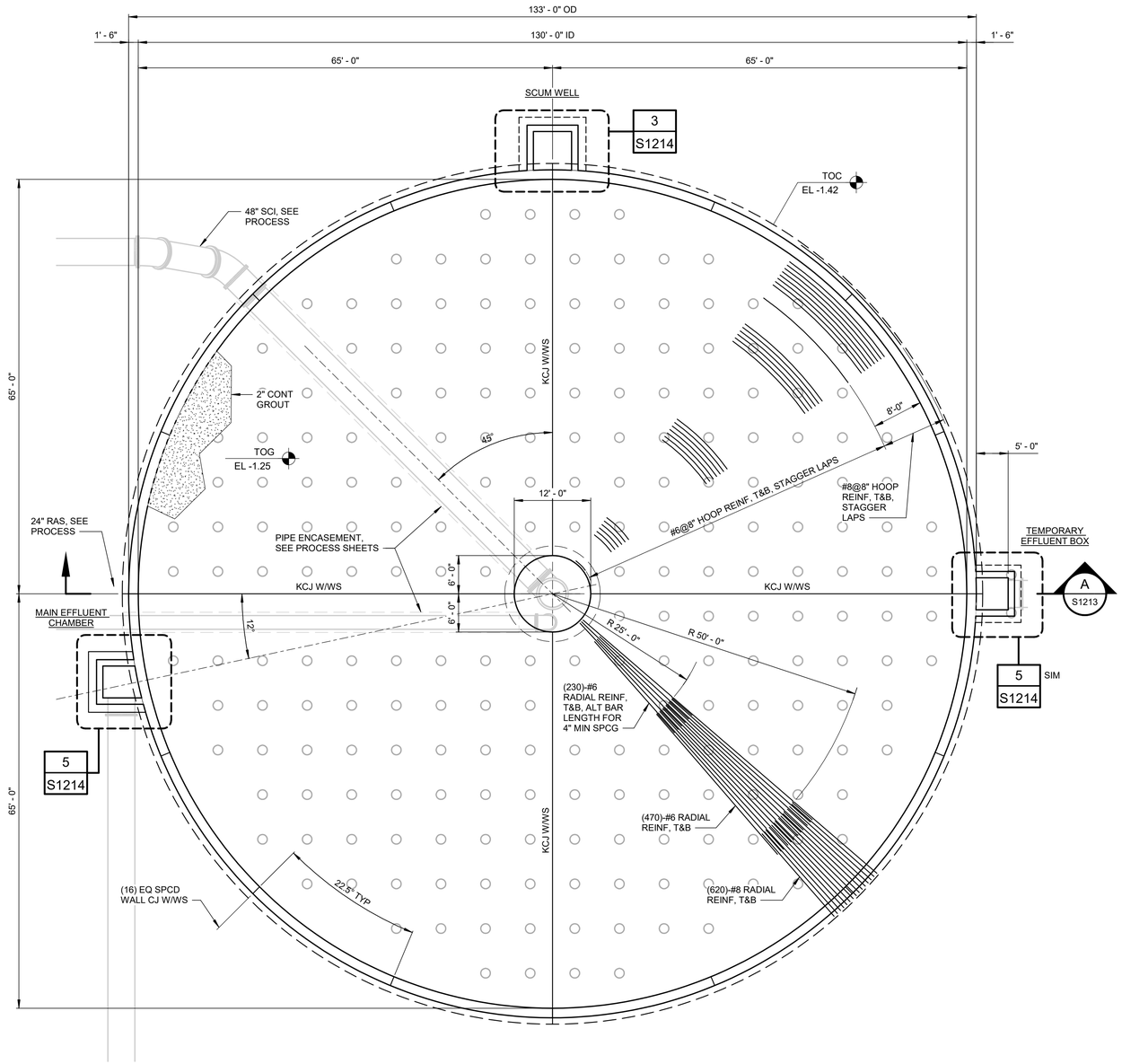
SECONDARY CLARIFIER NO 2 PILE LOCATION PLANS

0 1" 2"

FILENAME: FILENAME.rvt
SCALE: AS NOTED

DWG NO. S1210

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1200-SC02-S.rvt
10/4/2021 11:29:13 AM



FOUNDATION PLAN

3/32" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S1200 FOR ADDITIONAL NOTES.

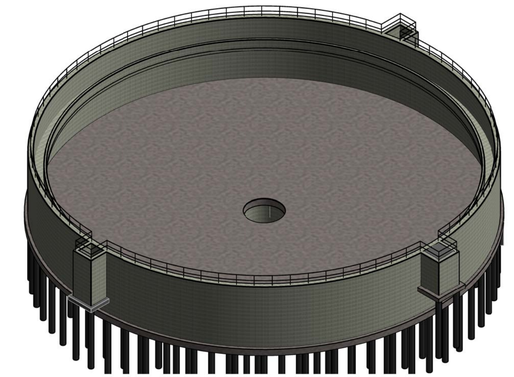


IMAGE OF SC No. 1 (WP2)

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1200-SC02-S.rvt
10/4/2021 11:29:22 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

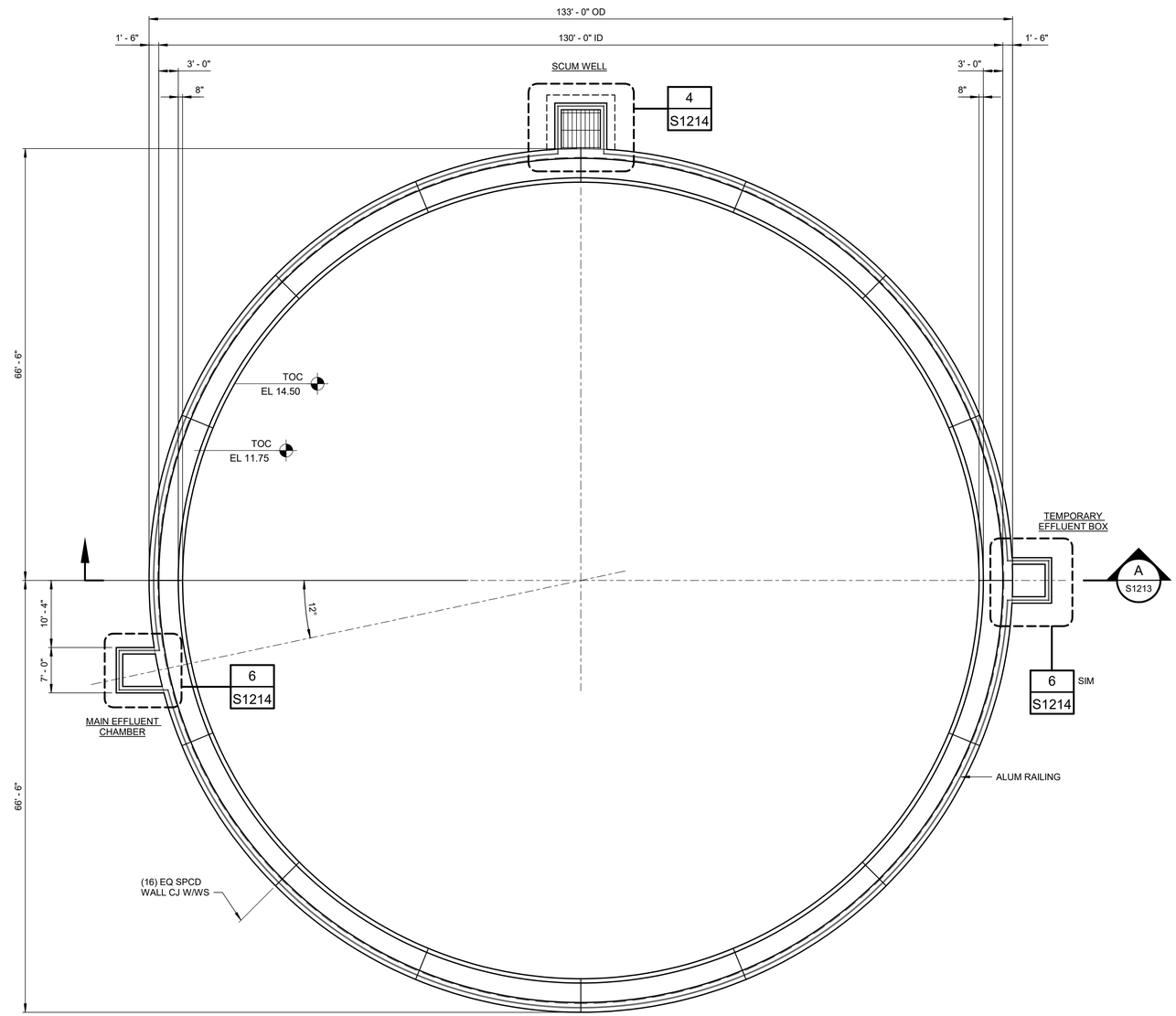
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SECONDARY CLARIFIER NO 2 FOUNDATION PLAN

0 1" 2"

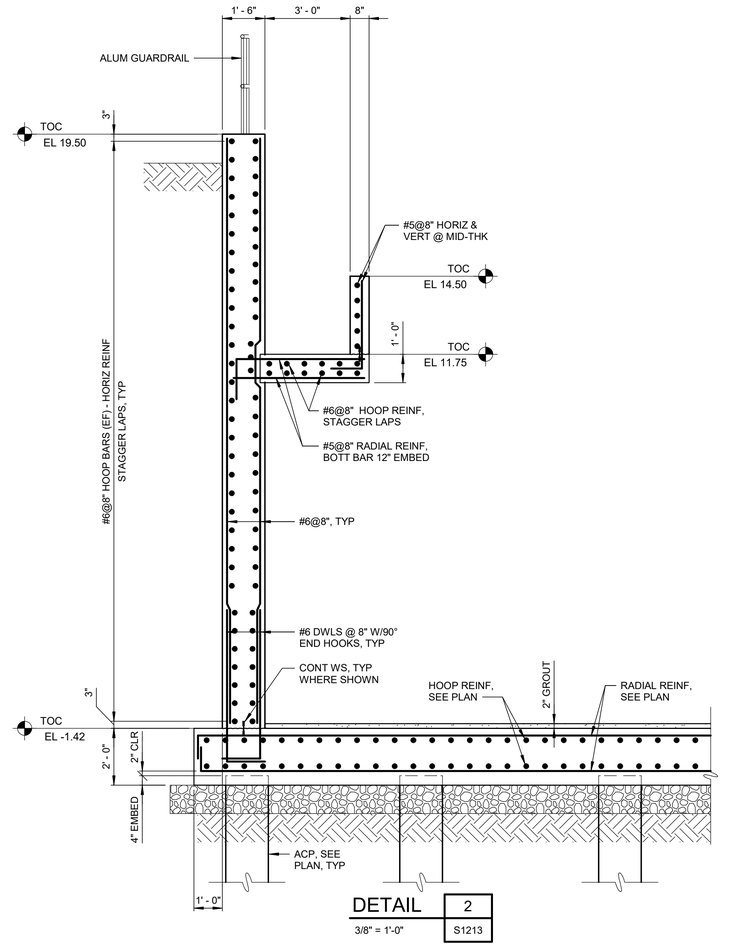
FILENAME: FILENAME.rvt
SCALE: AS NOTED

DWG NO. S1211



UPPER PLAN

3/32" = 1'-0"



DETAIL 2 / S1213

3/8" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1200 FOR ADDITIONAL NOTES.

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1200-SC02-S.rvt
10/4/2021 11:29:23 AM

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

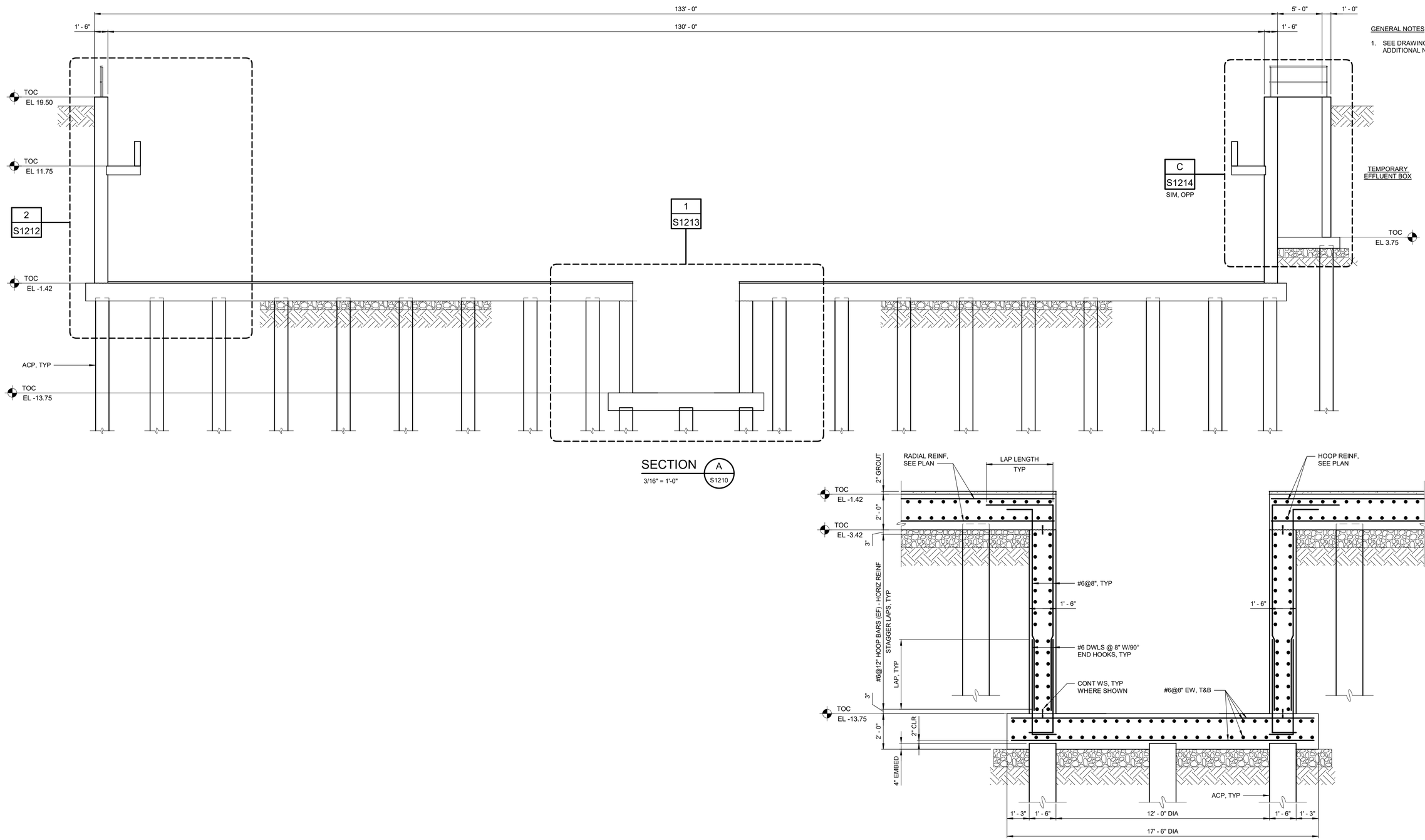
SECONDARY CLARIFIER NO 2 UPPER PLAN AND DETAILS

0 1" 2"

FILENAME FILENAME.rvt

SCALE AS NOTED

DWG NO. S1212



HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SECONDARY CLARIFIER NO 2 SECTIONS AND DETAILS 1

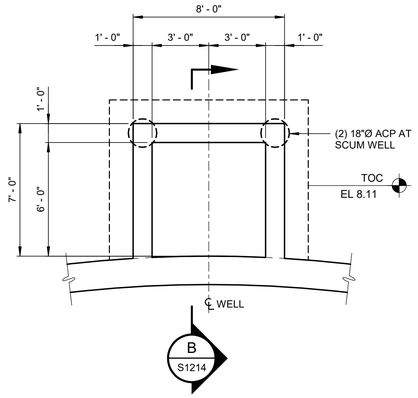
0 1" 2"

FILENAME FILENAME.rvt

SCALE AS NOTED

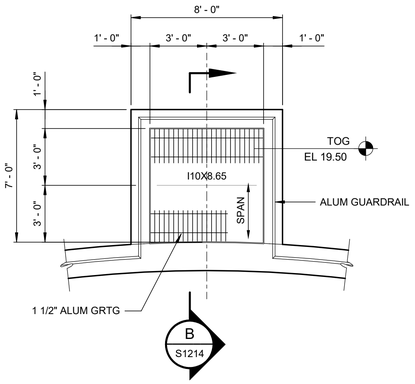
DWG NO. S1213

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1200-SC02-S.rvt
10/4/2021 11:29:23 AM



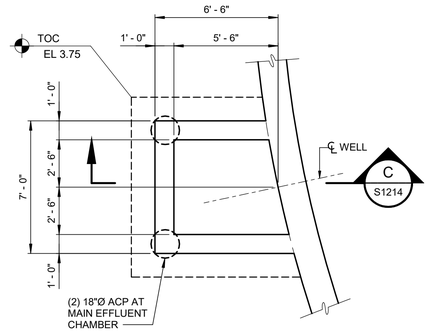
SCUM WELL FOUNDATION PLAN

DETAIL 3 — 1/4" = 1'-0" — S1211



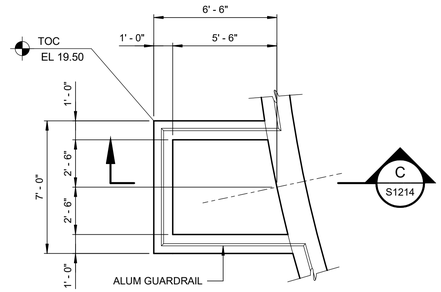
SCUM WELL UPPER PLAN

DETAIL 4 — 1/4" = 1'-0" — S1212



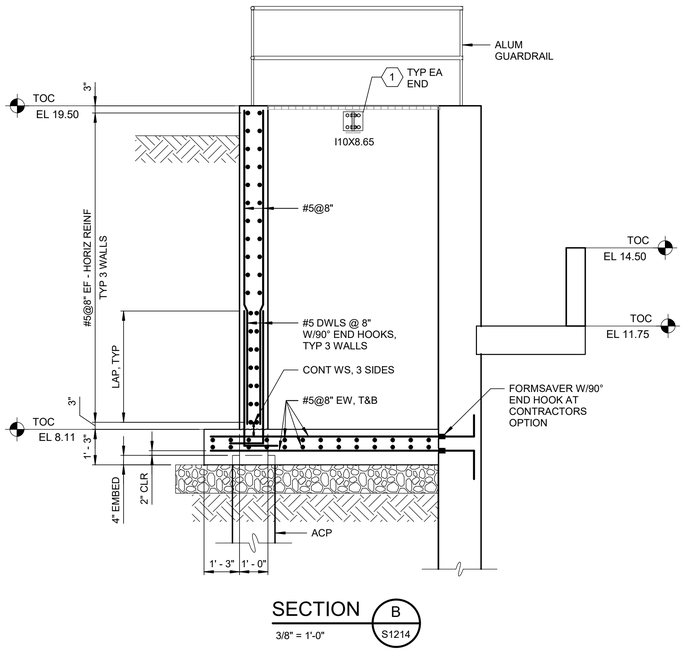
MAIN EFFLUENT CHAMBER - FDN PLAN

DETAIL 5 — 1/4" = 1'-0" — S1211

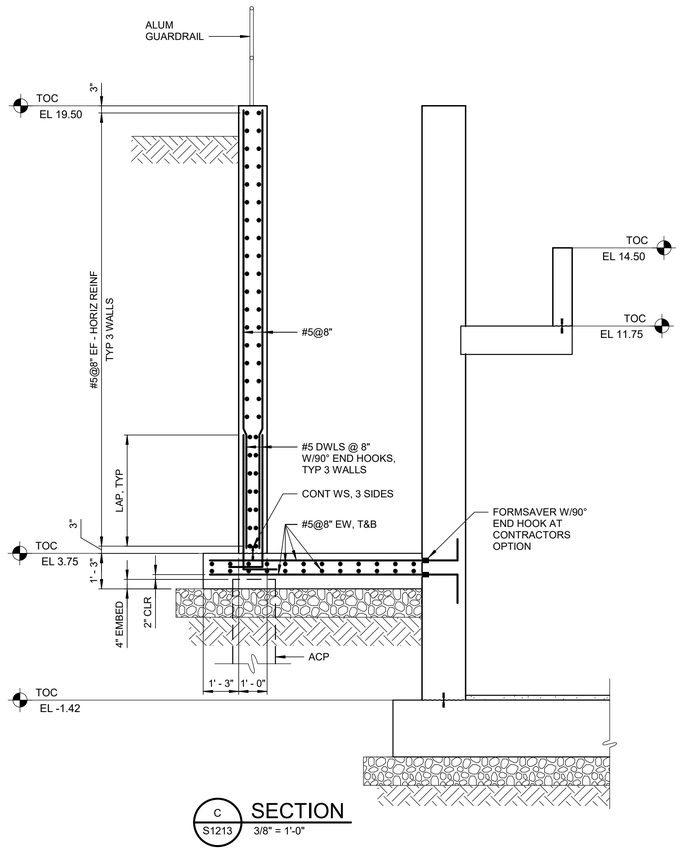


MAIN EFFLUENT CHAMBER - UPPER PLAN

DETAIL 6 — 1/4" = 1'-0" — S1212



SECTION B S1214 — 3/8" = 1'-0"



C S1213 SECTION — 3/8" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1200 FOR ADDITIONAL NOTES.
2. (2)-ALUMINUM L4X4X3/8X0'-8" LONG. ATTACH TO CONCRETE WITH (4)-3/4"Ø SST ADHESIVE ANCHORS (5" SPACING, 1-1/2" EDGE DISTANCE), ATTACH TO I10 WITH (2)-3/4"Ø SST BOLTS (3" SPACING, 1-1/2" EDGE DISTANCE).

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10/4/2021 11:29:25 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

SECONDARY CLARIFIER NO 2 SECTIONS AND DETAILS 2

0 1" 2"

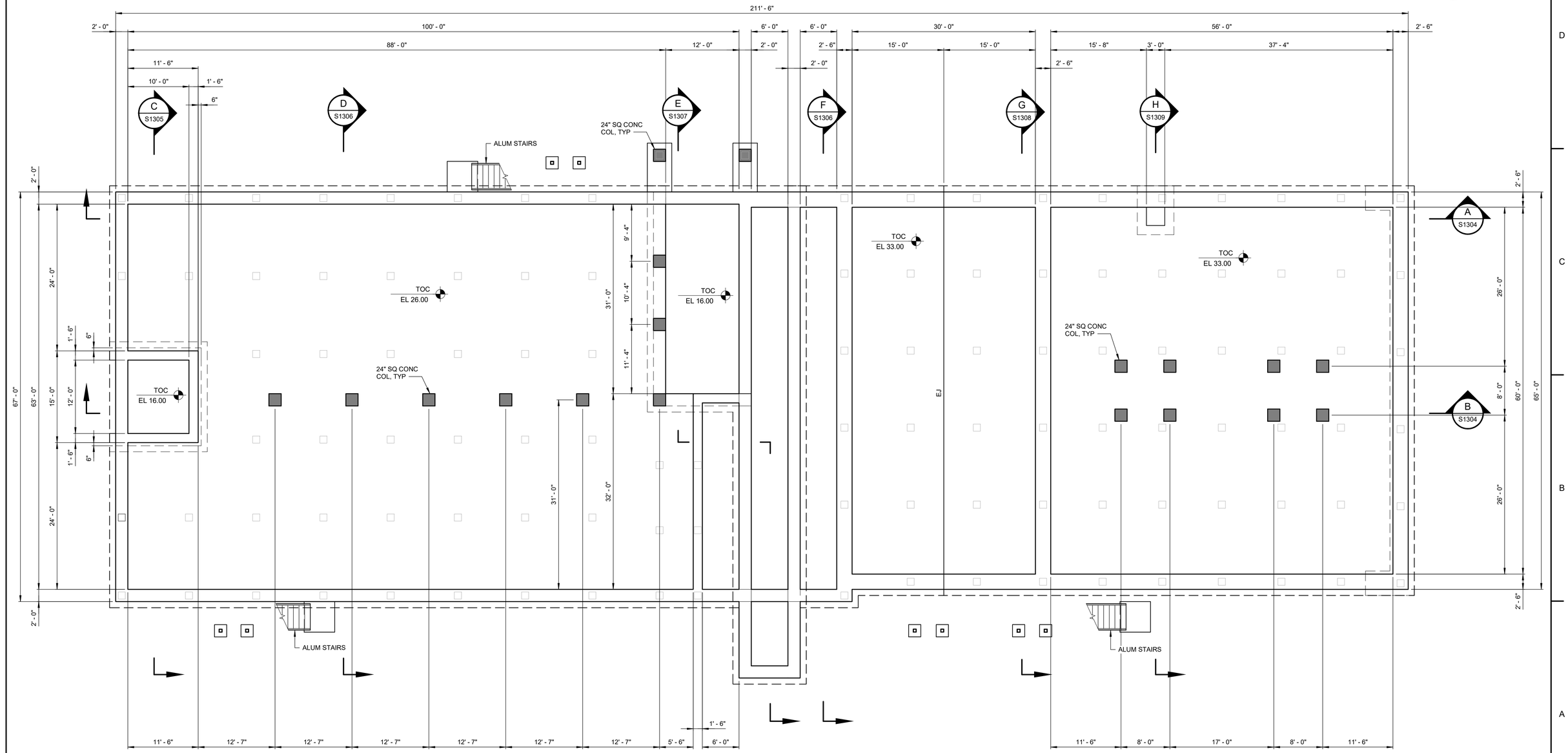
FILENAME FILENAME.rvt
SCALE As indicated

DWG NO. S1214

GENERAL NOTES:

1. SEE DRAWING S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES DRAWINGS FOR STANDARD STRUCTURAL DETAILS.

KEY NOTES



FOUNDATION PLAN - ELEVATION 33.00 (UNO)

1/8" = 1'-0"

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Virginia Beach, VA 23462
757.222.1500

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK FOUNDATION PLAN

0 1" 2"

FILENAME FILENAME.rvt

SCALE 1/8" = 1'-0"

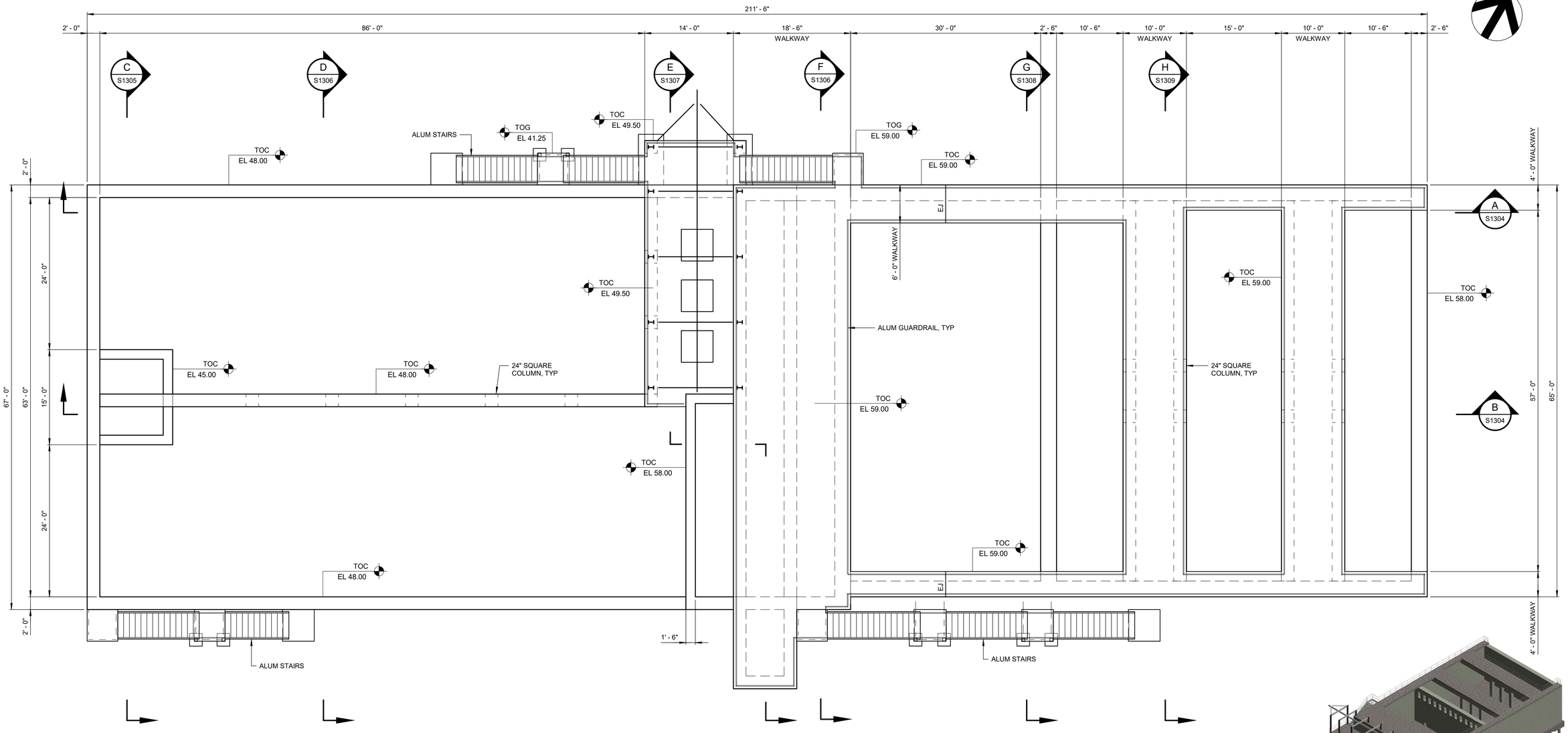
DWG NO. S1301

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:23:54 AM

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.

KEY NOTES



UPPER PLAN

1/8" = 1'-0"

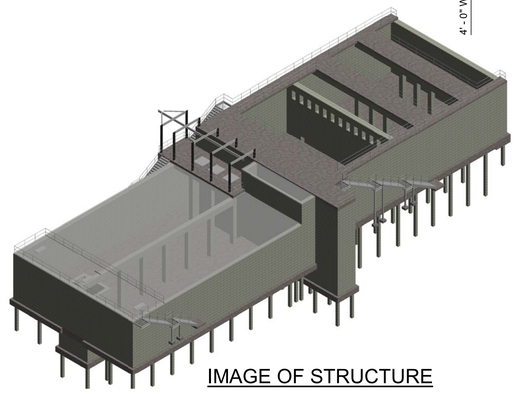


IMAGE OF STRUCTURE

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:00 AM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK UPPER PLAN

0 1" 2"

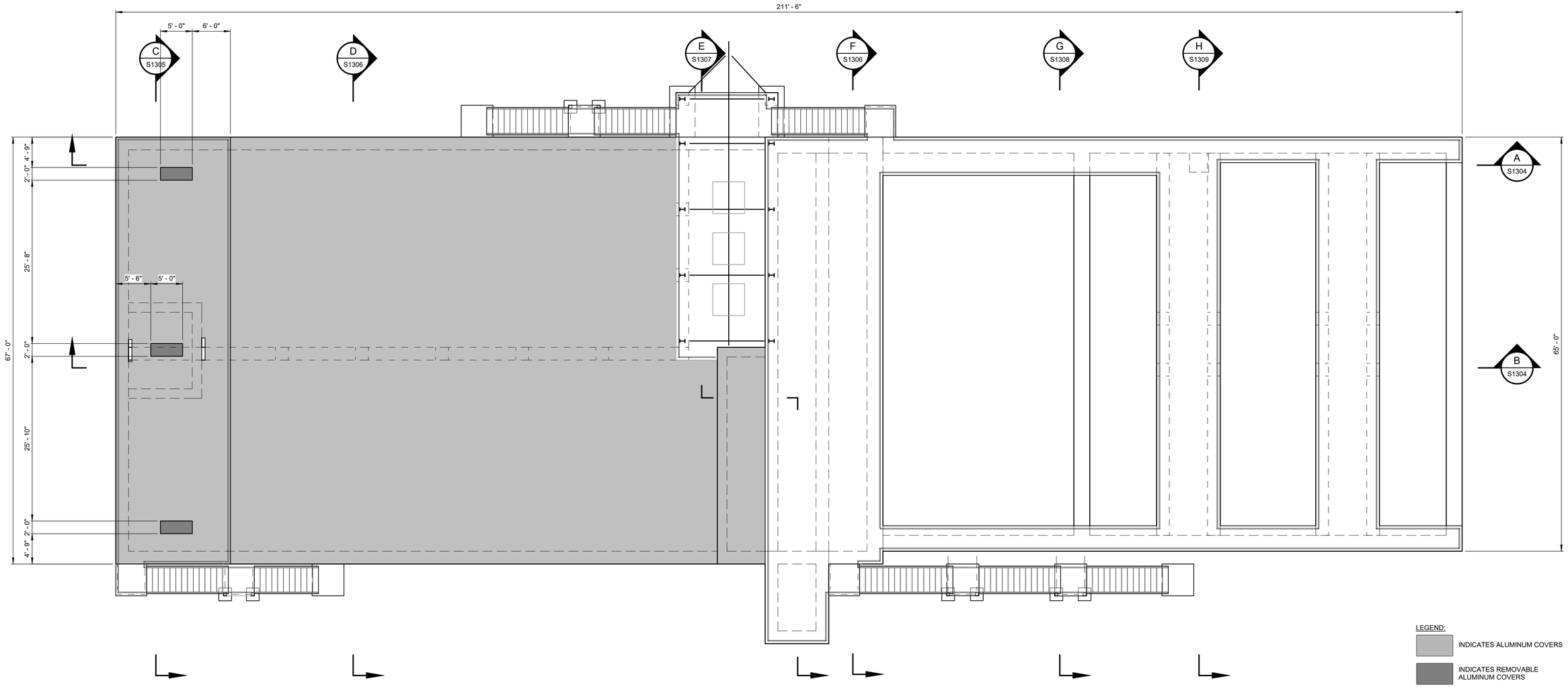
FILENAME FILENAME.rvt

SCALE 1/8" = 1'-0"

DWG NO. **S1302**

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.



LEGEND:

INDICATES ALUMINUM COVERS

INDICATES REMOVABLE ALUMINUM COVERS

COVER PLAN

1/8" = 1'-0"

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK COVER PLAN

0 1" 2"

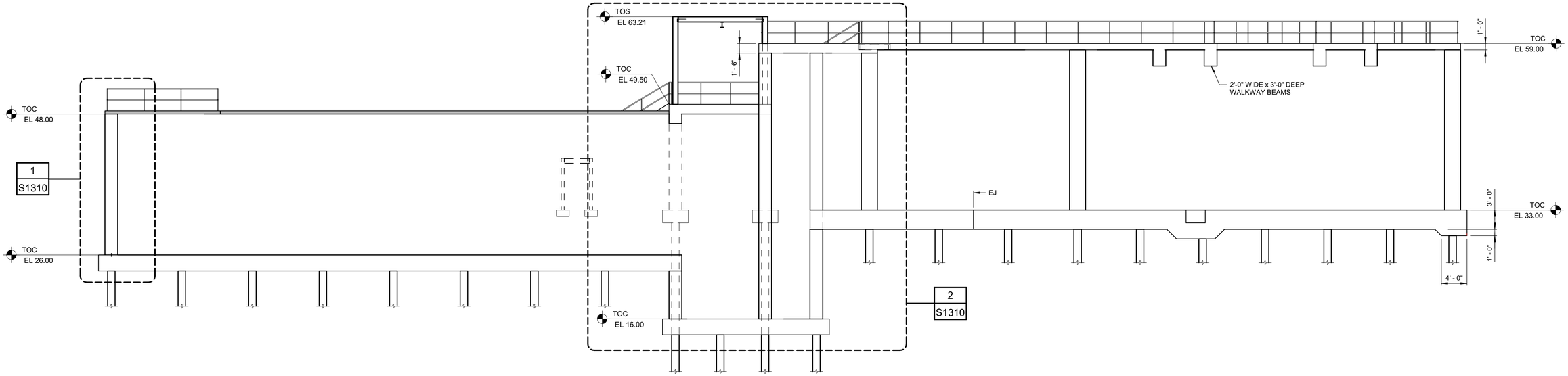
FILENAME	FILENAME.rvt
SCALE	As indicated

DWG NO. **S1303**

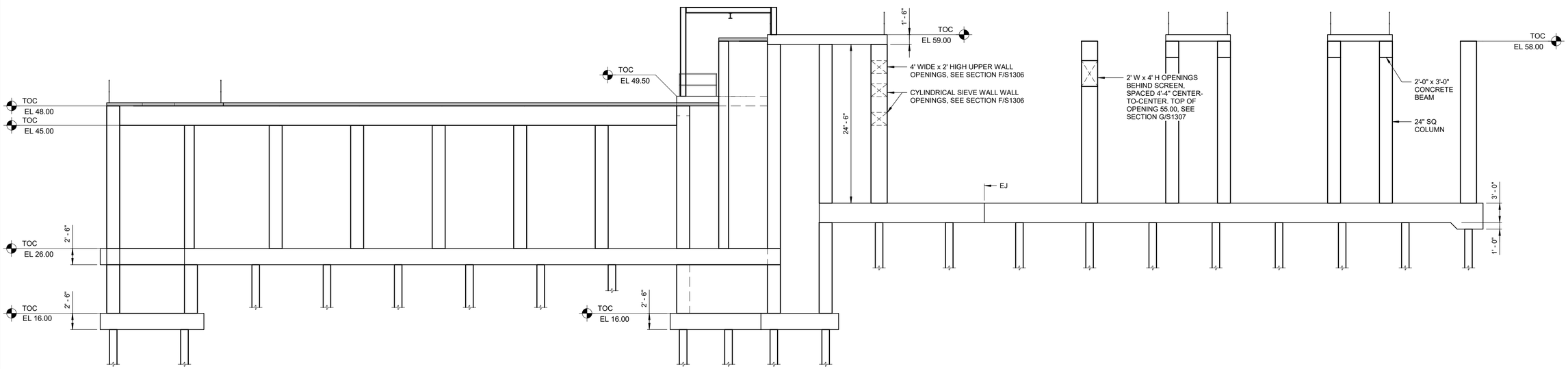
BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:01 AM

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.



SECTION A
1/8" = 1'-0"
S1301



SECTION B
1/8" = 1'-0"
S1301

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 1

0 1" 2"

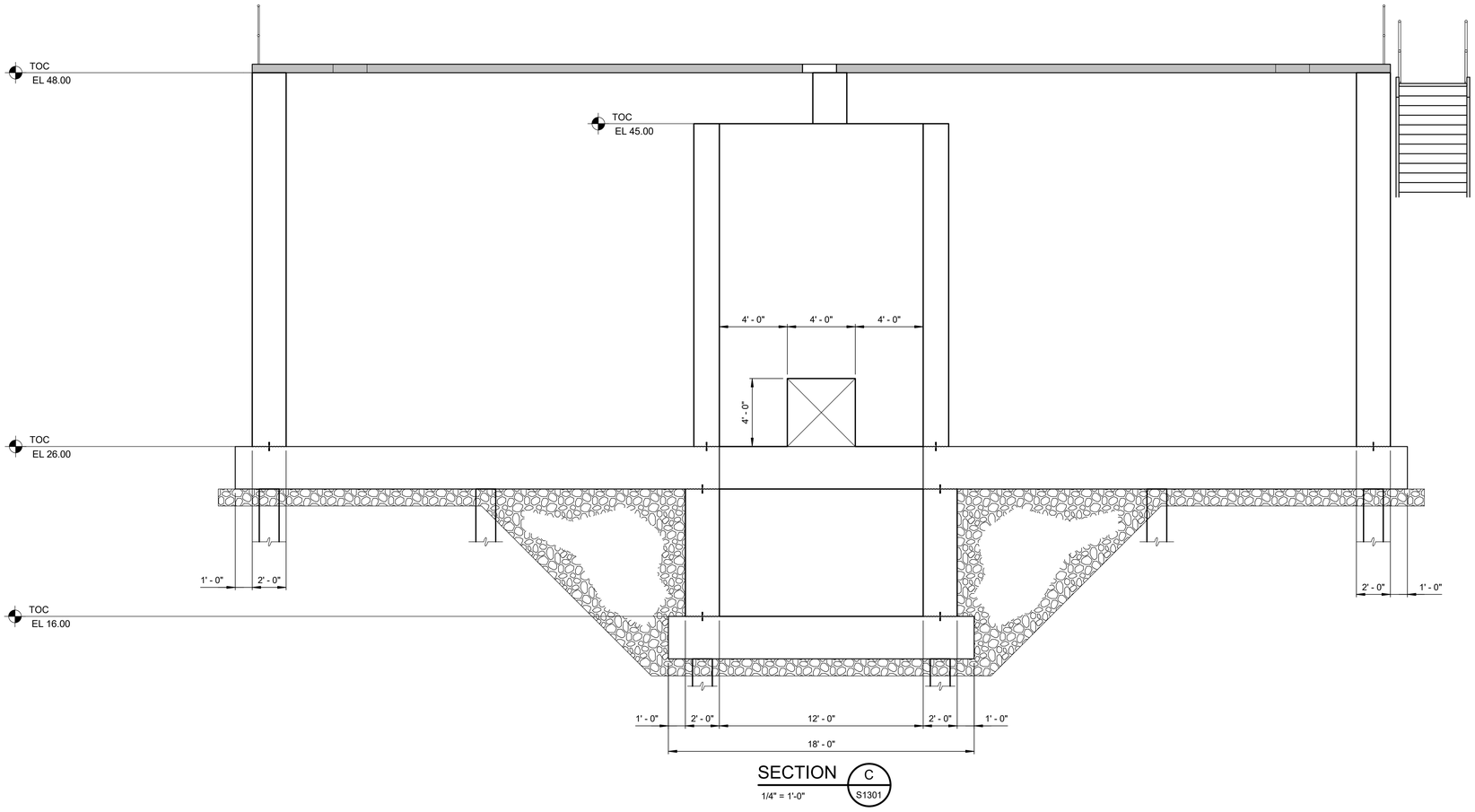
FILENAME	FILENAME.rvt
SCALE	1/8" = 1'-0"

DWG NO. **S1304**

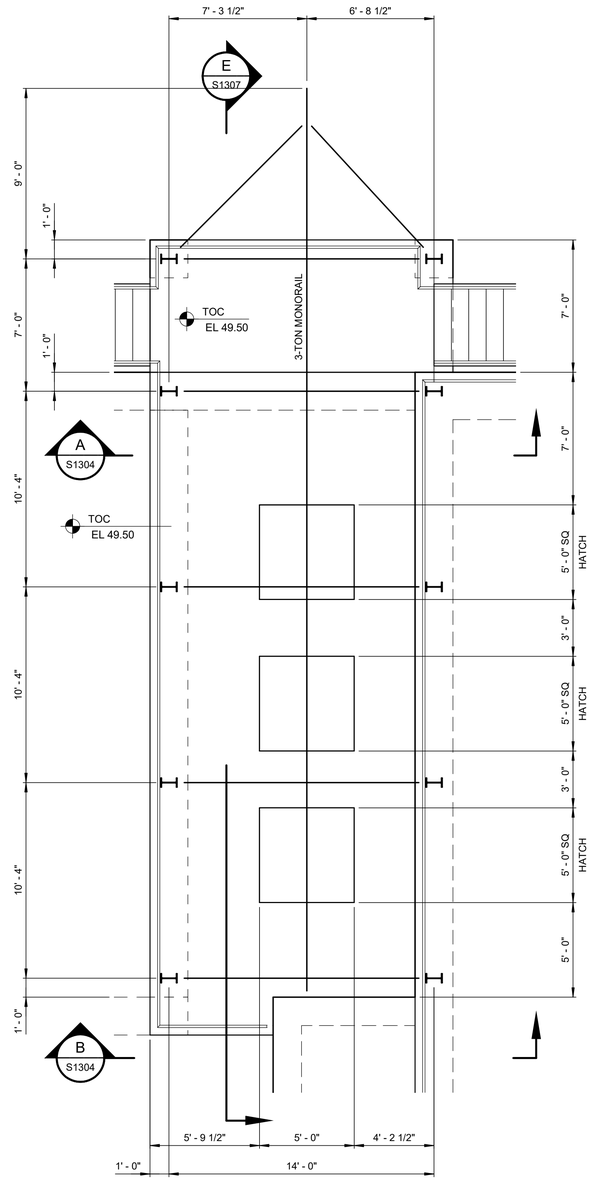
BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:01 AM

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.
2. ALL MONORAIL FRAMING TO BE PAINTED STEEL UNO.



SECTION C S1301
1/4" = 1'-0"



MONORAIL PLAN
1/4" = 1'-0"

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:02 AM

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Virginia Beach, VA 23462
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ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 2

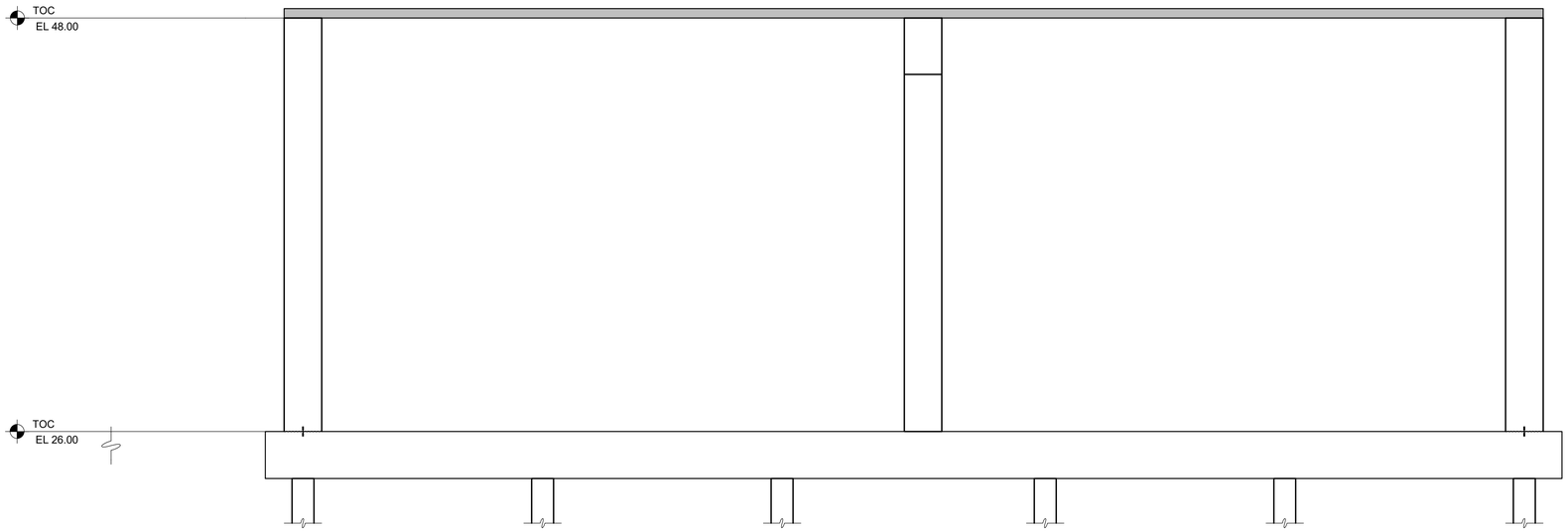
0 1" 2"

FILENAME: FILENAME.rvt
SCALE: 1/4" = 1'-0"

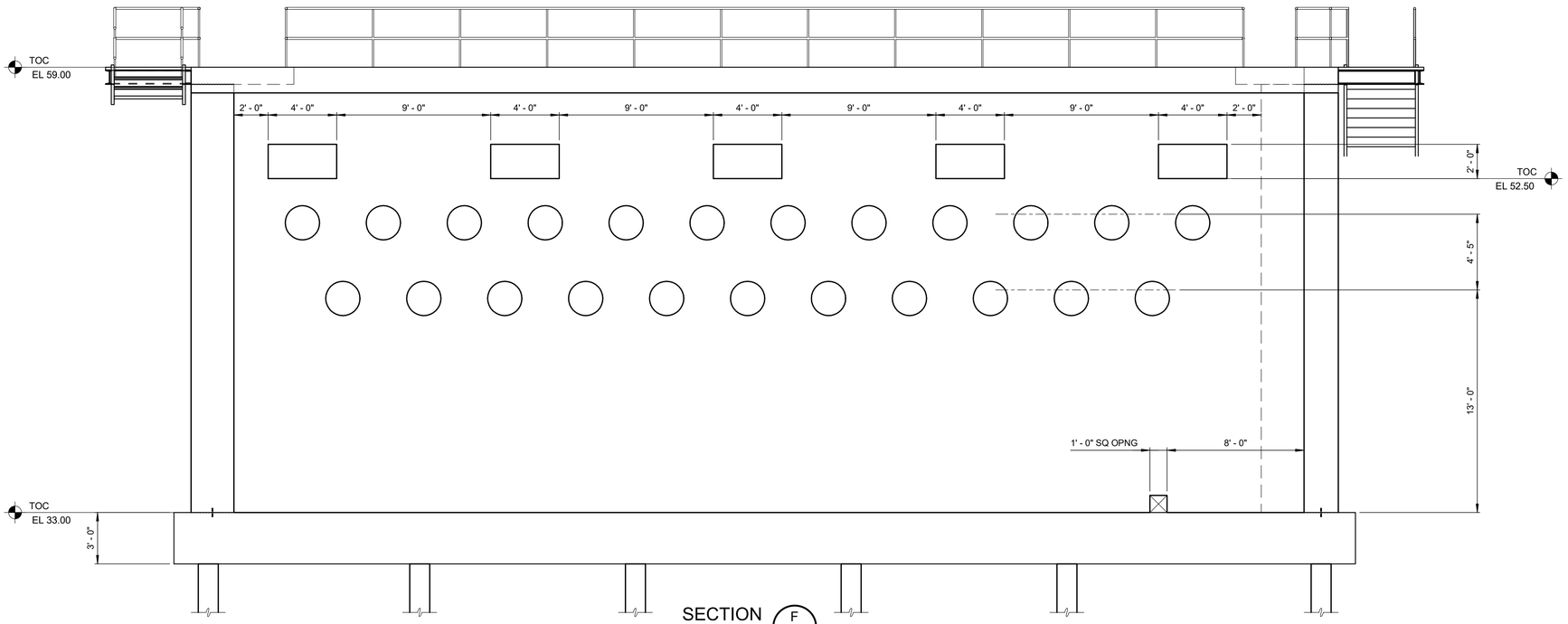
DWG NO. S1305

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.



SECTION D
1/4" = 1'-0"
S1301



SECTION F
1/4" = 1'-0"
S1301

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

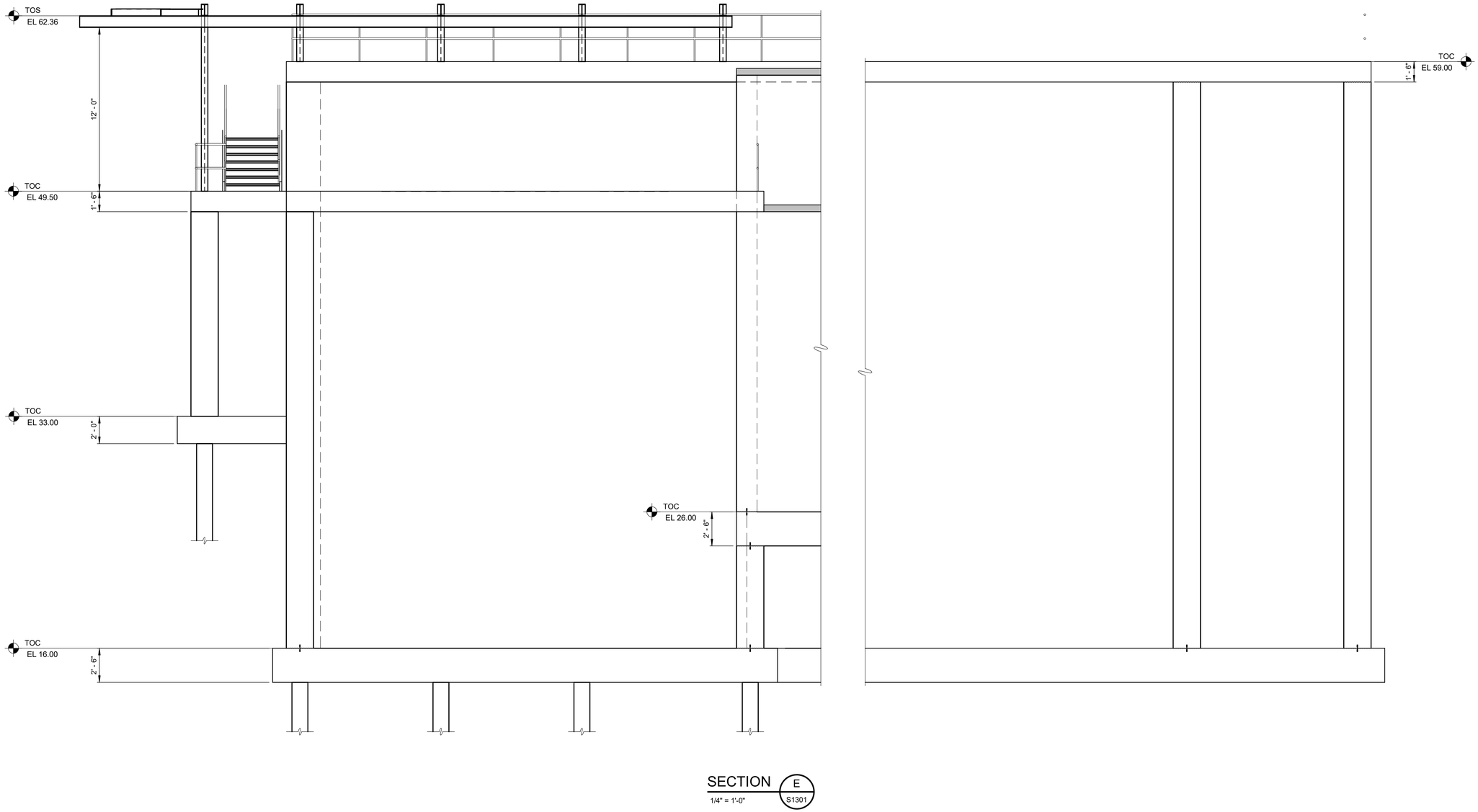
MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 3

0 1" 2"

FILENAME FILENAME.rvt
SCALE 1/4" = 1'-0"

DWG NO. S1306

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:02 AM



SECTION E
1/4" = 1'-0" S1301

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.

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ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

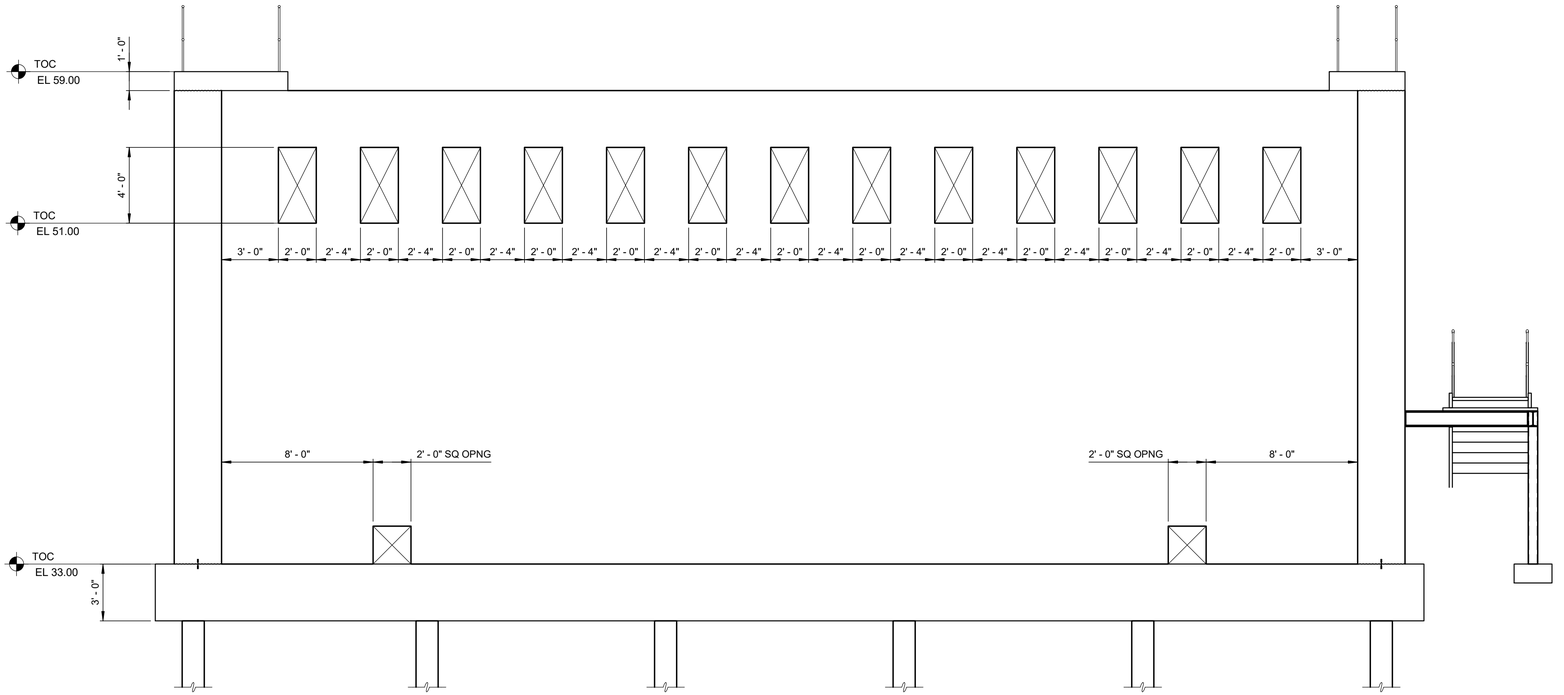
MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 4

0 1" 2"

FILENAME FILENAME.rvt
SCALE 1/4" = 1'-0"

DWG NO. S1307

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:03 AM



SECTION G
1/4" = 1'-0" S1301

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.

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Virginia Beach, VA 23462
757.222.1500

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 5

0 1" 2"

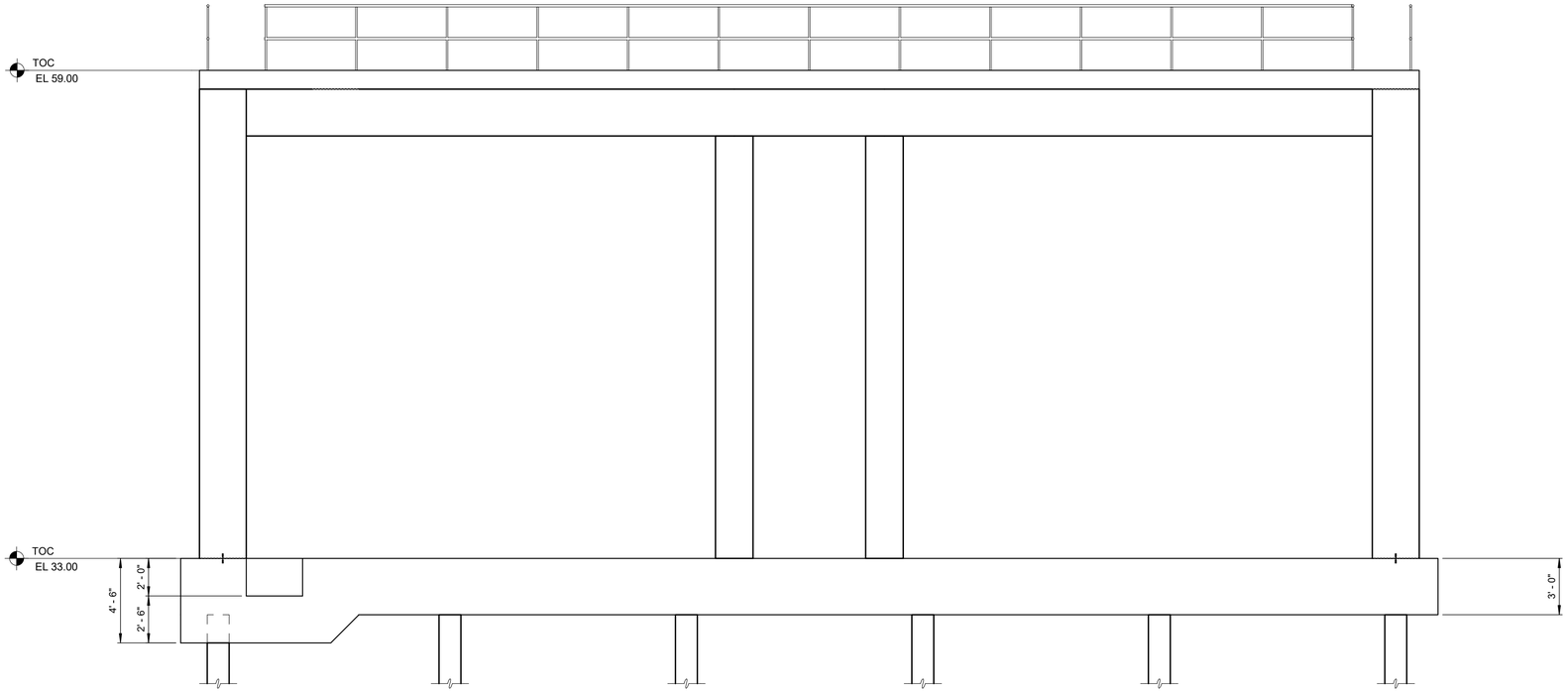
FILENAME FILENAME.rvt
SCALE 1/4" = 1'-0"

DWG NO. **S1308**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:03 AM

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.



SECTION H
1/4" = 1'-0" S1301

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK SECTIONS 6

0 1" 2"

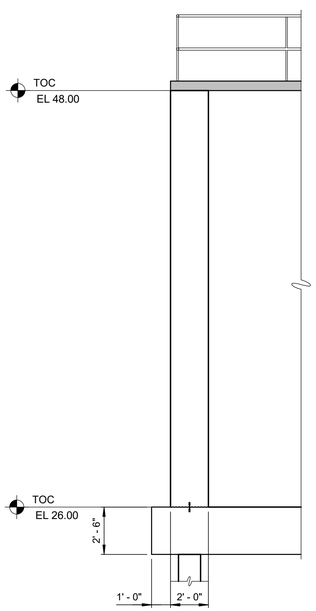
FILENAME	FILENAME.rvt
SCALE	1/4" = 1'-0"

DWG NO. **S1309**

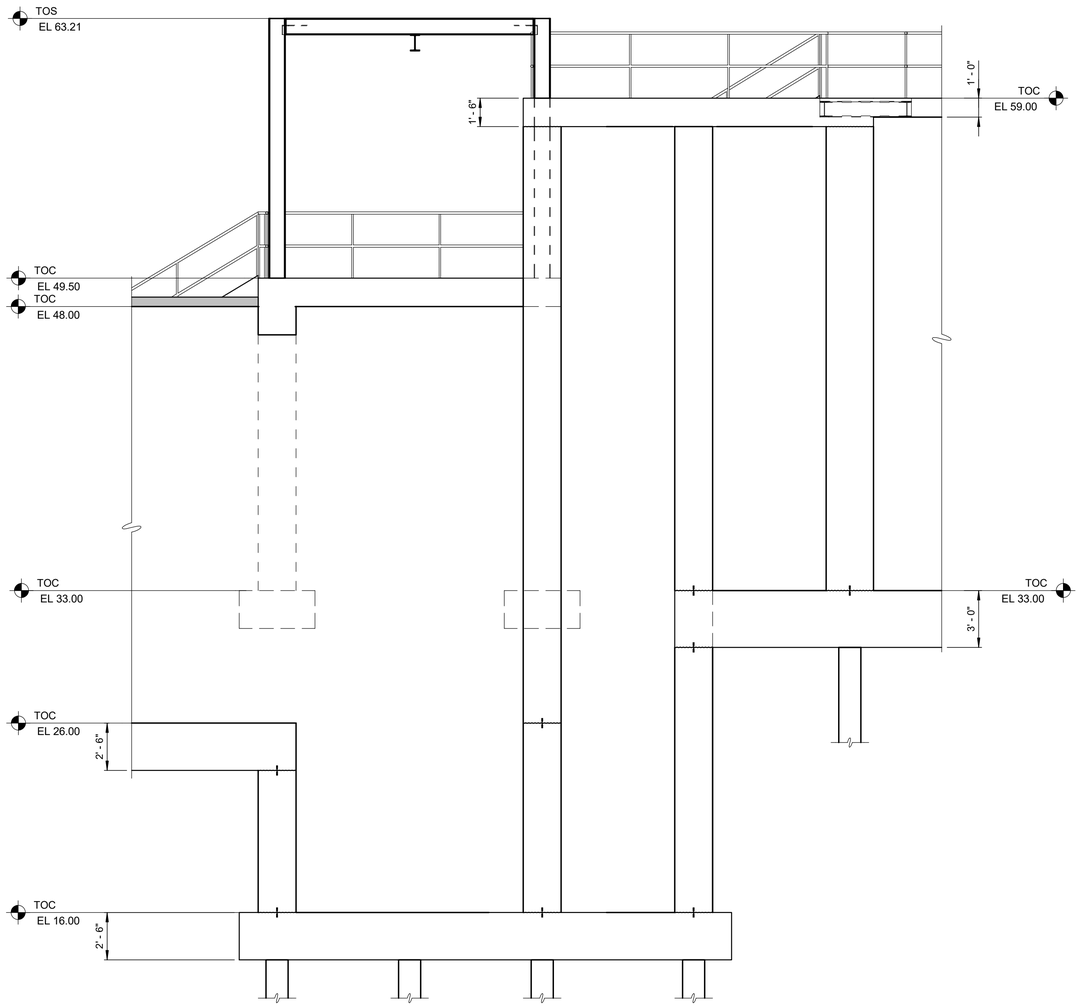
BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:04 AM

GENERAL NOTES:

1. SEE DRAWING S1301 FOR ADDITIONAL NOTES.



DETAIL 1
1/4" = 1'-0" S1304



DETAIL 2
1/4" = 1'-0" S1304

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1300-MBBR-S.rvt
10/3/2021 8:24:04 AM

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	M.E. MARTIN
CHECKED BY	Checker
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

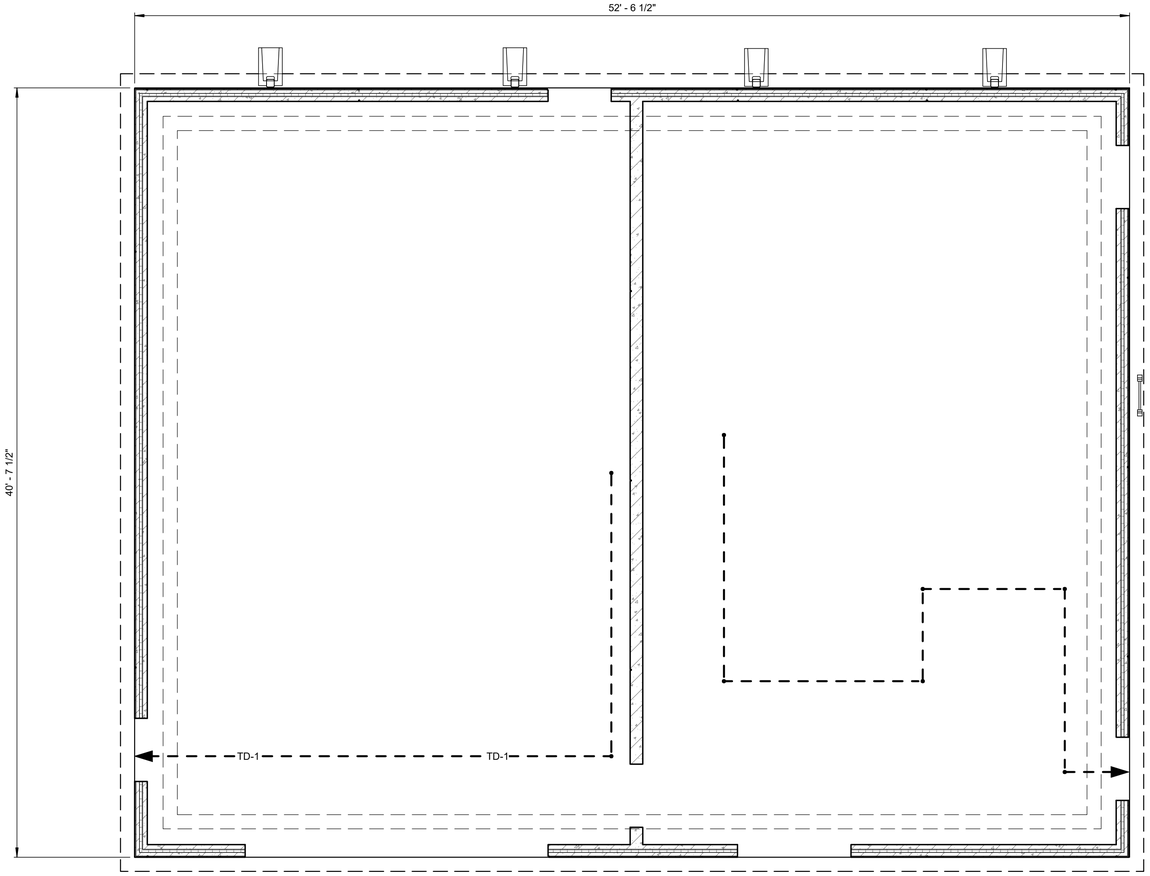
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR AND SWIFT INFLUENT EQ TANK DETAILS 1

0 1" 2"

FILENAME	FILENAME.rvt
SCALE	1/4" = 1'-0"

DWG NO. **S1310**



PLAN AT EL 0.00
1/4" = 1'-0"

GENERAL NOTES

1. --

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	E. MARTIN
CHECKED BY	V. PATEL
DRAWN BY	N. COBLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

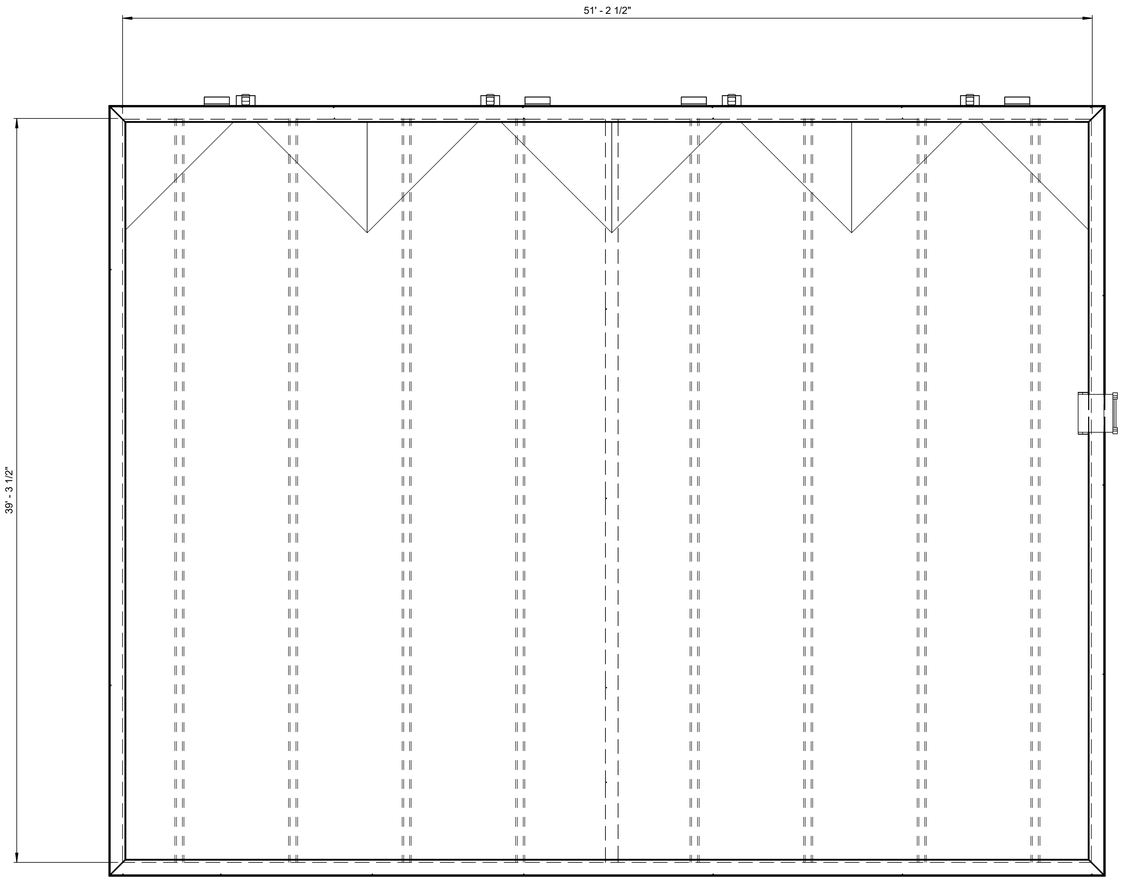
MBBR BLOWER BUILDING FOUNDATION PLAN

0 1" 2"

FILENAME 10292462-1350-BELE-S.rvt
SCALE 1/4" = 1'-0"

DWG NO. S1350

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1350-BELE-S.rvt
10/5/2021 8:15:09 AM



PLAN AT EL 15.00

1/4" = 1'-0"

N

GENERAL NOTES

1. --

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1350-BELE-S.rvt
10/5/2021 8:15:09 AM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	E. MARTIN
CHECKED BY	V. PATEL
DRAWN BY	N. COBLER
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

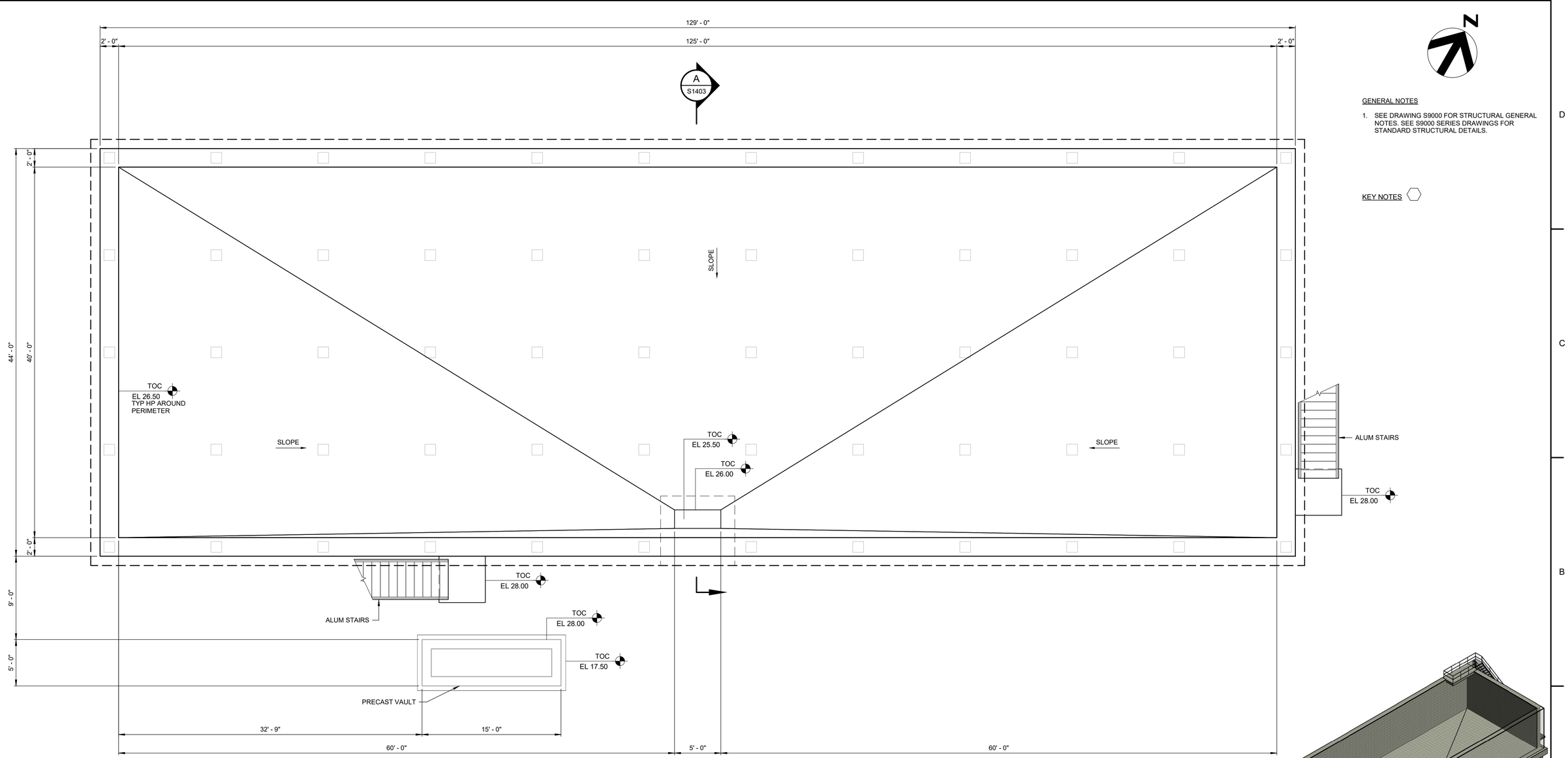
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MBBR BLOWER BUILDING ROOF FRAMING PLAN

0 1" 2"

FILENAME	10292462-1350-BELE-S.rvt
SCALE	1/4" = 1'-0"

DWG NO. **S1351** of XXX



FOUNDATION PLAN

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES DRAWINGS FOR STANDARD STRUCTURAL DETAILS.

KEY NOTES

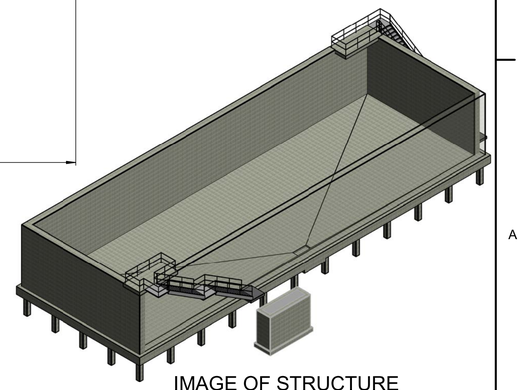


IMAGE OF STRUCTURE

HDR US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

WELL BACKFLUSH EQ TANK FOUNDATION PLAN

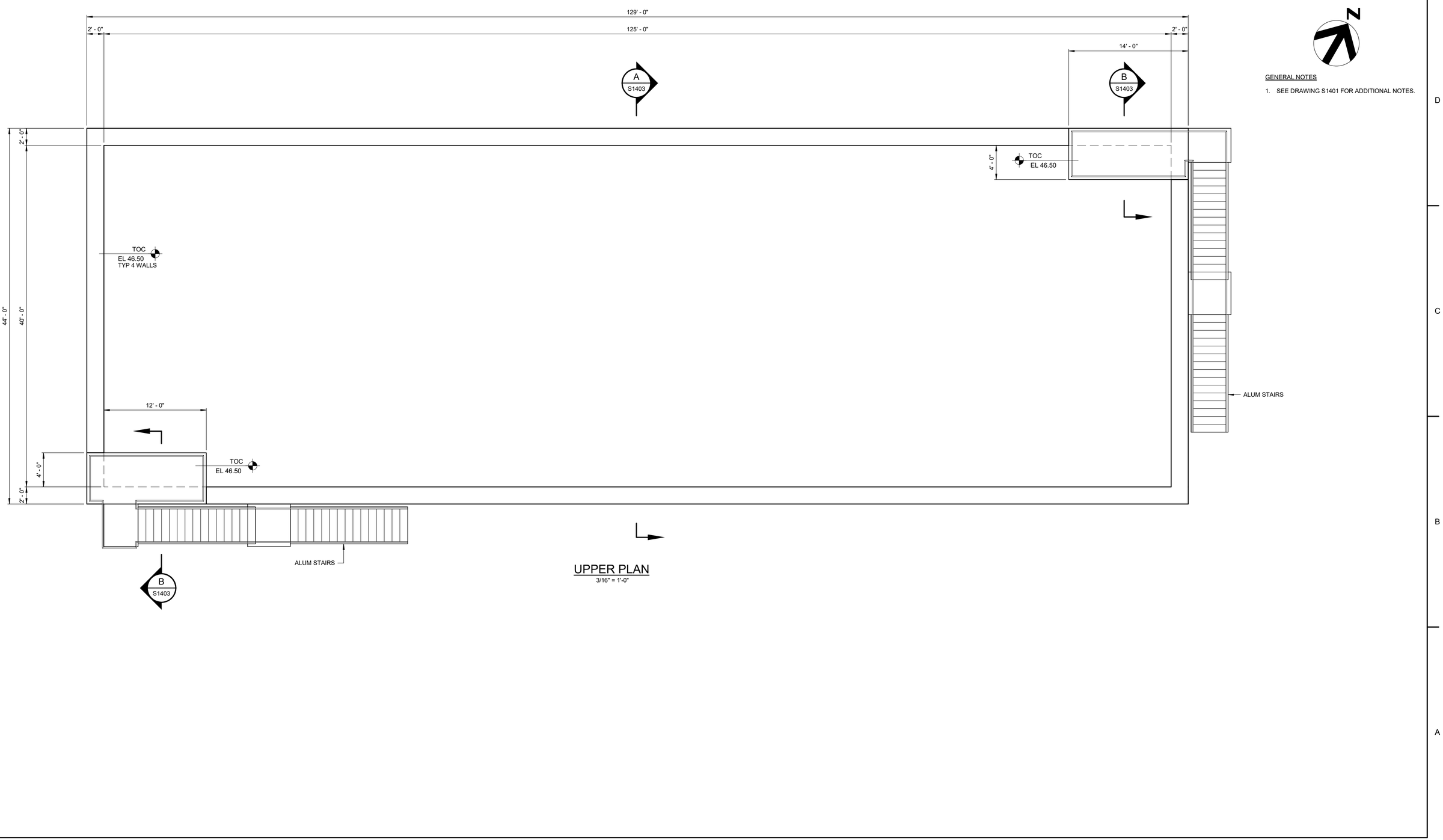
0 1" 2"

FILENAME FILENAME.rvt

SCALE 3/16" = 1'-0"

DWG NO. S1401

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1400-WBEQ-S.rvt
10/1/2021 10:24:58 AM



GENERAL NOTES

1. SEE DRAWING S1401 FOR ADDITIONAL NOTES.

UPPER PLAN

3/16" = 1'-0"

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

WELL BACKFLUSH EQ TANK UPPER PLAN

0 1" 2"

FILENAME	FILENAME.rvt
SCALE	3/16" = 1'-0"

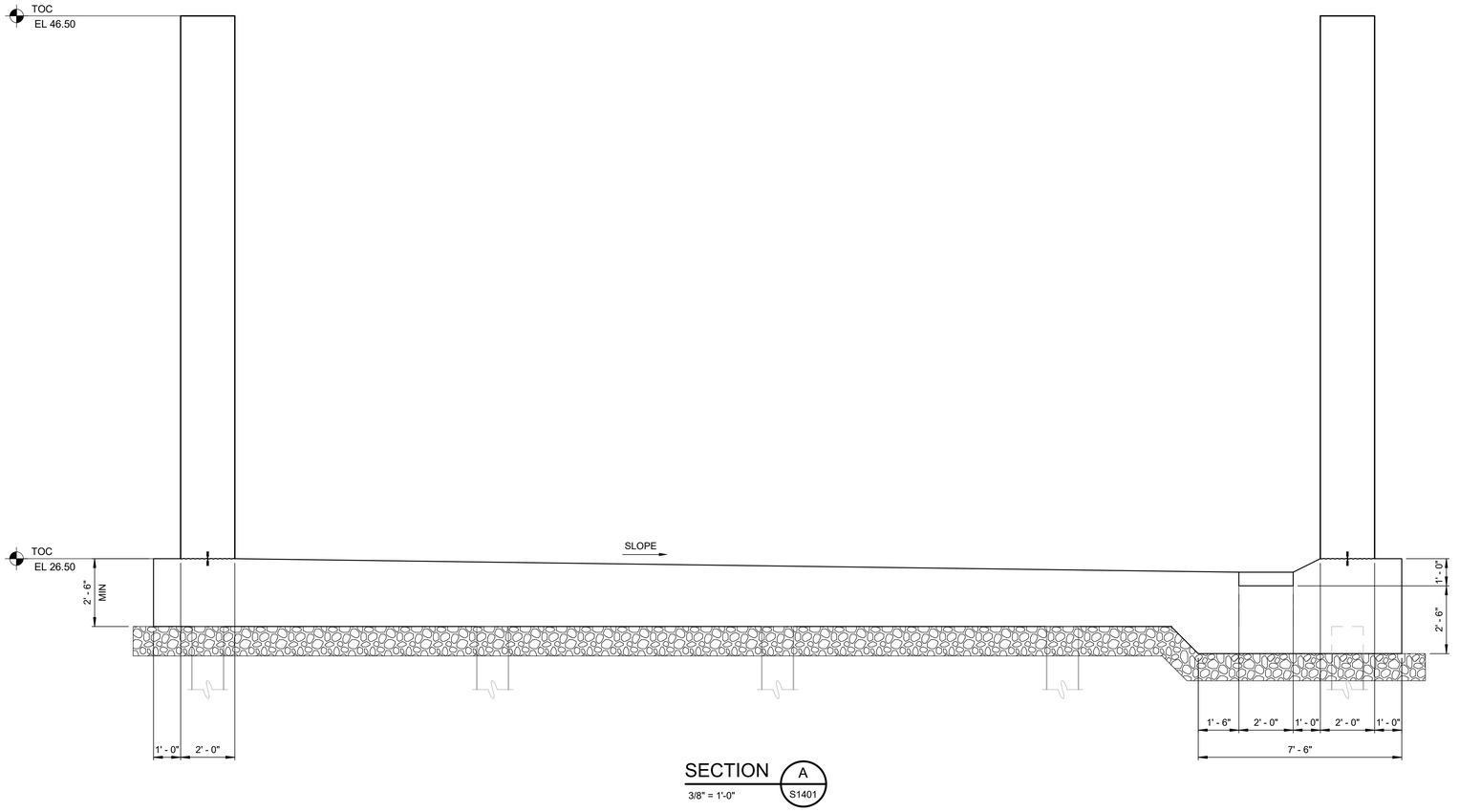
DWG NO. **S1402**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1400-WBEQ-S.rvt
10/1/2021 10:24:59 AM

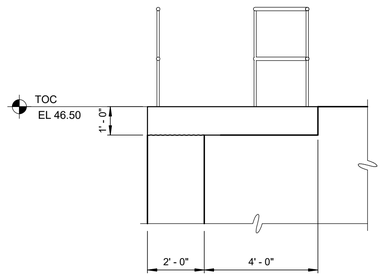
GENERAL NOTES

1. SEE DRAWING S1401 FOR ADDITIONAL NOTES.

KEY NOTES



SECTION A
3/8" = 1'-0"
S1401



SECTION B
3/8" = 1'-0"
S1402

HDR US-A
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

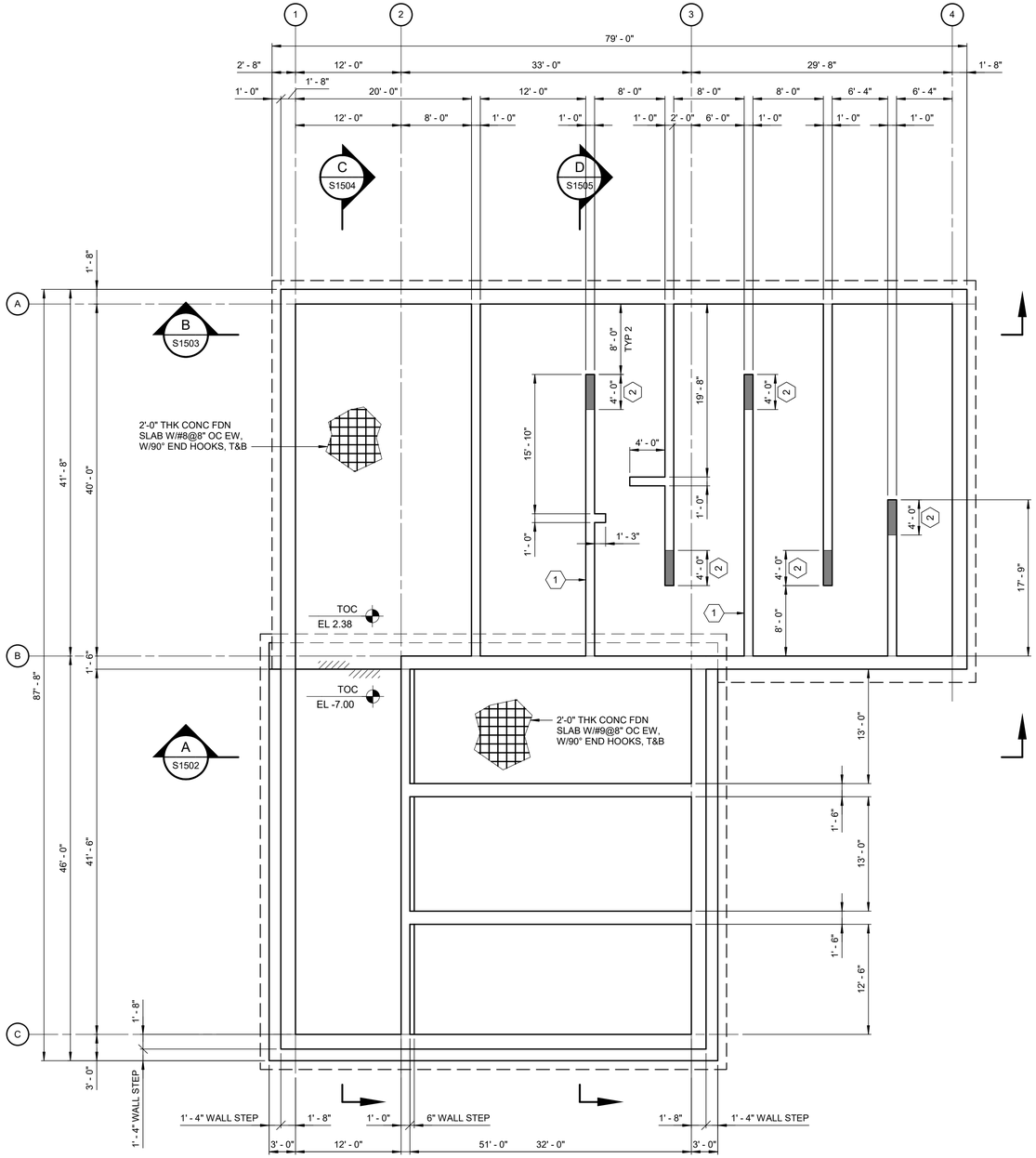
WELL BACKFLUSH EQ TANK SECTIONS 1

0 1" 2"

FILENAME FILENAME.rvt
SCALE 3/8" = 1'-0"

DWG NO. **S1403**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1400-WBEQ-S.rvt
10/1/2021 10:24:59 AM



FOUNDATION PLAN

1/8" = 1'-0"

N

GENERAL NOTES

1. SEE 99S SERIES FOR STRUCTURAL GENERALL NOTES AND STANDARD STRUCTURAL DETAILS.
2. (*) INDICATES DIMENSION/ITEM TO BE VERIFIED PRIOR TO FABRICATION AND CONSTRUCTION.

KEY NOTES (#)

1. SEE SECTION B/S1502 FOR WALL REINFORCING.
2. #7@8" OC VERTICAL REINFORCING, TYP EACH FACE.

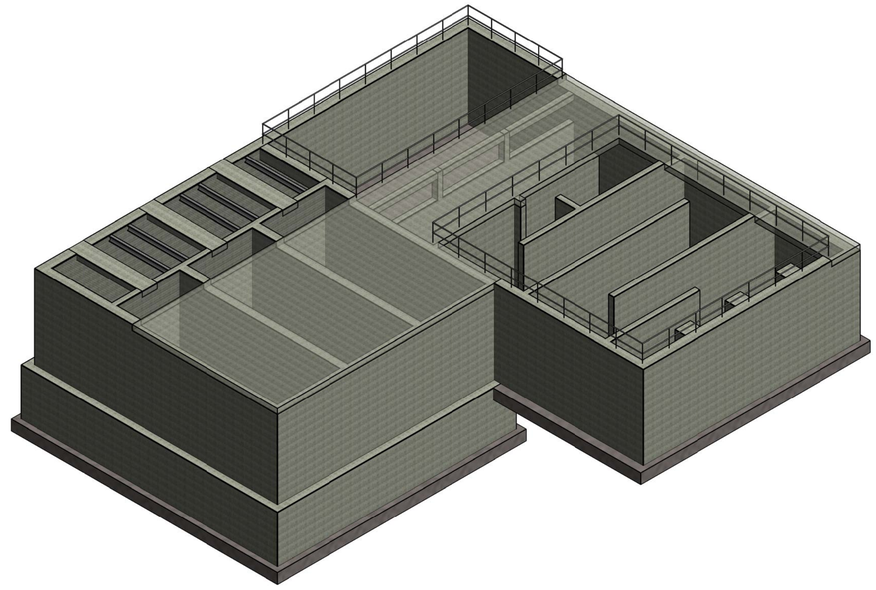


IMAGE OF SPLITTER BOX

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

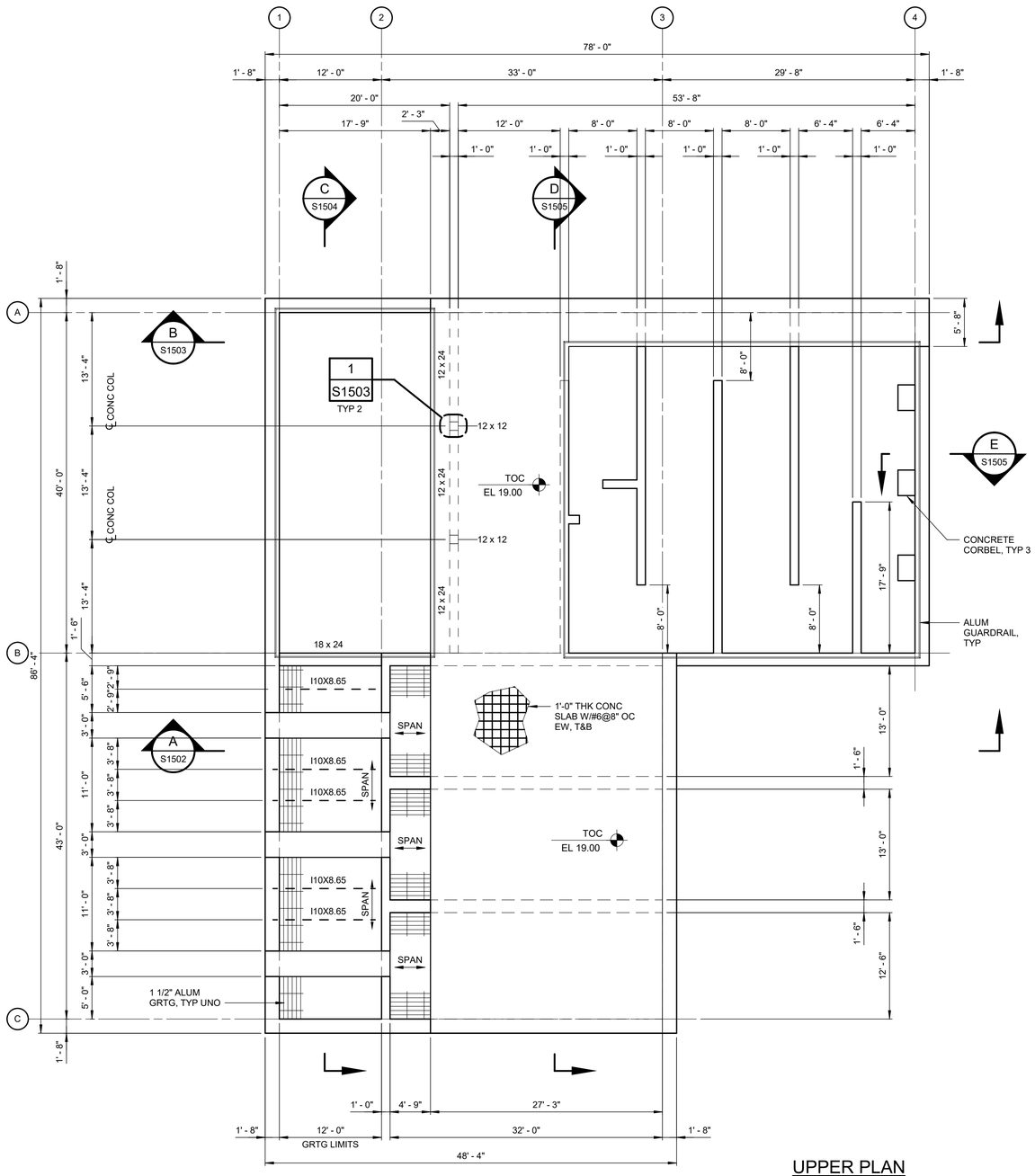
JUNCTION AND SPLITTER BOX FOUNDATION PLAN

0 1" 2"

FILENAME	10292462-1500-MRIPS-S.rvt
SCALE	1/8" = 1'-0"

DWG NO. **S1500**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
9/29/2021 12:42:53 PM



UPPER PLAN
1/8" = 1'-0"

GENERAL NOTES

1. SEE SHEET S1500 FOR ADDITIONAL NOTES.
2. ALL METAL FRAMING SHALL BE ALUMINUM, UNO. ALL FASTENERS SHALL BE SST 304, UNO.

KEY NOTES

US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

JUNCTION AND SPLITTER BOX UPPER LEVEL PLAN

0 1" 2"

FILENAME	10292462-1500-MRIPS-S.rvt
SCALE	1/8" = 1'-0"

DWG NO. **S1501**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
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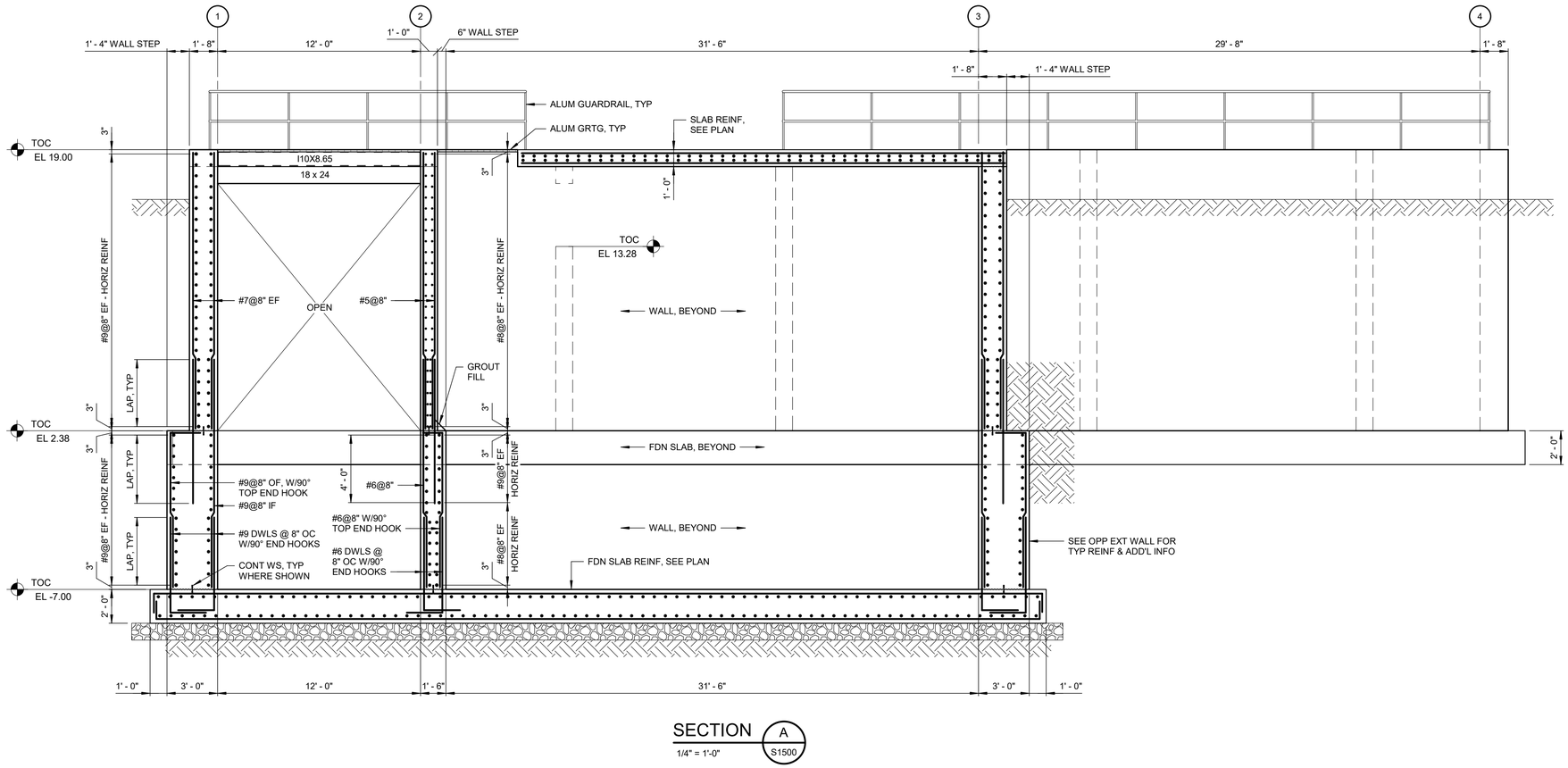

SECTION A
1/4" = 1'-0"
S1500

GENERAL NOTES

1. SEE SHEET S1500 FOR ADDITIONAL NOTES.

KEY NOTES

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
9/29/2021 12:42:54 PM

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

JUNCTION AND SPLITTER BOX SECTIONS 1

0 1" 2"

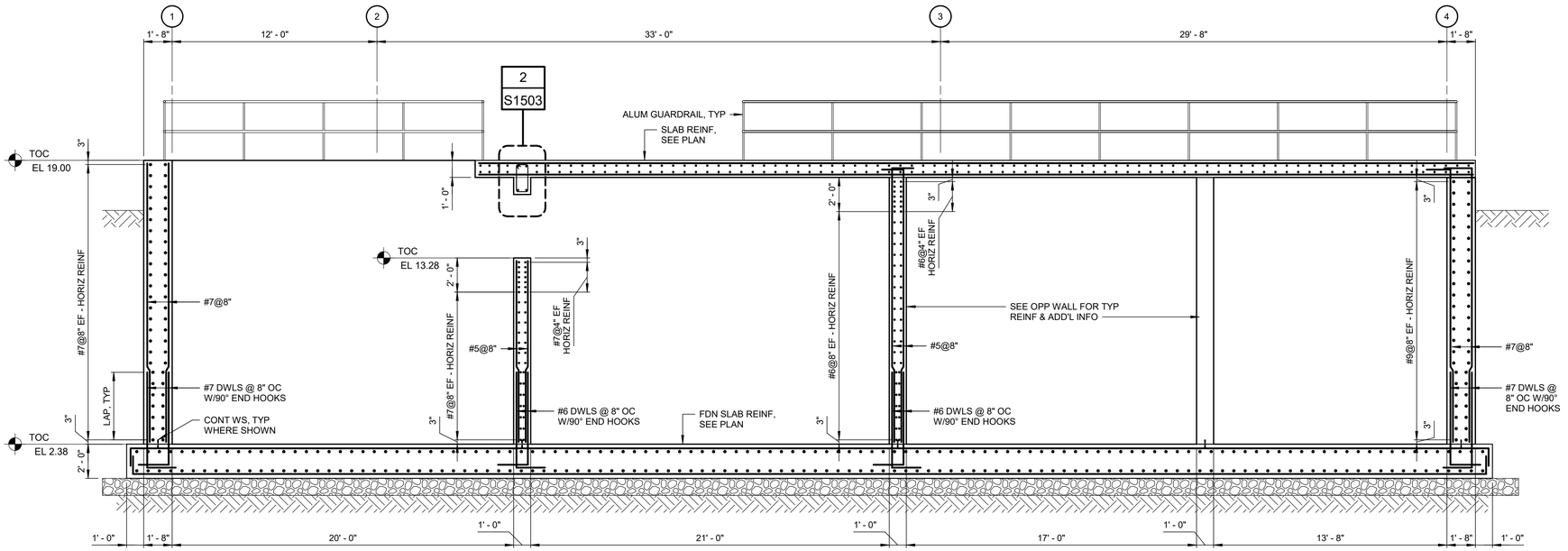
FILENAME 10292462-1500-MRIPS-S.rvt
SCALE 1/4" = 1'-0"

DWG NO. **S1502**

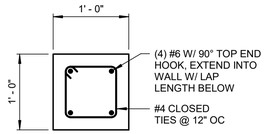
GENERAL NOTES

1. SEE SHEET S1500 FOR ADDITIONAL NOTES.

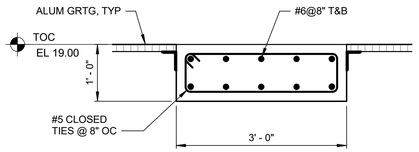
KEY NOTES



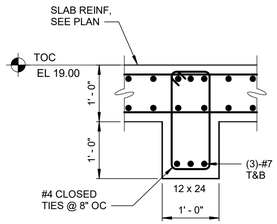
SECTION B S1500
1/4" = 1'-0"



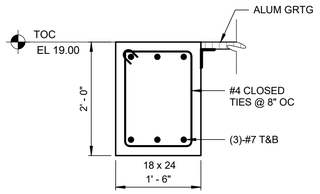
DETAIL 1 S1501
1" = 1'-0"



DETAIL 3 S1504
3/4" = 1'-0"



DETAIL 2 S1503
3/4" = 1'-0"



DETAIL 4 S1504
3/4" = 1'-0"

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
9/29/2021 12:42:54 PM

HDR
US-A Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400) WORK PACKAGE 2

JUNCTION AND SPLITTER BOX SECTIONS 2

0 1" 2"

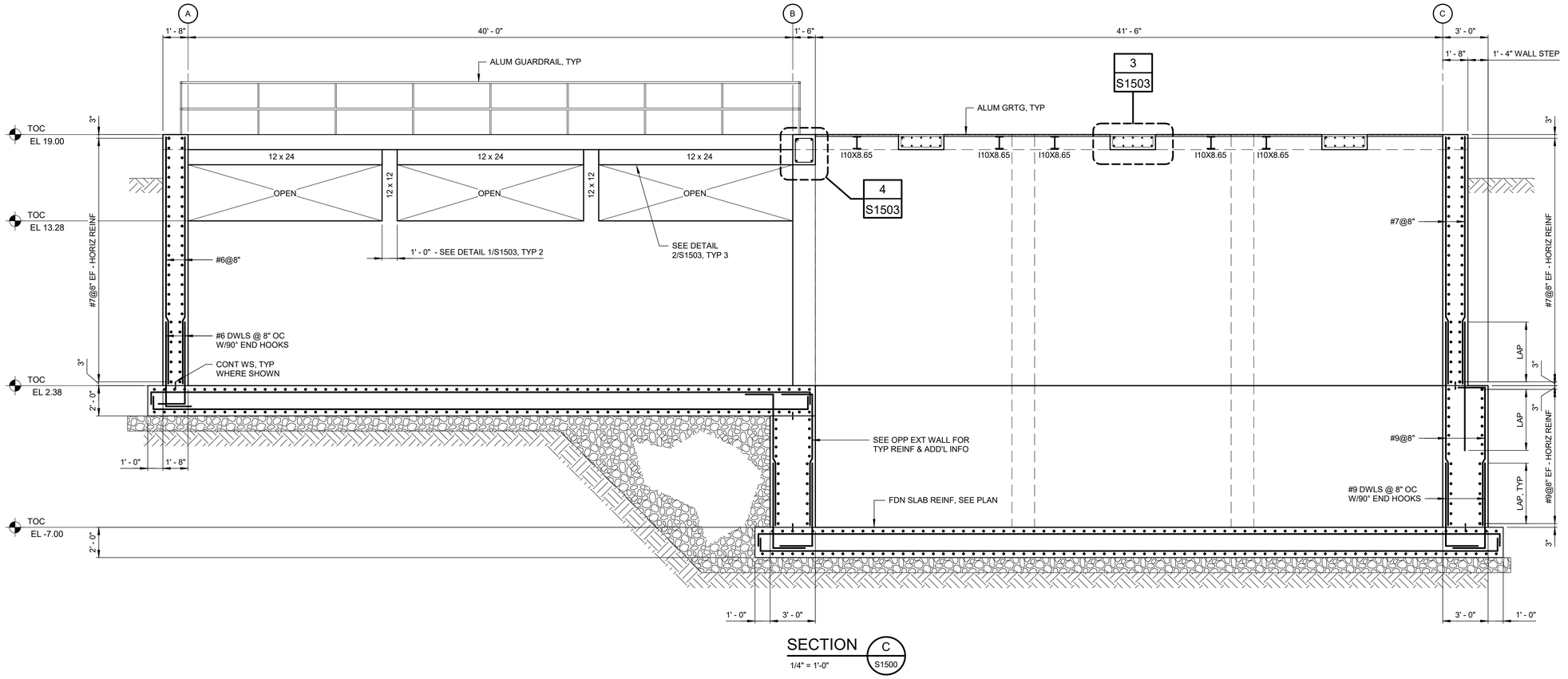
FILENAME 10292462-1500-MRIPS-S.rvt

SCALE As indicated

DWG NO. S1503

GENERAL NOTES

1. SEE SHEET S1500 FOR ADDITIONAL NOTES.



SECTION C S1500
1/4" = 1'-0"

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
9/29/2021 12:42:55 PM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

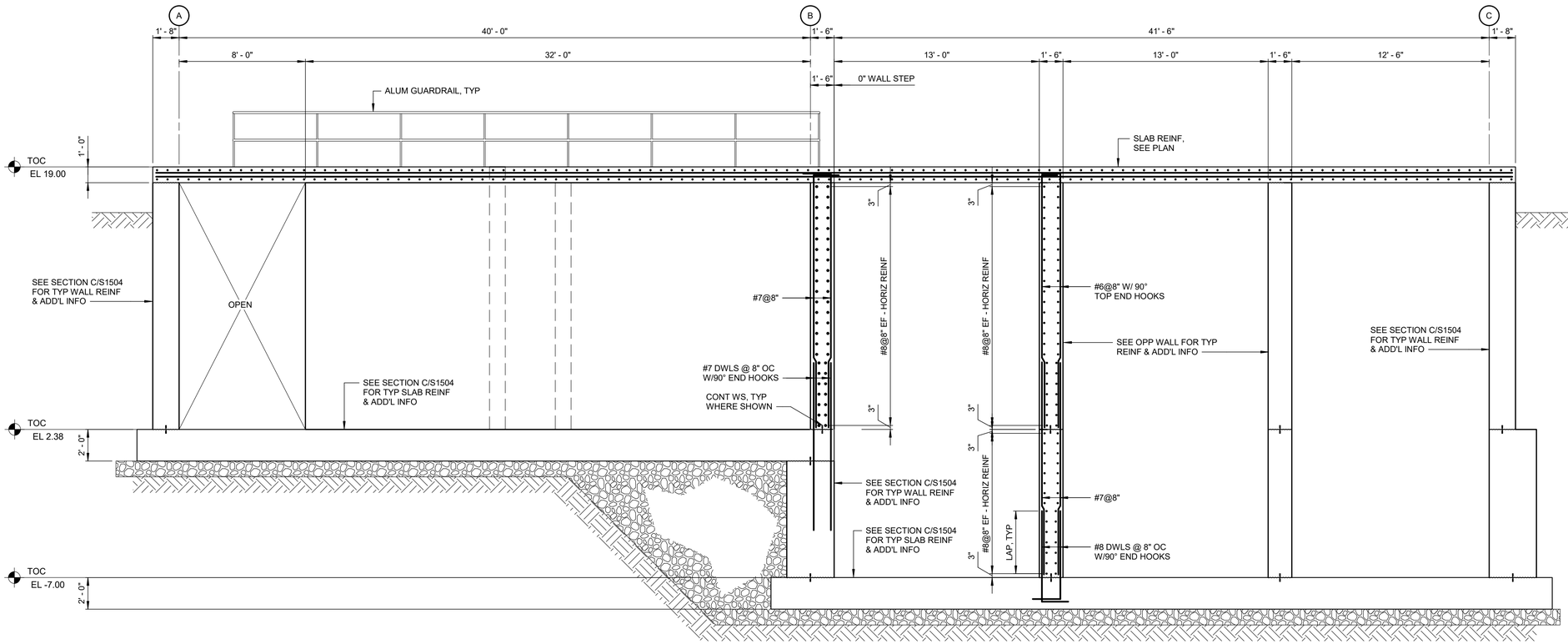
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

JUNCTION AND SPLITTER BOX SECTIONS 3

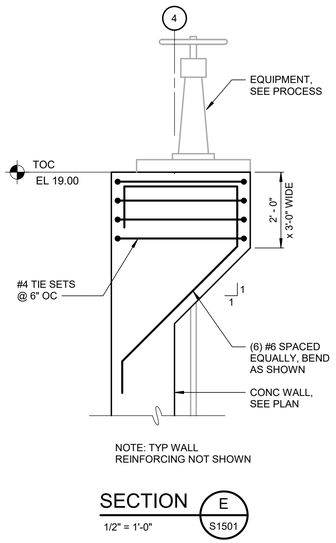
0 1" 2"

FILENAME 10292462-1500-MRIPS-S.rvt
SCALE 1/4" = 1'-0"

DWG NO. **S1504**



SECTION D S1500
1/4" = 1'-0"



NOTE: TYP WALL REINFORCING NOT SHOWN

SECTION E S1501
1/2" = 1'-0"

GENERAL NOTES

1. SEE SHEET S1500 FOR ADDITIONAL NOTES.

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	J. COOKSEY
CHECKED BY	V. PATEL
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

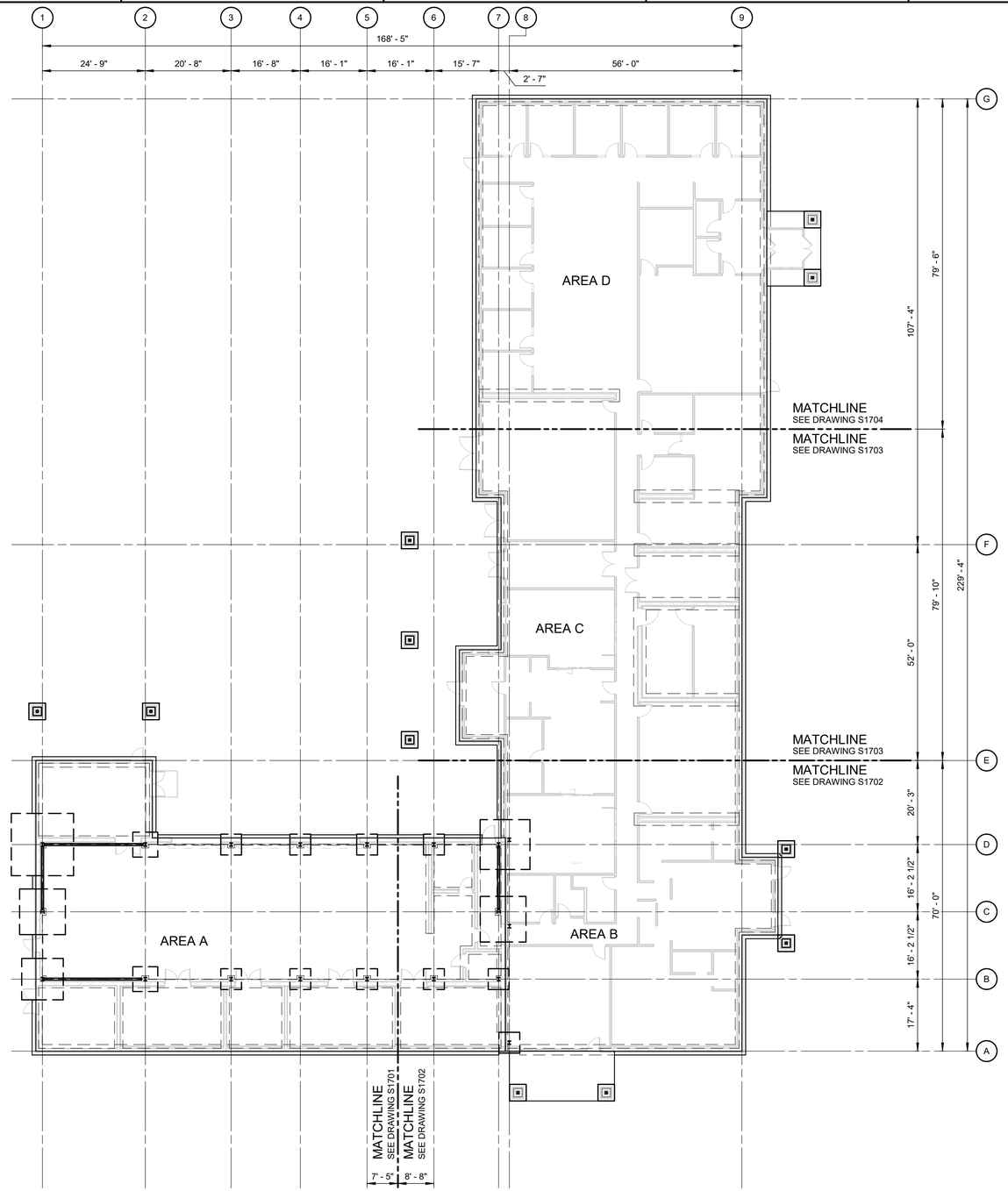
JUNCTION AND SPLITTER BOX SECTIONS 4

0 1" 2"

FILENAME 10292462-1500-MRIPS-S.rvt
SCALE As indicated

DWG NO. **S1505**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1500-MRIPS-S.rvt
9/29/2021 12:42:55 PM



OVERALL FOUNDATION PLAN

1/16" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES DRAWINGS FOR STANDARD STRUCTURAL DETAILS.
2. (*) INDICATES DIMENSION/ITEM TO BE VERIFIED PRIOR TO FABRICATION AND CONSTRUCTION.

D

C

B

A

BIM 360://10292462_ HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
10/4/2021 1:04:58 PM

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

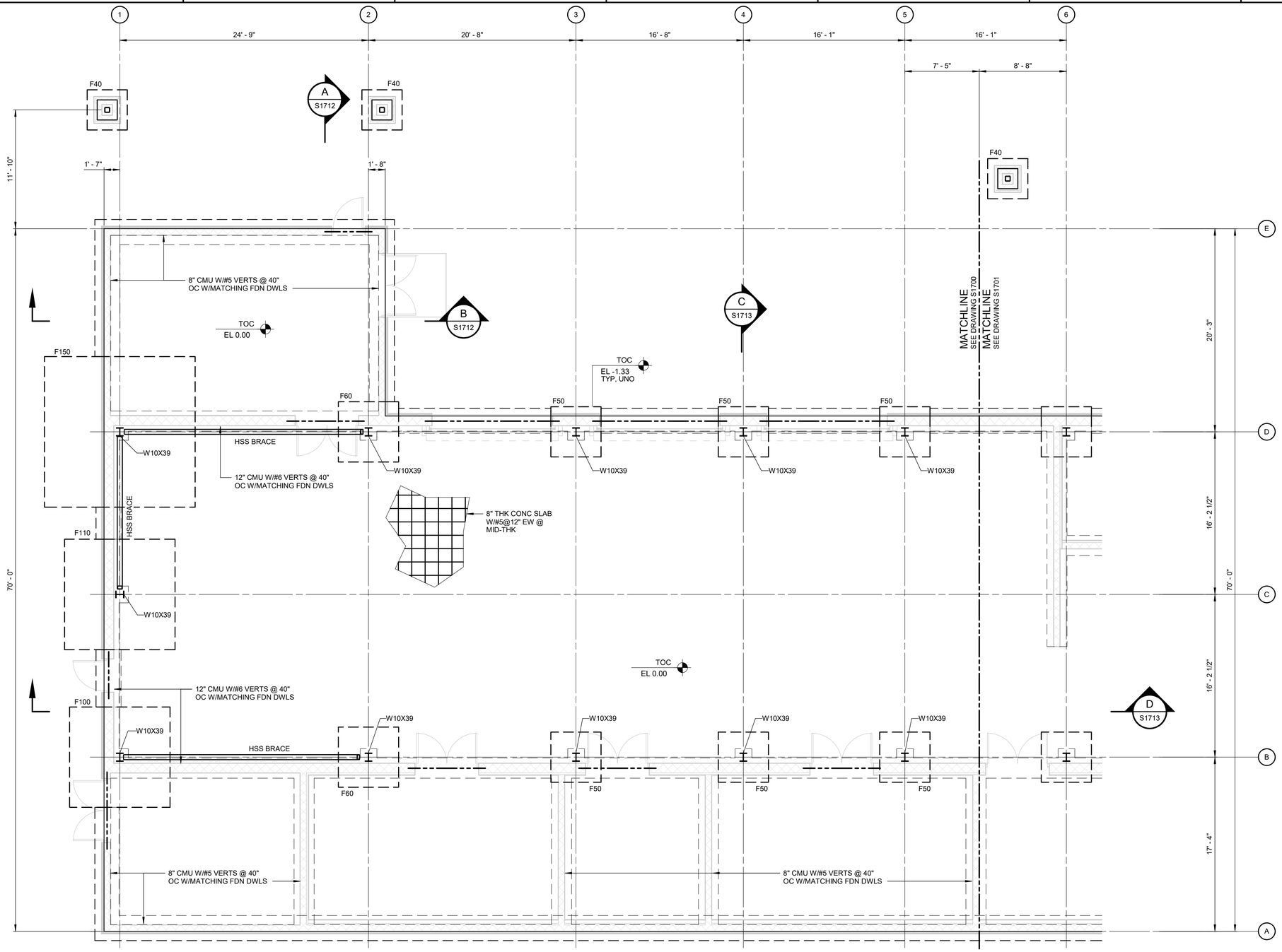
ADMINISTRATION AND MAINTENANCE BUILDING
OVERALL FOUNDATION PLAN

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt

SCALE 1/16" = 1'-0"

DWG NO. **S1700**



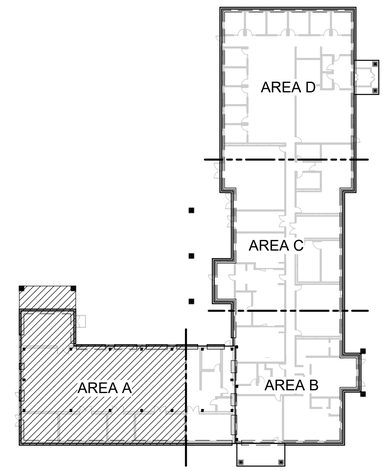
FOUNDATION PLAN - AREA A

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

FOOTING SCHEDULE				
MARK	THICKNESS	WIDTH	LENGTH	REINFORCING
F40	1'-0"	4'-0"	4'-0"	(5)-#5 EW, BOTTOM
F50	1'-0"	5'-0"	5'-0"	(6)-#5 EW, BOTTOM
F60	1'-6"	6'-0"	6'-0"	(7)-#6 EW, TOP & BOTTOM
F100	1'-10"	10'-0"	10'-0"	(11)-#6 EW, TOP & BOTTOM
F110	1'-10"	11'-0"	11'-0"	(12)-#7 EW, TOP & BOTTOM
F120	2'-0"	12'-0"	12'-0"	(13)-#7 EW, TOP & BOTTOM
F150	2'-2"	15'-0"	15'-0"	(16)-#8 EW, TOP & BOTTOM



KEYPLAN

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA A

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt

SCALE As indicated

DWG NO. **S1701**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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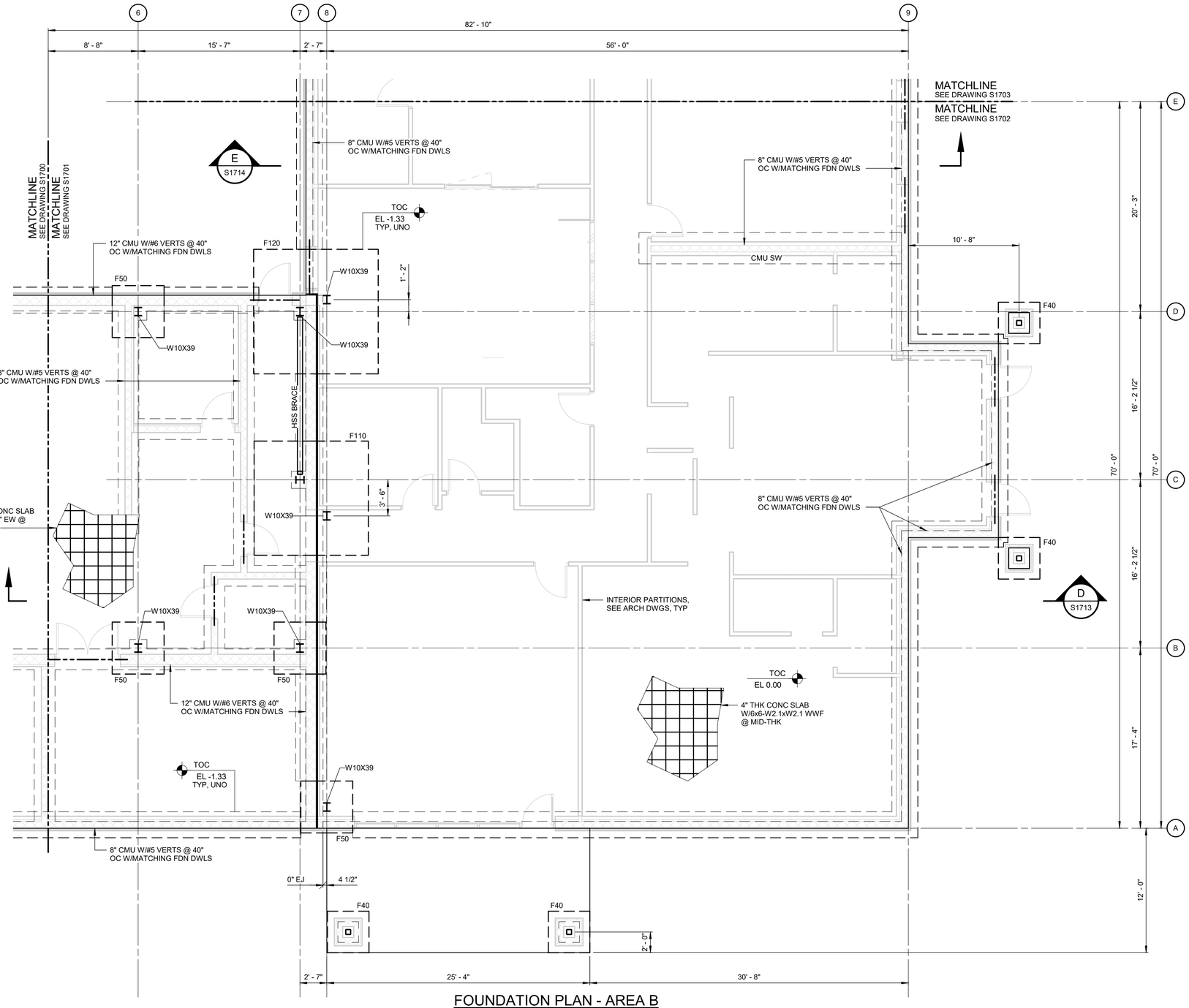
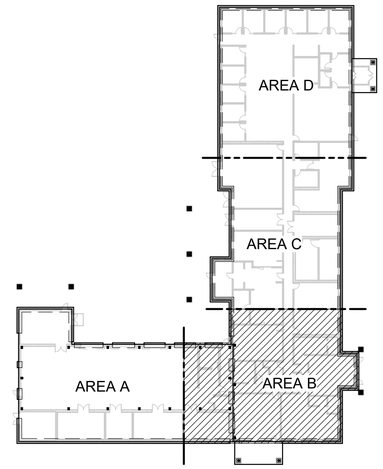


FOUNDATION PLAN - AREA B

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.
2. SEE DRAWING S1701 FOR FOOTING SCHEDULE.



KEYPLAN

249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
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PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA B

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt

SCALE As indicated

DWG NO. **S1702**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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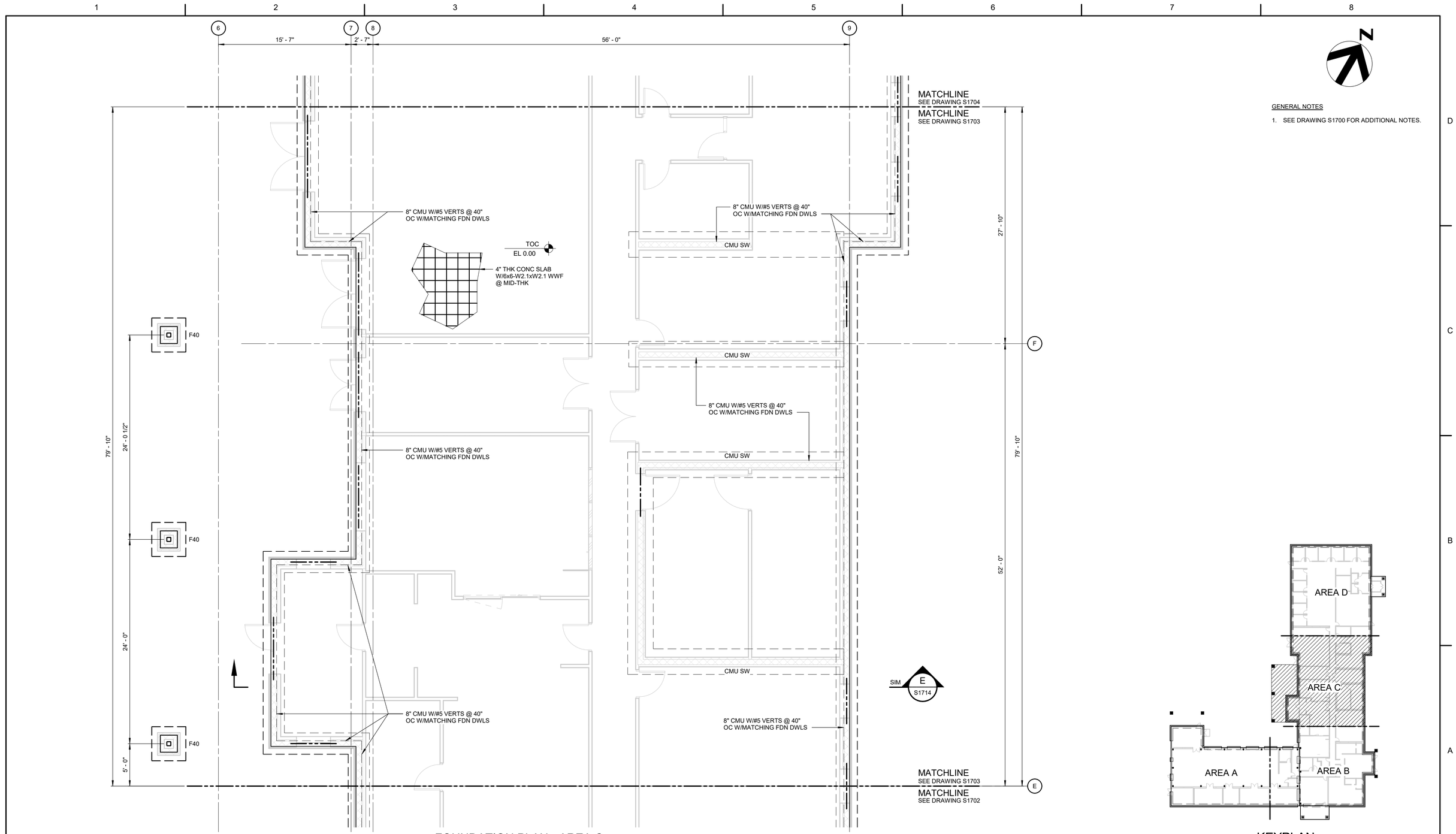

FOUNDATION PLAN - AREA C

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEYPLAN

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
10/4/2021 1:05:03 PM

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Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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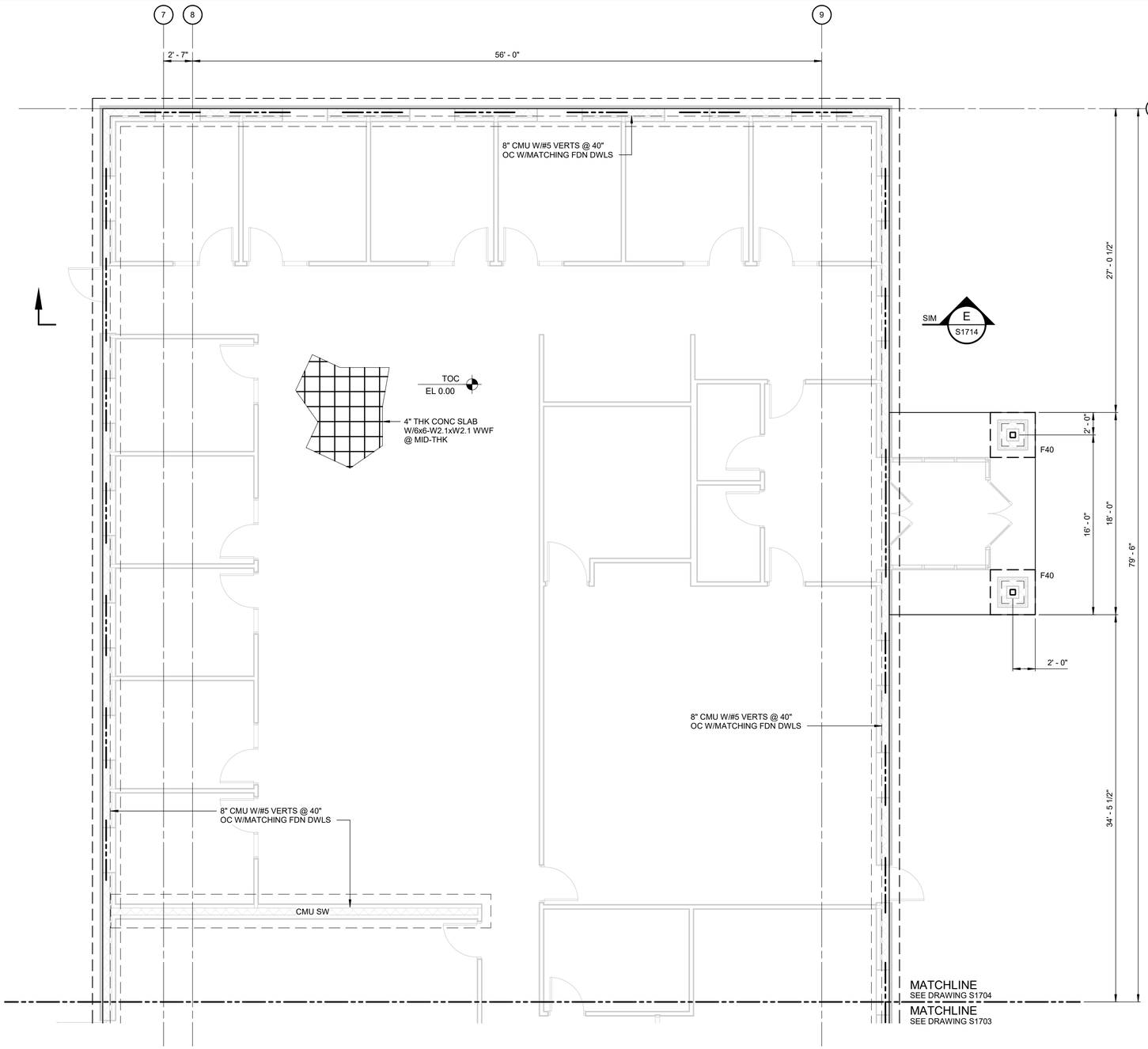
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA C

0 1" 2"

FILENAME	10292462-1700-ADM-S.rvt
SCALE	As indicated
DWG NO.	S1703

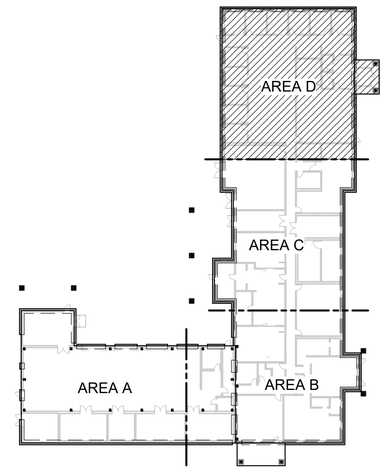


FOUNDATION PLAN - AREA D

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.



KEYPLAN

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING FOUNDATION PLAN - AREA D

0 1" 2"

FILENAME	10292462-1700-ADM-S.rvt
SCALE	As indicated
DWG NO.	S1704

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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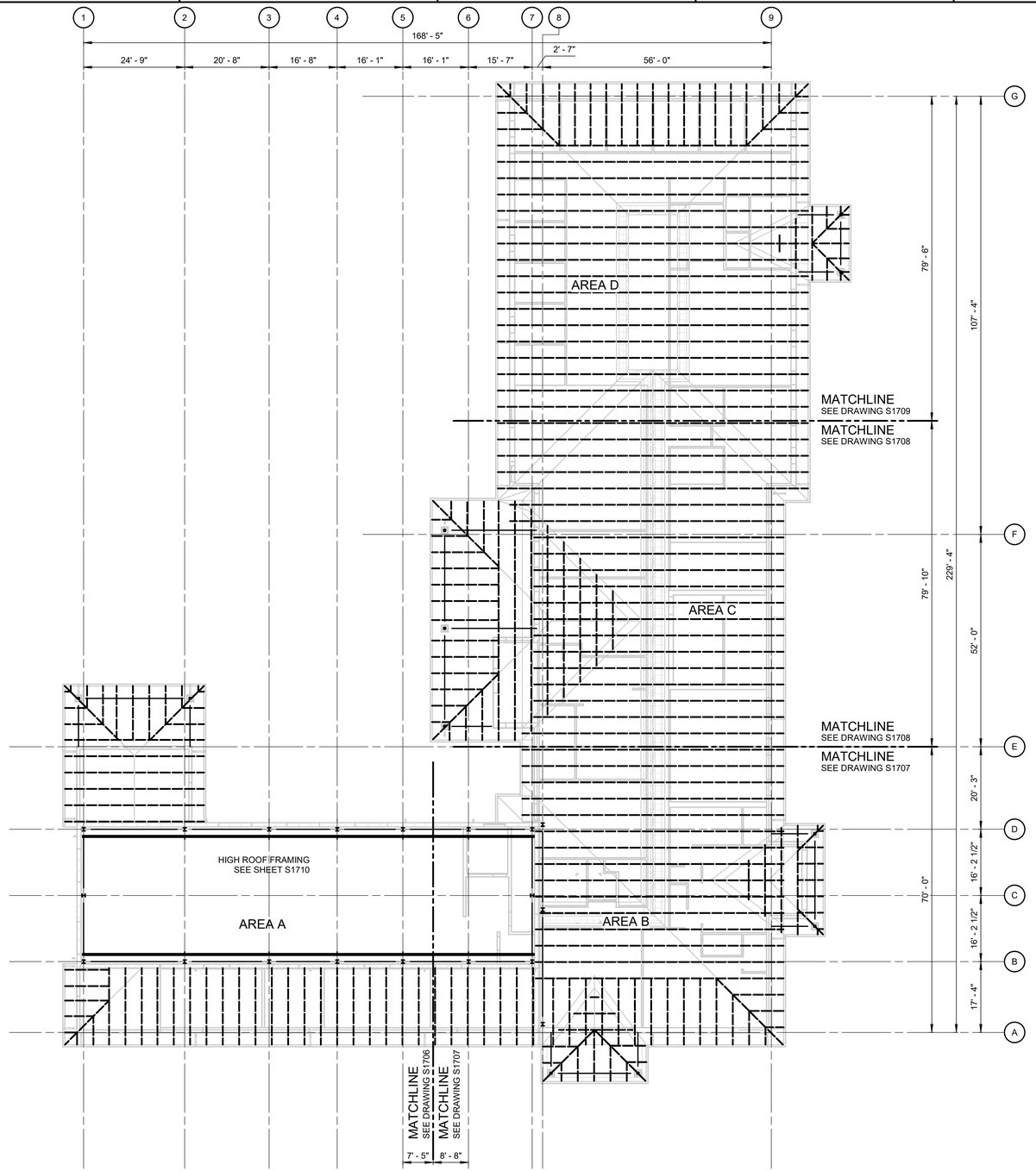

OVERALL LOW ROOF FRAMING PLAN

1/16" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

D

C

B

A

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
10/4/2021 1:05:04 PM

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HRSD

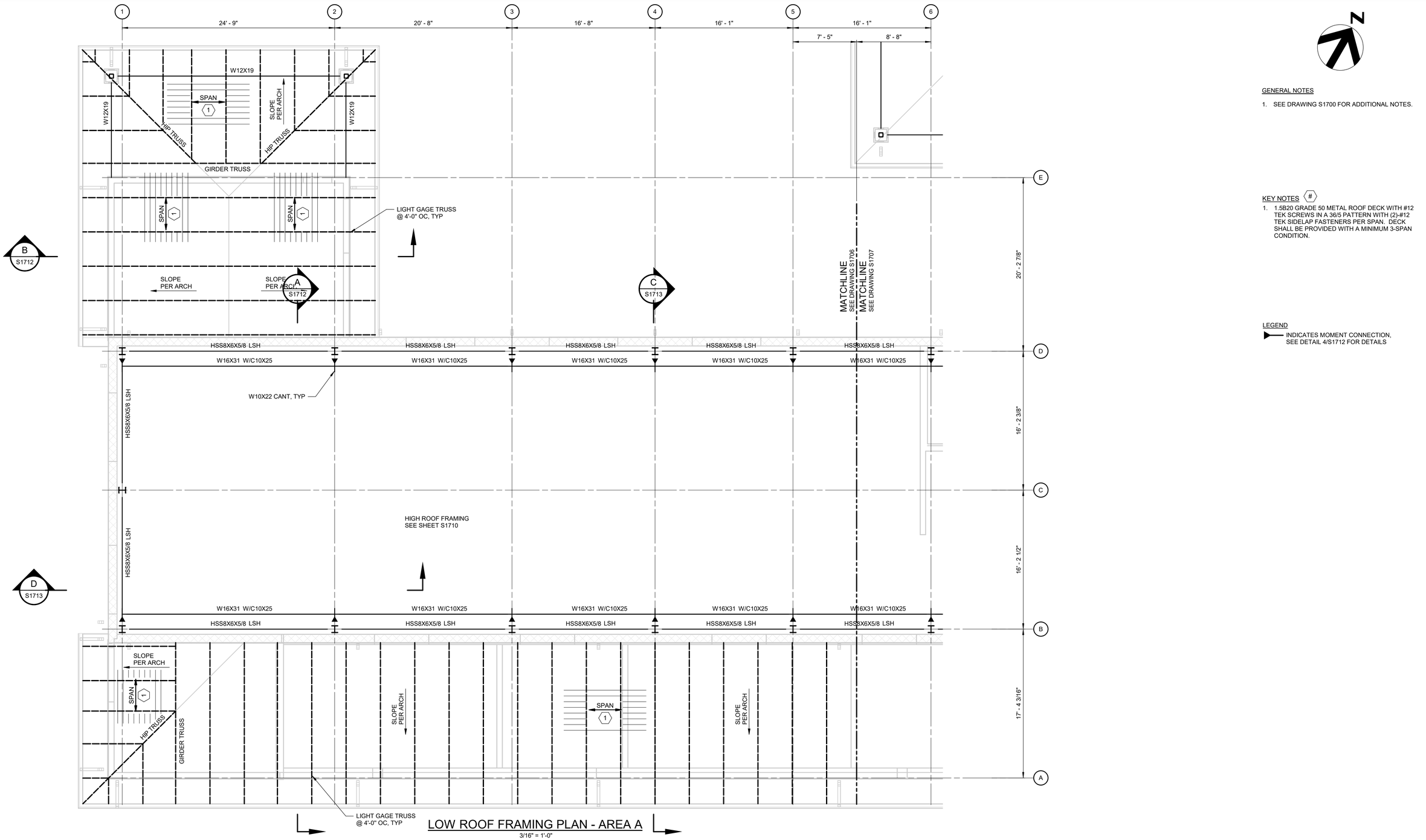
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
OVERALL LOW ROOF FRAMING PLAN

0 1" 2"

FILENAME	10292462-1700-ADM-S.rvt
SCALE	1/16" = 1'-0"

DWG NO. **S1705**



LOW ROOF FRAMING PLAN - AREA A

3/16" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

1. 1.5B20 GRADE 50 METAL ROOF DECK WITH #12 TEK SCREWS IN A 36/5 PATTERN WITH (2)-#12 TEK SIDELAP FASTENERS PER SPAN. DECK SHALL BE PROVIDED WITH A MINIMUM 3-SPAN CONDITION.

LEGEND

INDICATES MOMENT CONNECTION, SEE DETAIL 4/S1712 FOR DETAILS

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Virginia Beach, VA 23462
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PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
LOW ROOF FRAMING PLAN- AREA A

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt

SCALE As indicated

DWG NO. **S1706**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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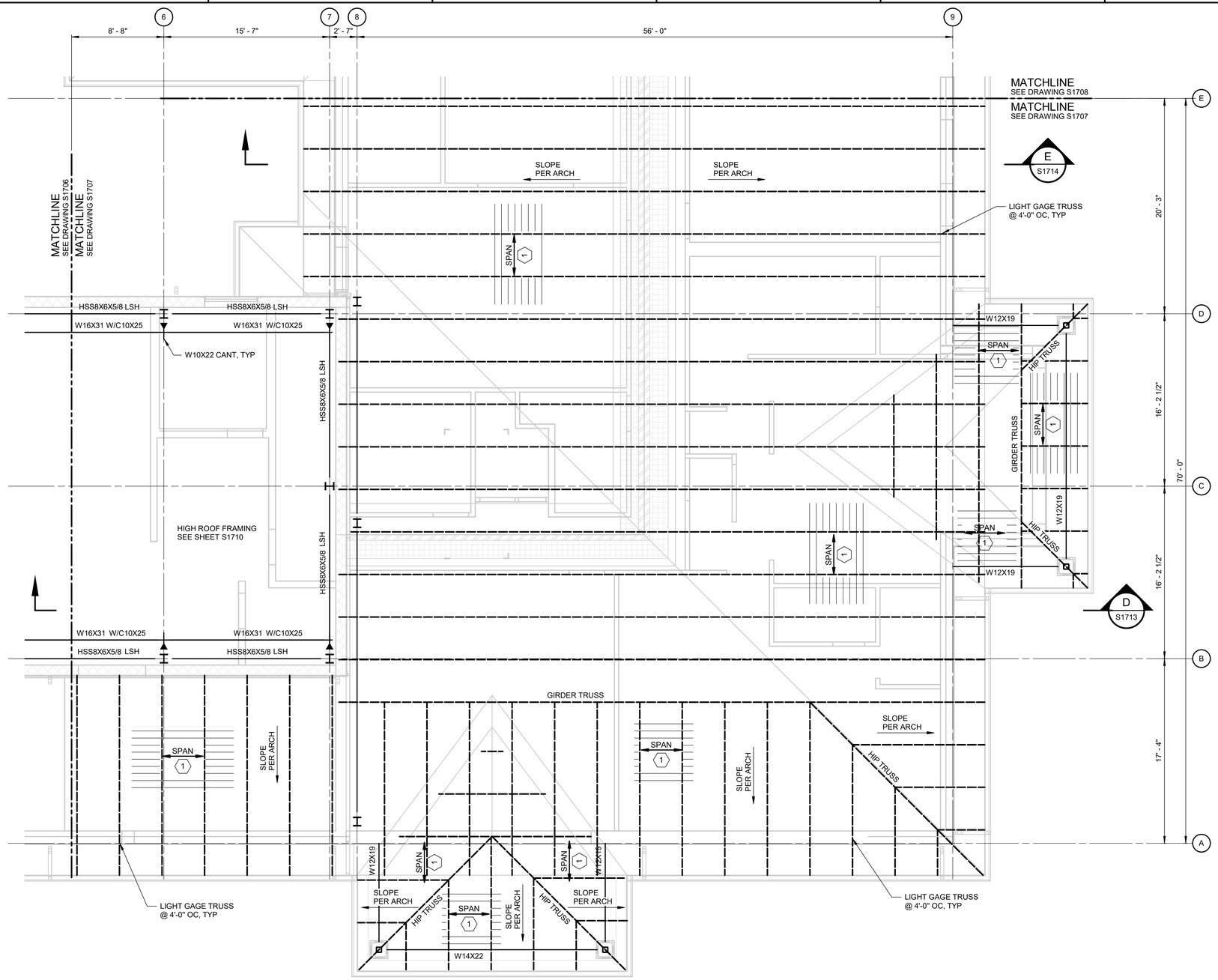

LOW ROOF FRAMING PLAN - AREA B

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

1. 1.5B20 GRADE 50 METAL ROOF DECK WITH #12 TEK SCREWS IN A 36/5 PATTERN WITH (2)-#12 TEK SIDELAP FASTENERS PER SPAN. DECK SHALL BE PROVIDED WITH A MINIMUM 3-SPAN CONDITION.

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PROJECT NUMBER	10292462

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HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
LOW ROOF FRAMING PLAN- AREA B

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S1707**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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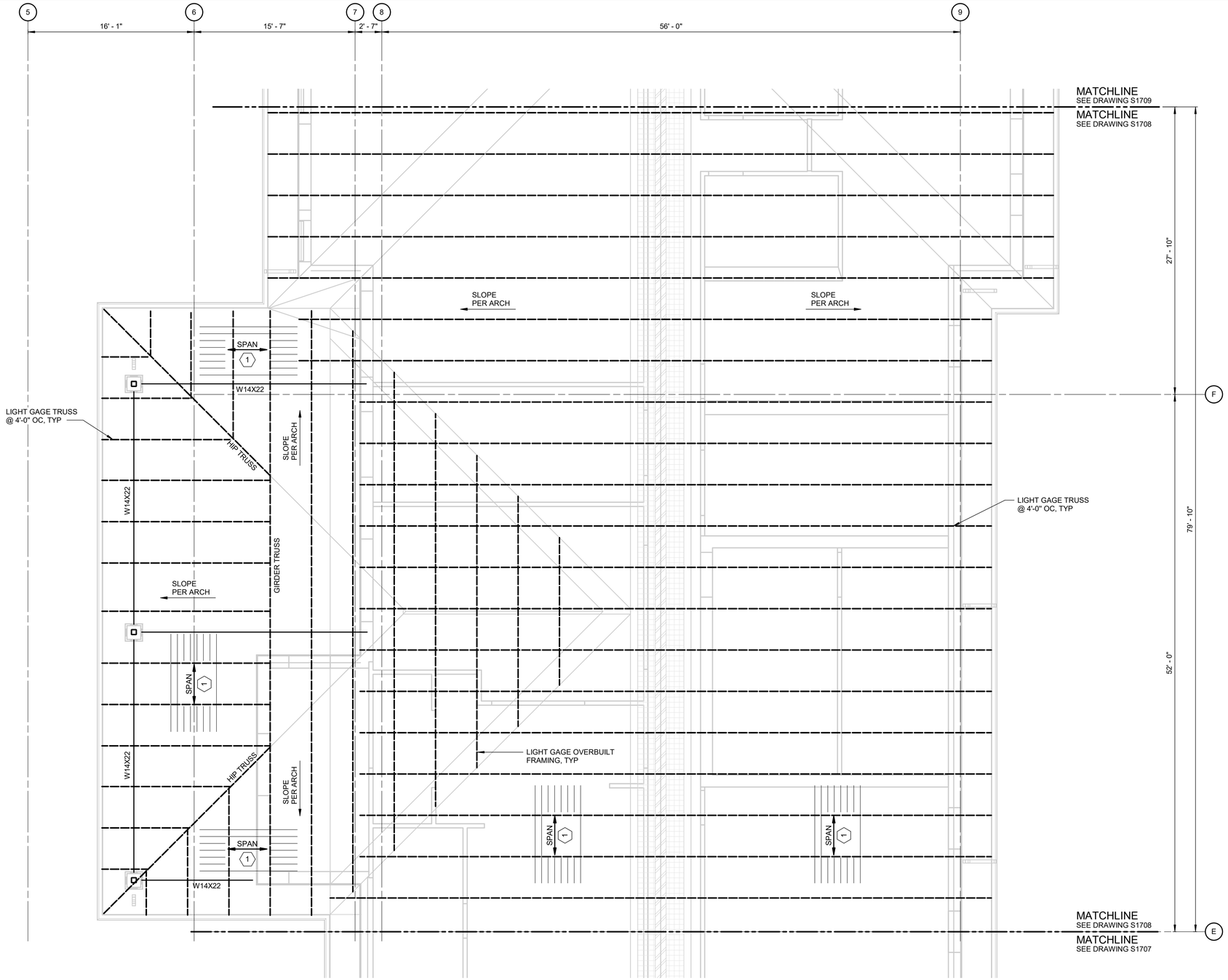

LOW ROOF FRAMING PLAN - AREA C

3/16" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

1. 1.5B20 GRADE 50 METAL ROOF DECK WITH #12 TEK SCREWS IN A 36/5 PATTERN WITH (2)-#12 TEK SIDELAP FASTENERS PER SPAN. DECK SHALL BE PROVIDED WITH A MINIMUM 3-SPAN CONDITION.

D
C
B
A

HDR US-A
Ulliman Schutte – Alberici Joint Venture
249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	JASON R. KERNS
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CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
LOW ROOF FRAMING PLAN- AREA C

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S1708**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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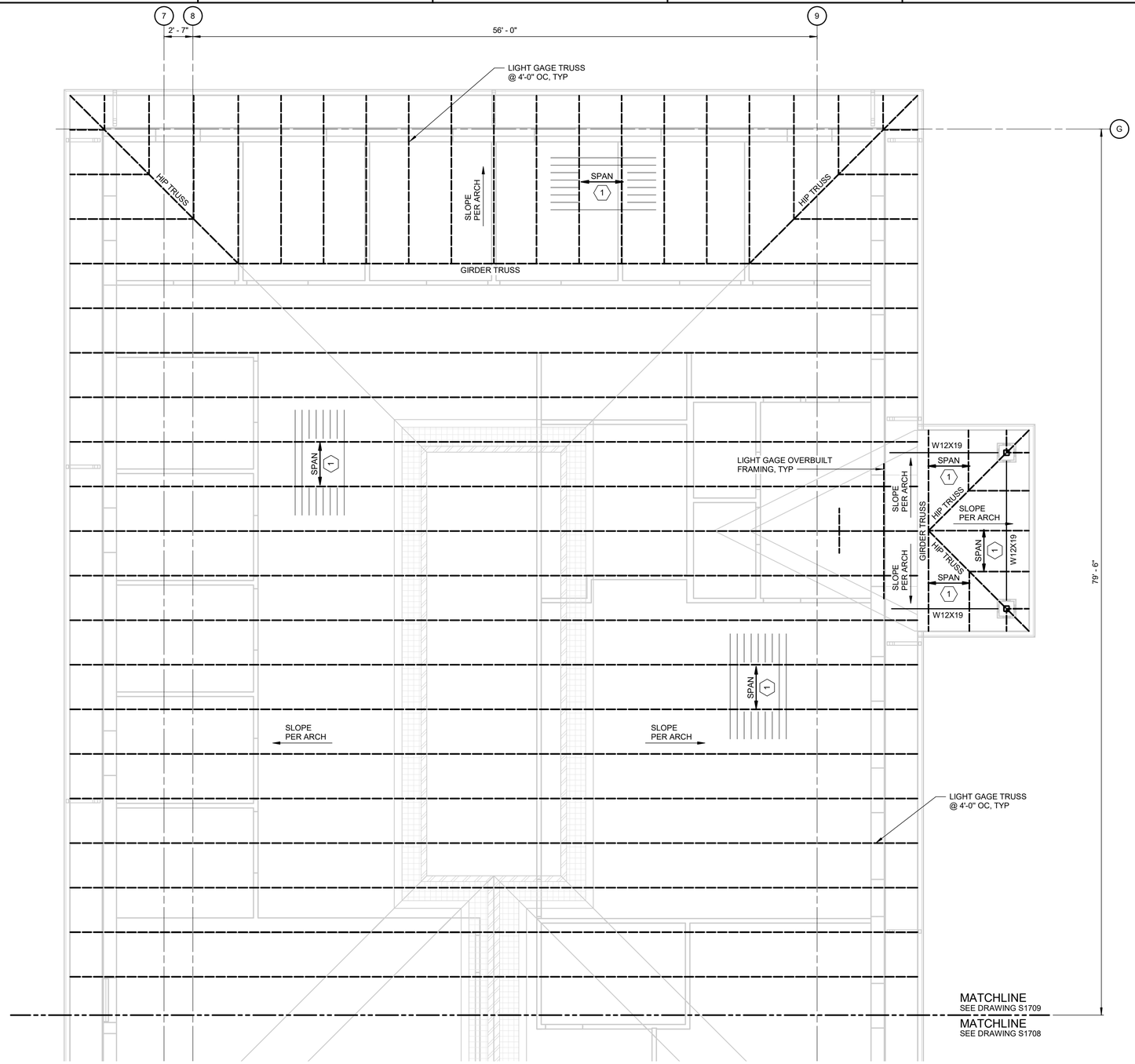

LOW ROOF FRAMING PLAN - AREA D

3/16" = 1'-0"

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

1. 1.5B20 GRADE 50 METAL ROOF DECK WITH #12 TEK SCREWS IN A 36/5 PATTERN WITH (2)-#12 TEK SIDELAP FASTENERS PER SPAN. DECK SHALL BE PROVIDED WITH A MINIMUM 3-SPAN CONDITION.

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ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
LOW ROOF FRAMING PLAN- AREA D

0 1" 2"

FILENAME	10292462-1700-ADM-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S1709**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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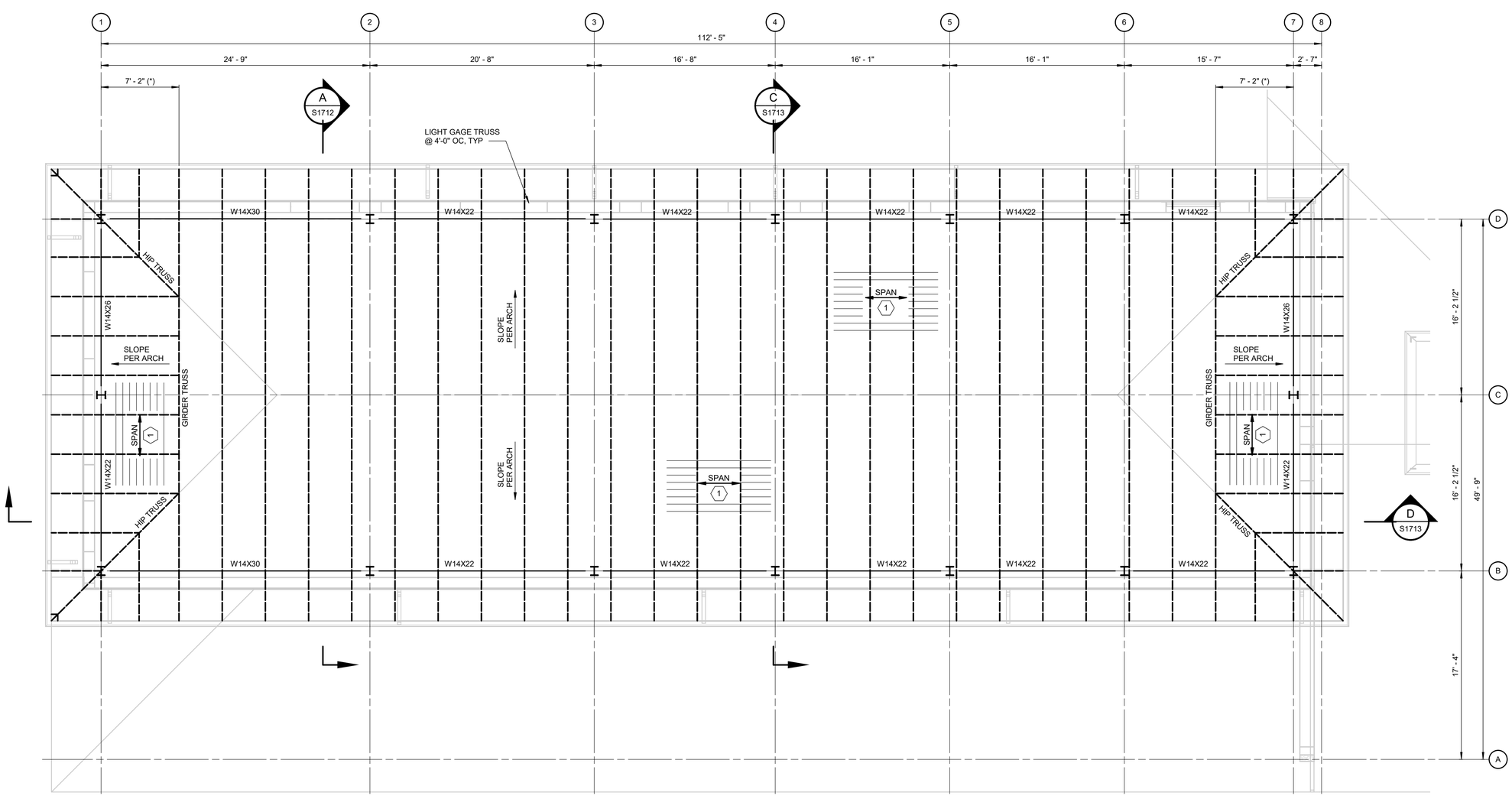

HIGH ROOF FRAMING PLAN
3/16" = 1'-0"

N

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

1. 1.5B20 GRADE 50 METAL ROOF DECK WITH #12 TEK SCREWS IN A 36/7 PATTERN WITH (5)-#12 TEK SIDELAP FASTENERS PER SPAN. DECK SHALL BE PROVIDED WITH A MINIMUM 3-SPAN CONDITION.

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CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING
HIGH ROOF FRAMING PLAN

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S1710**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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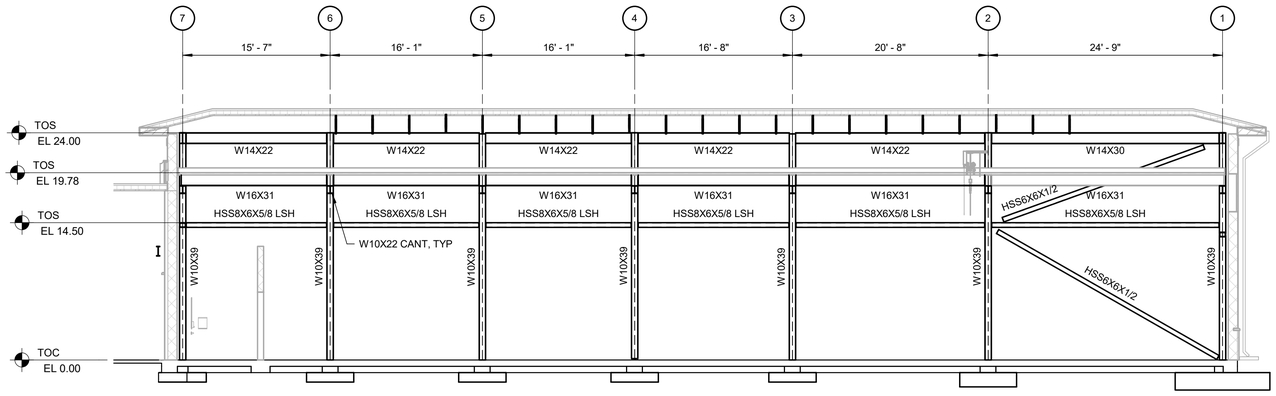
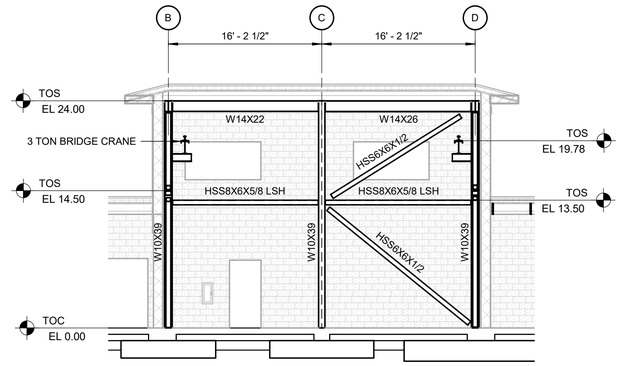
GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.



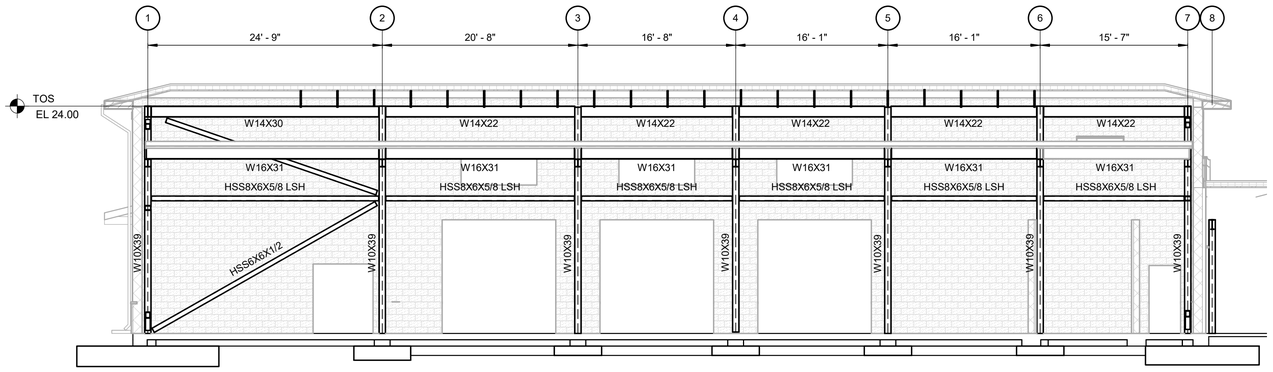
ELEVATION GRID LINE B

1/8" = 1'-0"



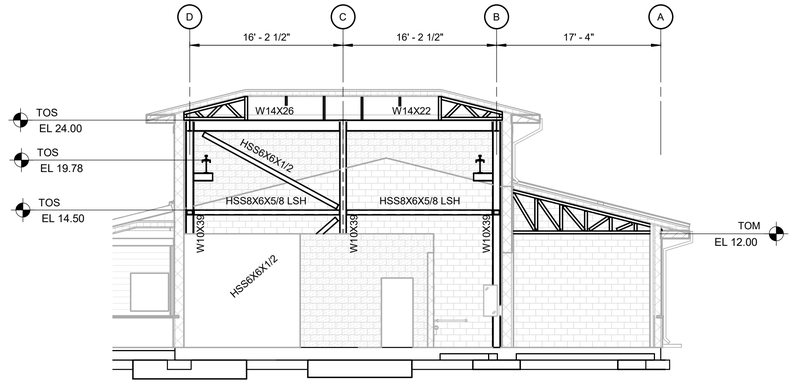
ELEVATION GRID LINE 1

1/8" = 1'-0"



ELEVATION GRID LINE D

1/8" = 1'-0"



ELEVATION GRID LINE 7

1/8" = 1'-0"

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING ELEVATIONS

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt

SCALE 1/8" = 1'-0"

DWG NO. S1711

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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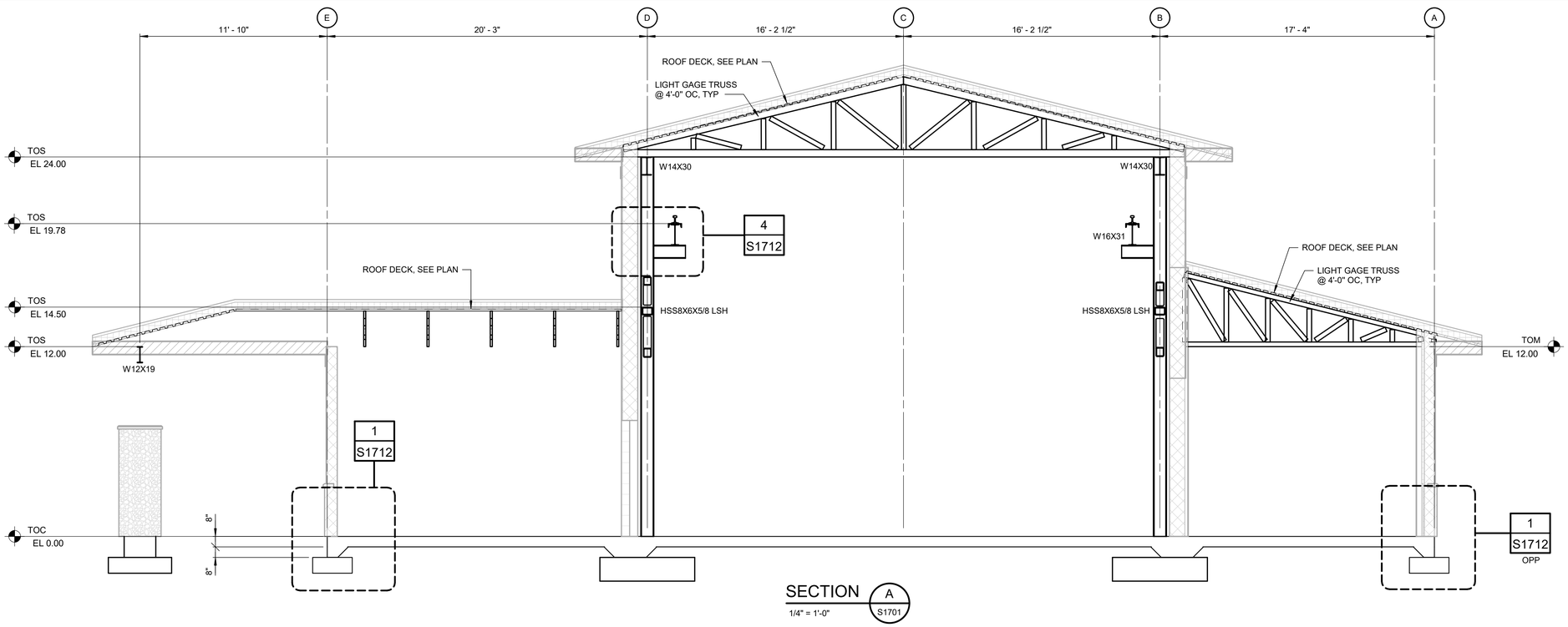


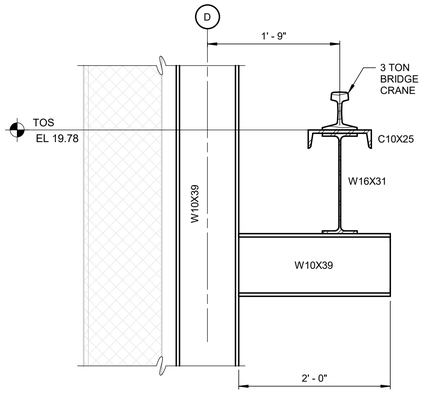
SECTION A
1/4" = 1'-0" S1701

GENERAL NOTES

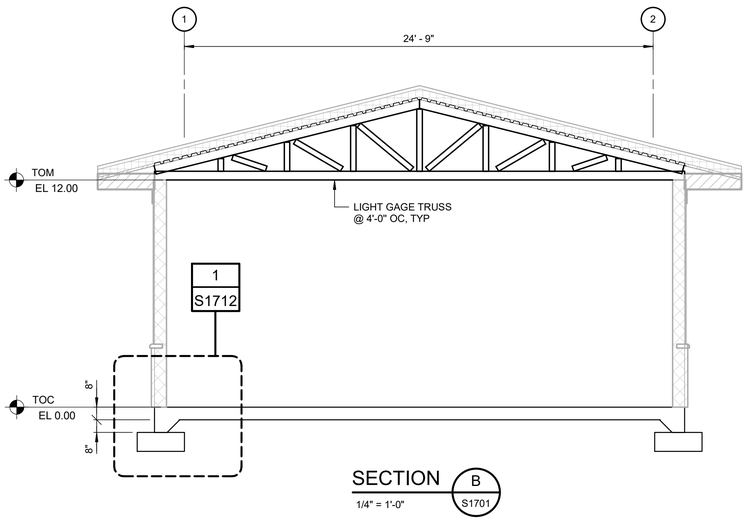
1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

KEY NOTES (#)

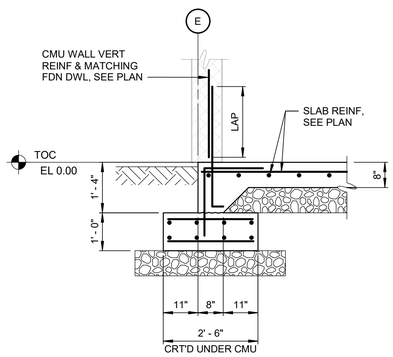
1. SEE PLANS FOR MINIMUM 1'-8" x 1'-8" SQUARE THICKENED SLAB SECTION CENTERED UNDER ALL STEEL COLUMNS.



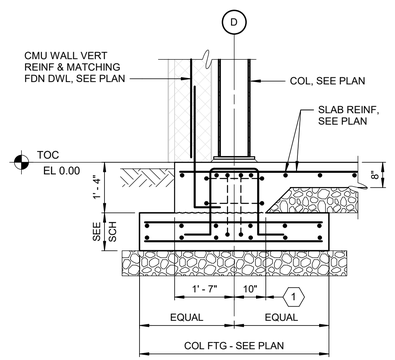
DETAIL 4
1" = 1'-0" S1712



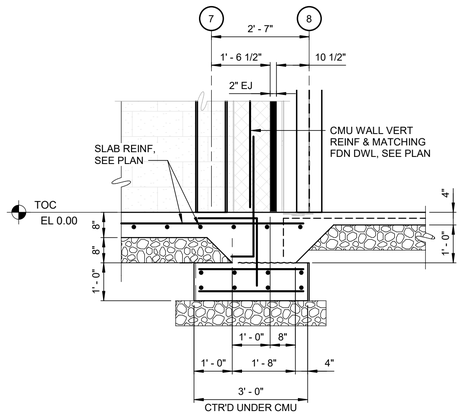
SECTION B
1/4" = 1'-0" S1701



DETAIL 1
1/2" = 1'-0" S1712



DETAIL 2
1/2" = 1'-0" S1713



DETAIL 3
1/2" = 1'-0" S1713

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

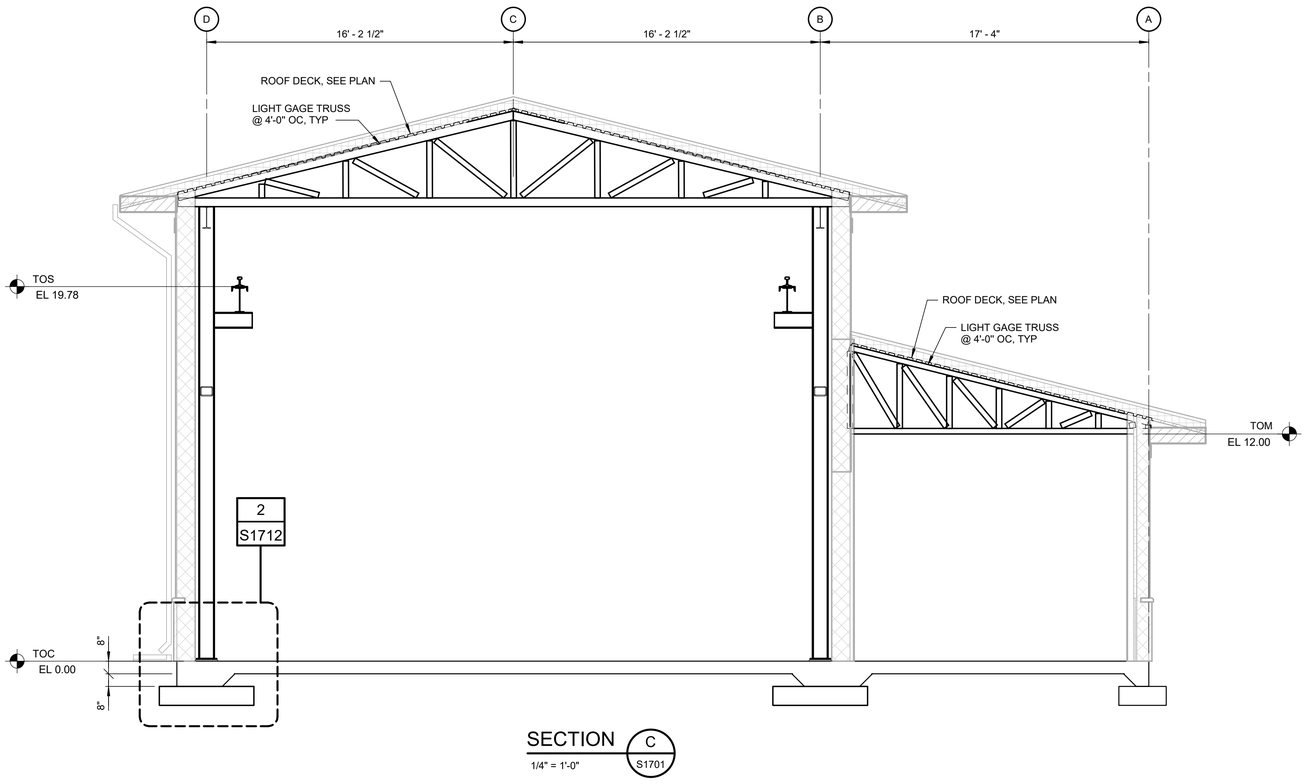
ADMINISTRATION AND MAINTENANCE BUILDING SECTIONS AND DETAILS 1

0 1" 2"

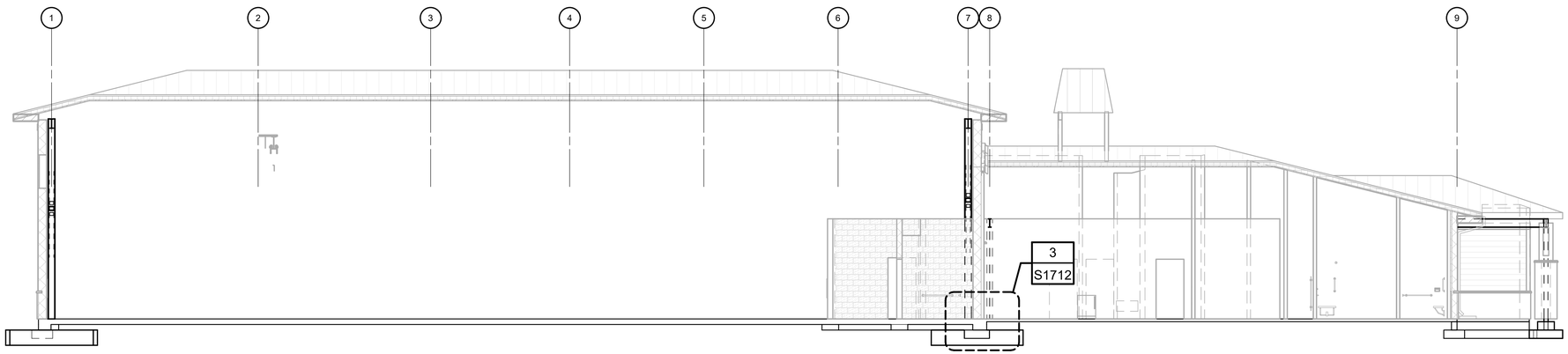
FILENAME 10292462-1700-ADM-S.rvt
SCALE As indicated

DWG NO. **S1712**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
10/4/2021 1:05:12 PM



SECTION C
1/4" = 1'-0"
S1701



SECTION D
1/8" = 1'-0"
S1701

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

HDR US-A
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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

ADMINISTRATION AND MAINTENANCE BUILDING SECTIONS AND DETAILS 2

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt
SCALE As indicated

DWG NO. **S1713**

BIM 360://10292462_ HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
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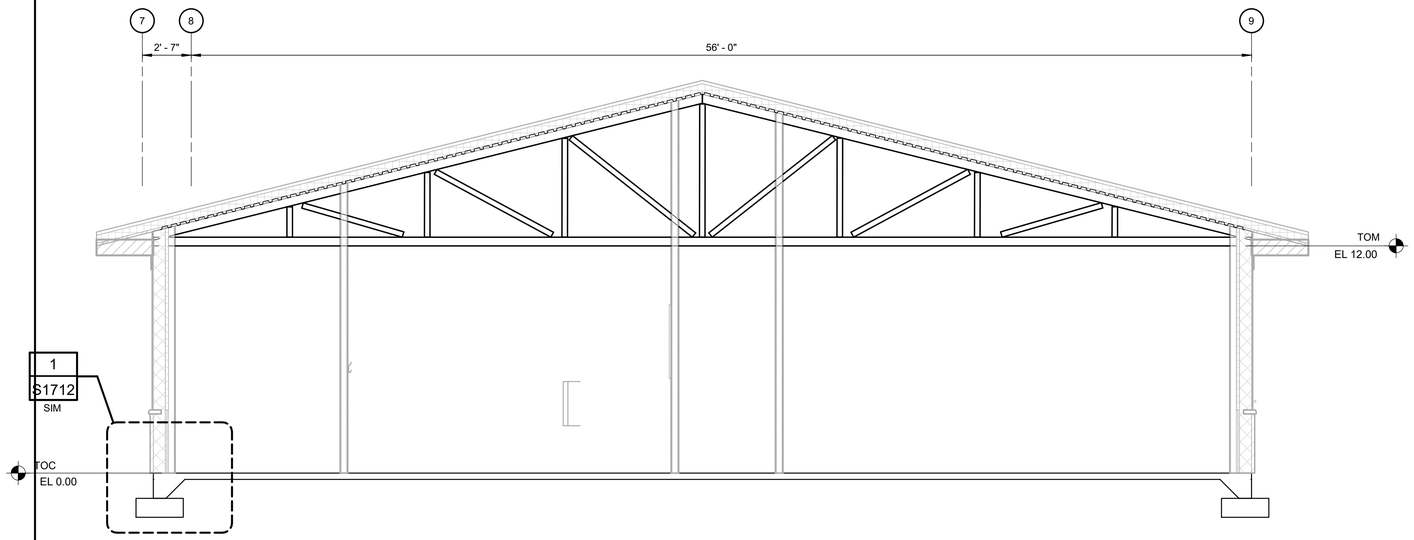

SECTION E
1/4" = 1'-0"
S1702

GENERAL NOTES

1. SEE DRAWING S1700 FOR ADDITIONAL NOTES.

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	K. VILLELLA
CHECKED BY	M. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

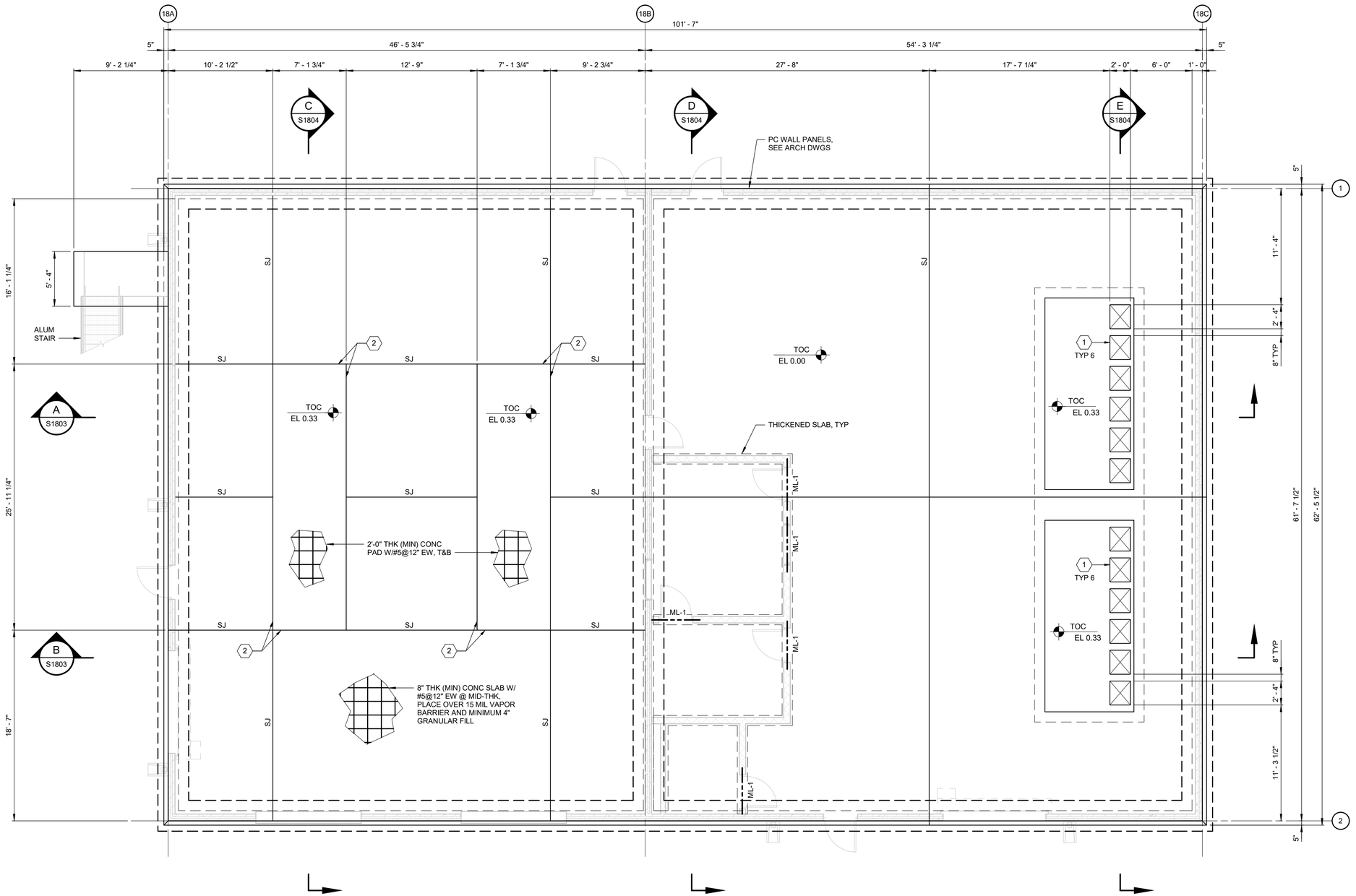
ADMINISTRATION AND MAINTENANCE BUILDING SECTIONS AND DETAILS 3

0 1" 2"

FILENAME 10292462-1700-ADM-S.rvt
SCALE 1/4" = 1'-0"

DWG NO. S1714

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1700-ADM-S.rvt
10/4/2021 1:05:14 PM



FOUNDATION PLAN

3/16" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING S9000 FOR STRUCTURAL GENERAL NOTES. SEE S9000 SERIES DRAWINGS FOR STANDARD STRUCTURAL DETAILS.
2. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND PROCESS DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS AND FLOOR SLOPES AND DRAINS.

KEY NOTES: (#)

1. 2'-4" X 2'-0" X 1'-6" DEEP SLAB RECESS FOR ELECTRICAL CONDUITS, COORDINATE WITH ELECTRICAL DRAWINGS.
2. CONTINUOUS 1/2" PREFORMED EXPANSION JOINT MATERIAL WITH FINISH SEALNT.

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1800-MELE-S.rvt
10/4/2021 11:22:52 AM

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ISSUE	DATE	DESCRIPTION
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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	B. BRADLEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

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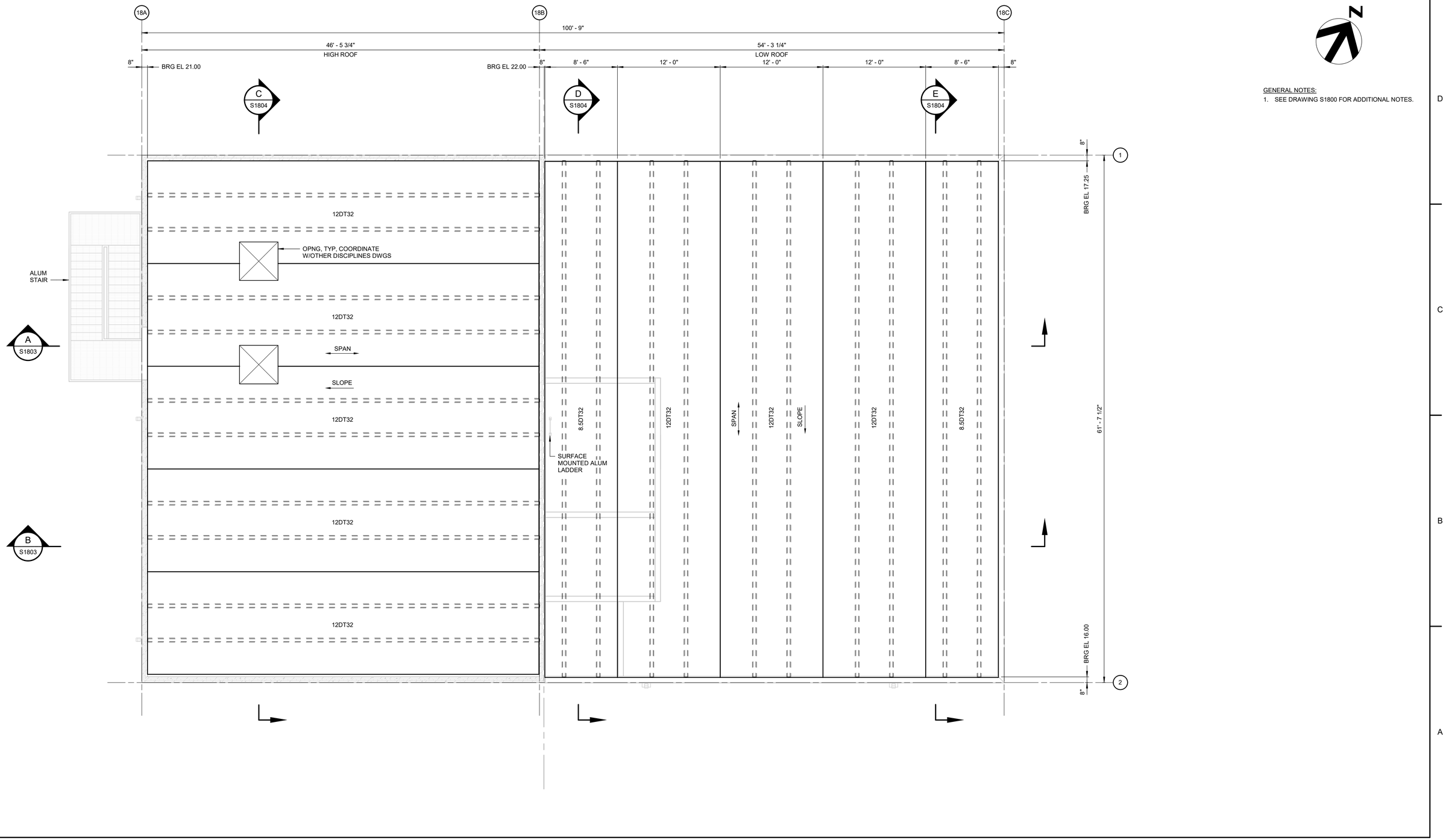
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING FOUNDATION PLAN

0 1" 2"

FILENAME	10292462-1800-MELE-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S1800**



GENERAL NOTES:

1. SEE DRAWING S1800 FOR ADDITIONAL NOTES.

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1800-MELE-S.rvt
10/4/2021 11:22:53 AM

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ISSUE	DATE	DESCRIPTION
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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	B. BRADLEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING LOW ROOF PLAN

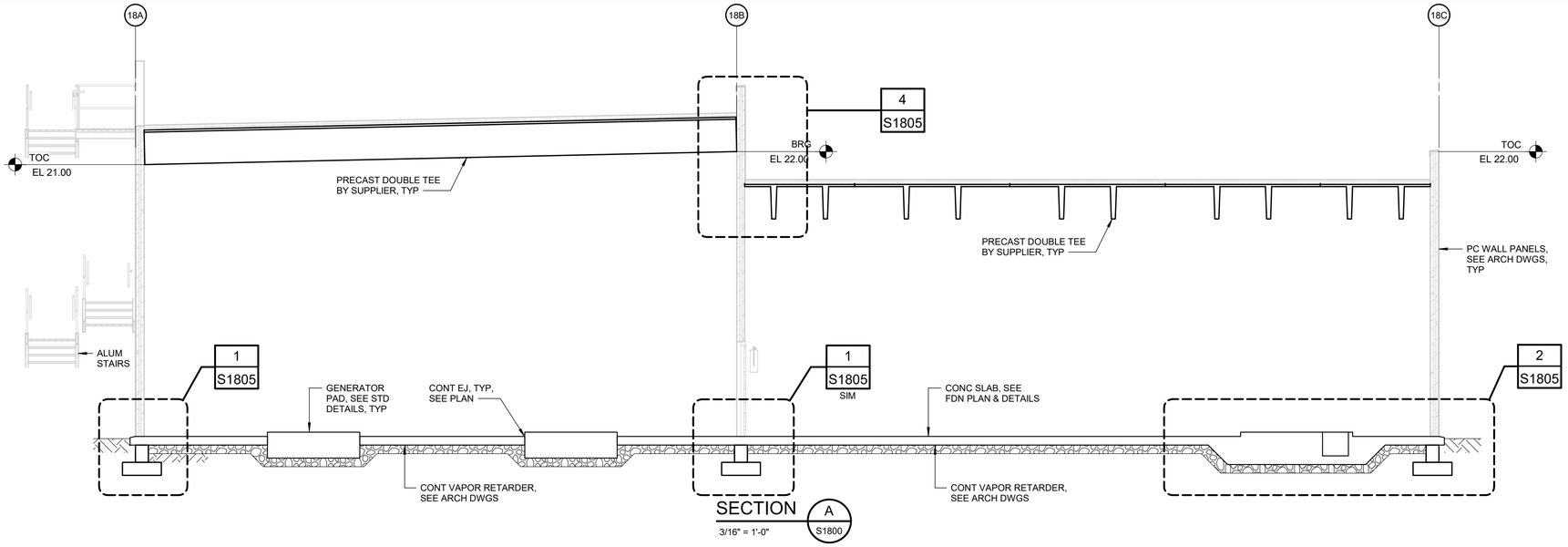
0 1" 2"

FILENAME 10292462-1800-MELE-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S1801**

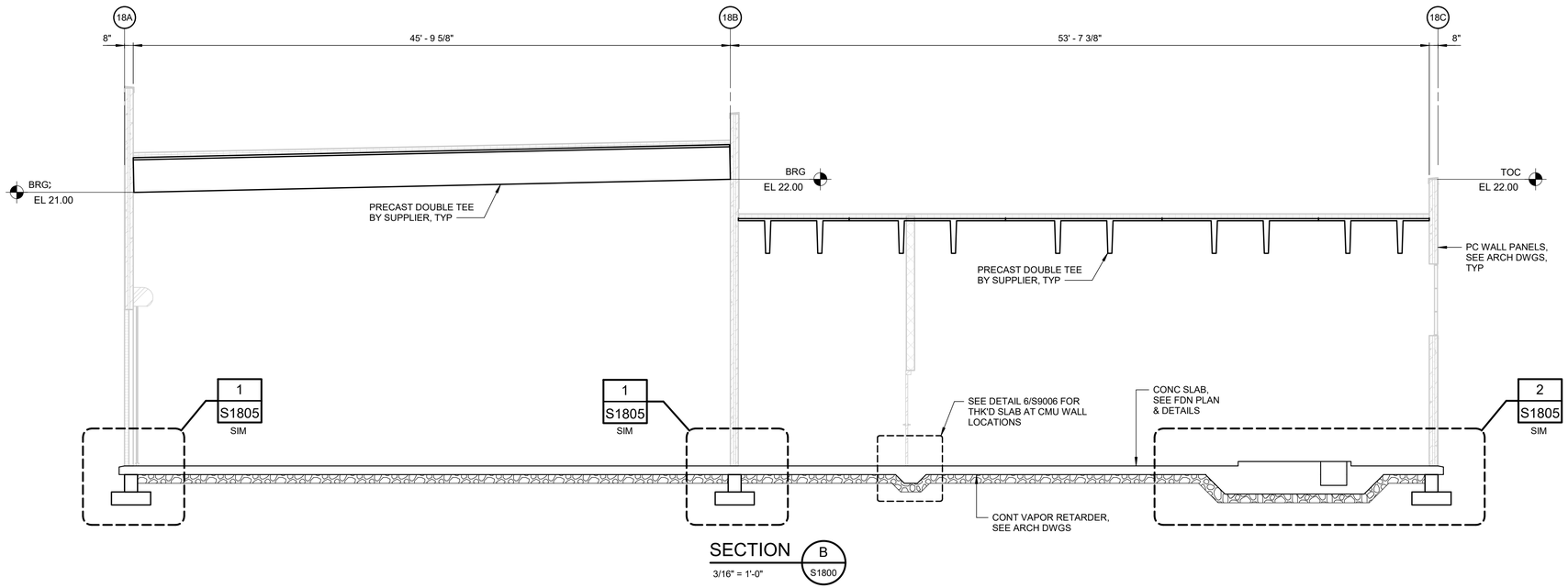
GENERAL NOTES:

1. SEE DRAWING S1800 FOR ADDITIONAL NOTES.



SECTION A S1800

3/16" = 1'-0"



SECTION B S1800

3/16" = 1'-0"

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DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING SECTIONS 1

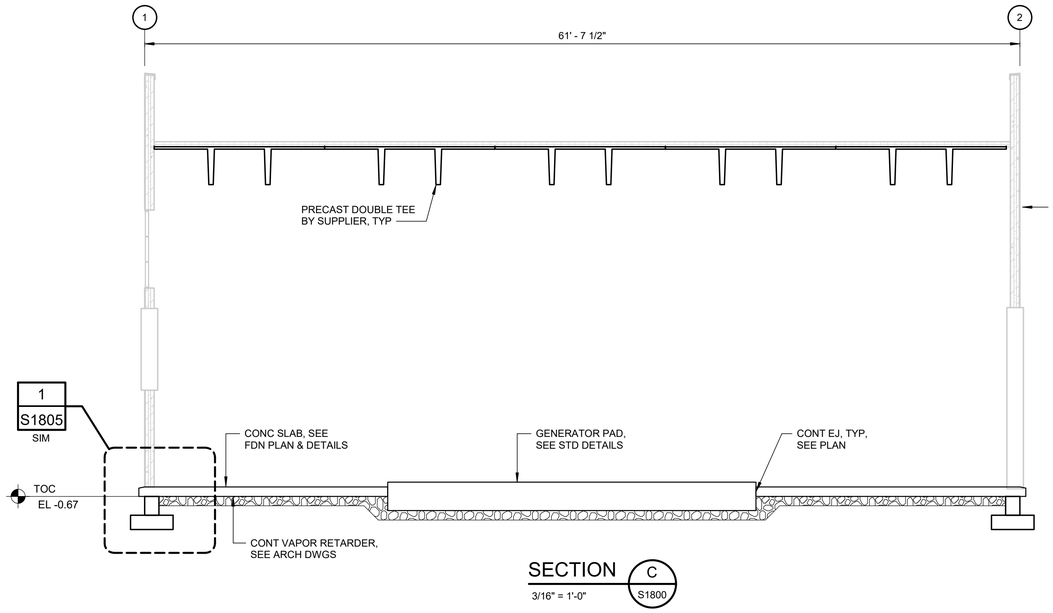
0 1" 2"

FILENAME	10292462-1800-MELE-S.rvt
SCALE	3/16" = 1'-0"

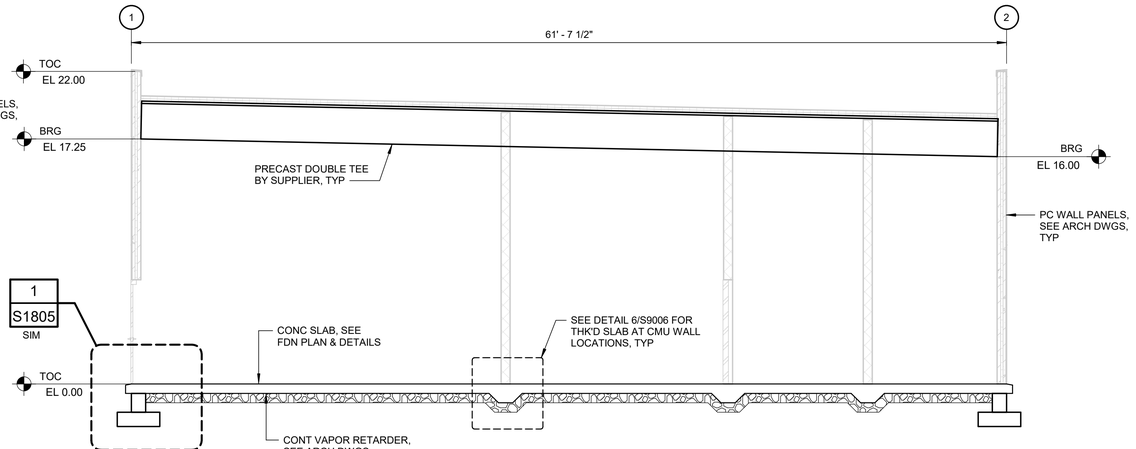
DWG NO. **S1803**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1800-MELE-S.rvt
10/4/2021 11:22:53 AM

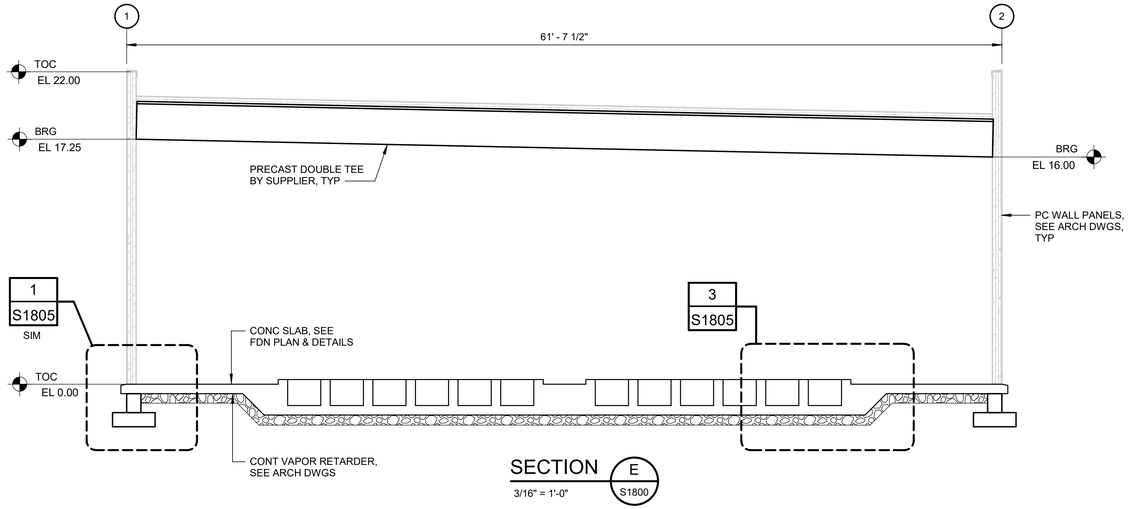
GENERAL NOTES:
1. SEE DRAWING S1800 FOR ADDITIONAL NOTES.



SECTION C
3/16" = 1'-0"
S1800



SECTION D
3/16" = 1'-0"
S1800



SECTION E
3/16" = 1'-0"
S1800

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	B. BRADLEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING SECTIONS 2

0 1" 2"

FILENAME 10292462-1800-MELE-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S1804**

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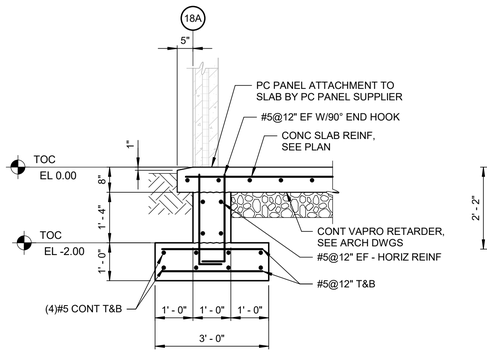
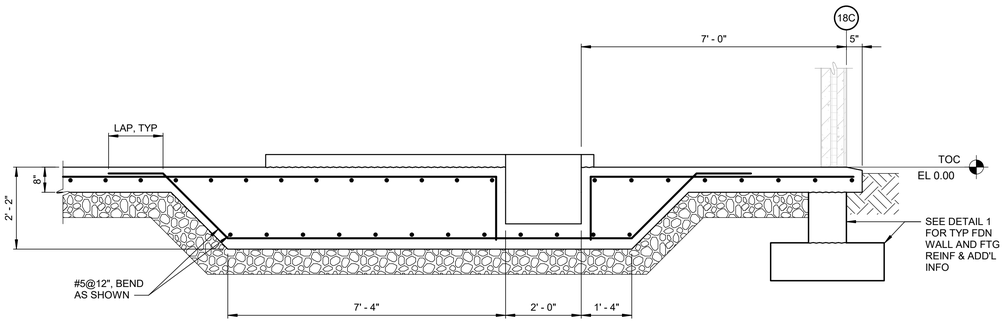
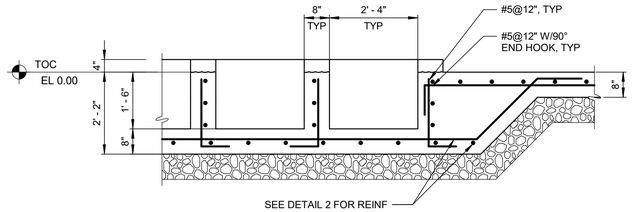
10/4/2021 11:22:54 AM



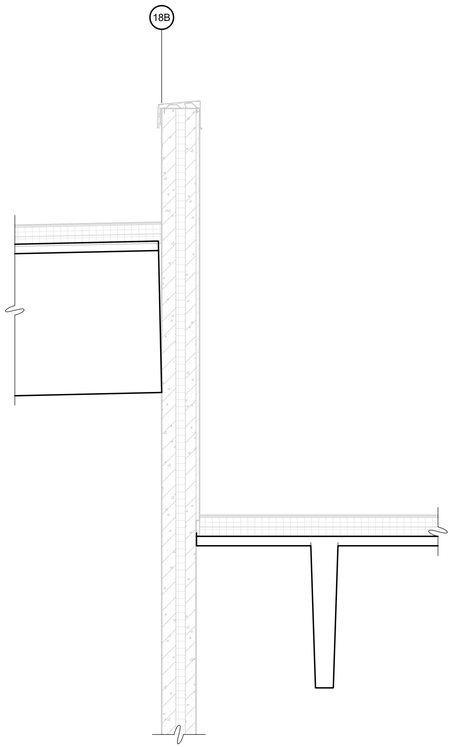
DETAIL 1 — 1/2" = 1'-0" — S1803



DETAIL 2 — 1/2" = 1'-0" — S1803



DETAIL 3 — 1/2" = 1'-0" — S1804



DETAIL 4 — 3/4" = 1'-0" — S1803

GENERAL NOTES:

1. SEE DRAWING S1800 FOR ADDITIONAL NOTES.

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Ulliman Schutte – Alberici Joint Venture

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	B. BRADLEY
CHECKED BY	M.E. MARTIN
DRAWN BY	W. MALACHIN
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND JRTP ANRI (JR013400)
WORK PACKAGE 2

MAIN ELECTRICAL BUILDING DETAILS 1

0 1" 2"

FILENAME 10292462-1800-MELE-S.rvt
SCALE As indicated

DWG NO. **S1805**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1800-MELE-S.rvt
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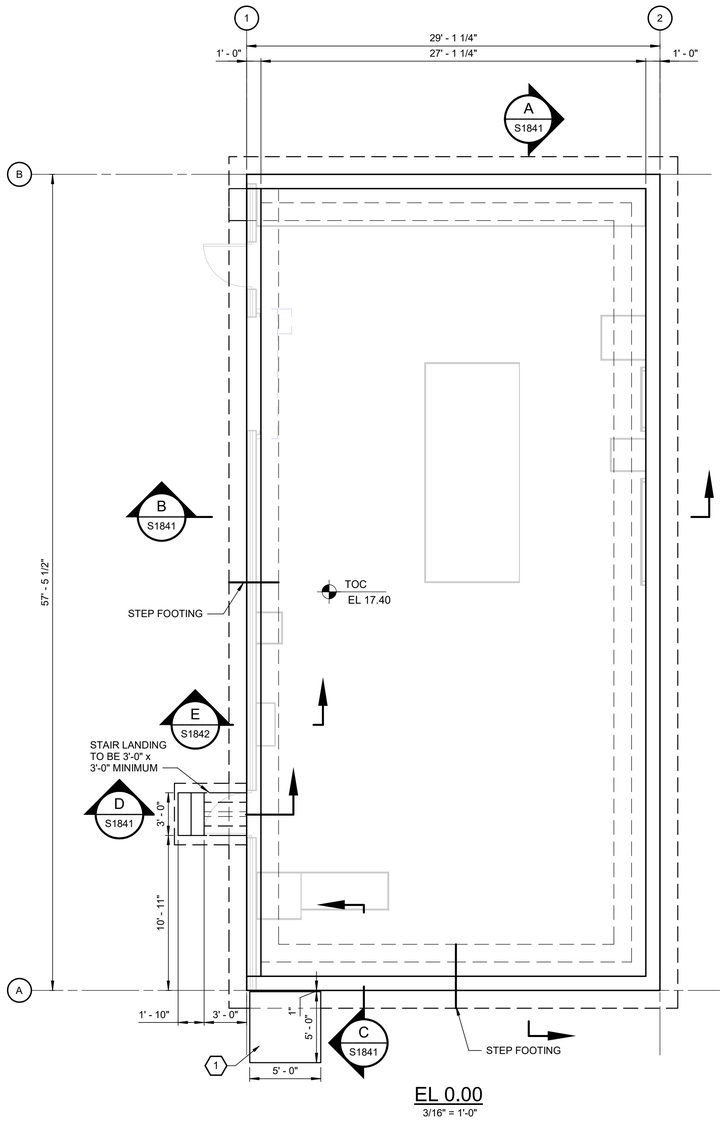
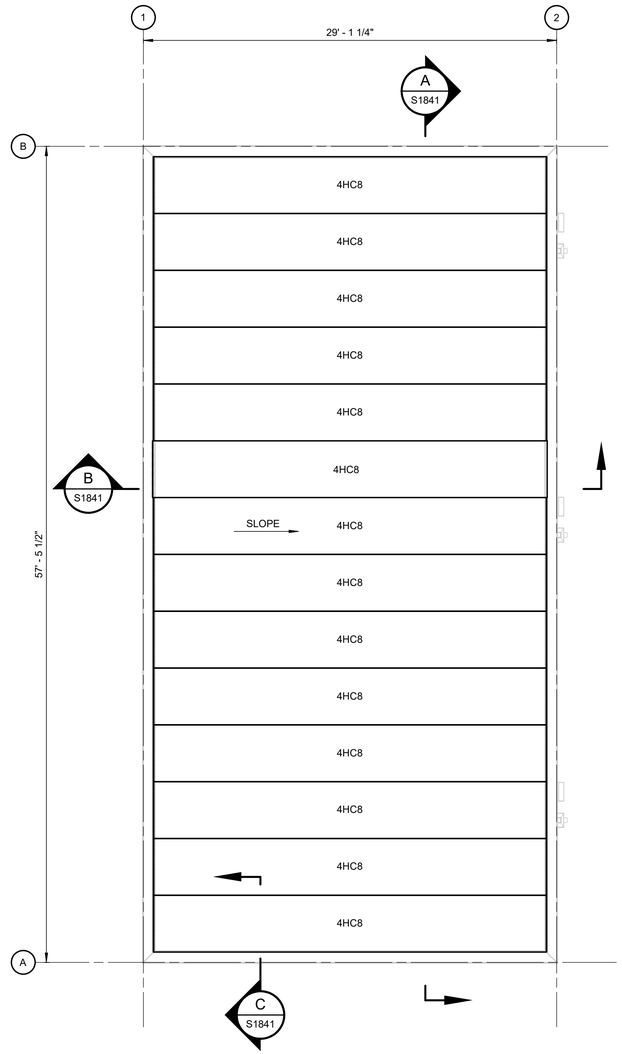


EL 0.00
3/16" = 1'-0"



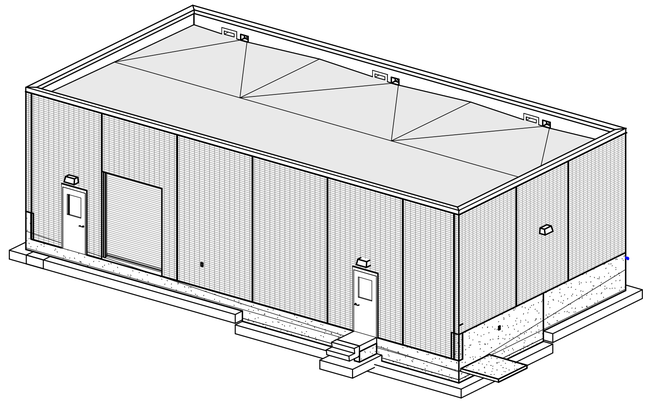
EL 14.00
3/16" = 1'-0"

GENERAL NOTES:

1. SEE S99 SERIES FRO STRUCTURAL GENERAL NOTES AND STANDARD DETAILS.
2. (*) INDICATES DIMENSION OR ELEVATION TO BE VERIFIED PRIOR TO CONSTRUCTION.
3. SEE ELECTRICAL SHEETS FOR NUMBER, SIZE AND LOCATION OF EQUIPMENT PADS.
4. ALL SUSPENDED CONDUIT AND LIGHTING INSTALLED IN UNDERSIDE OF HOLLOW CORE SHALL BE INSTALLED WITH ANCHORS APPROVED FOR USE IN HOLLOW CORE. DO NOT DAMAGE EXISTING HOLLOW CORE TENDONS.

KEYNOTE: (X)

1. PROVIDE 1'-4" THICK CONCRETE PAD W/ 8" #57 STONE SUBBASE W/ #4@12" EW. TOC EL. 16.48.



3D VIEW

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249 Central Park Ave., Ste 201
Virginia Beach, VA 23462
757.222.1500

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DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	E. MARTIN
CHECKED BY	V. PATEL
DRAWN BY	J. ARROYO
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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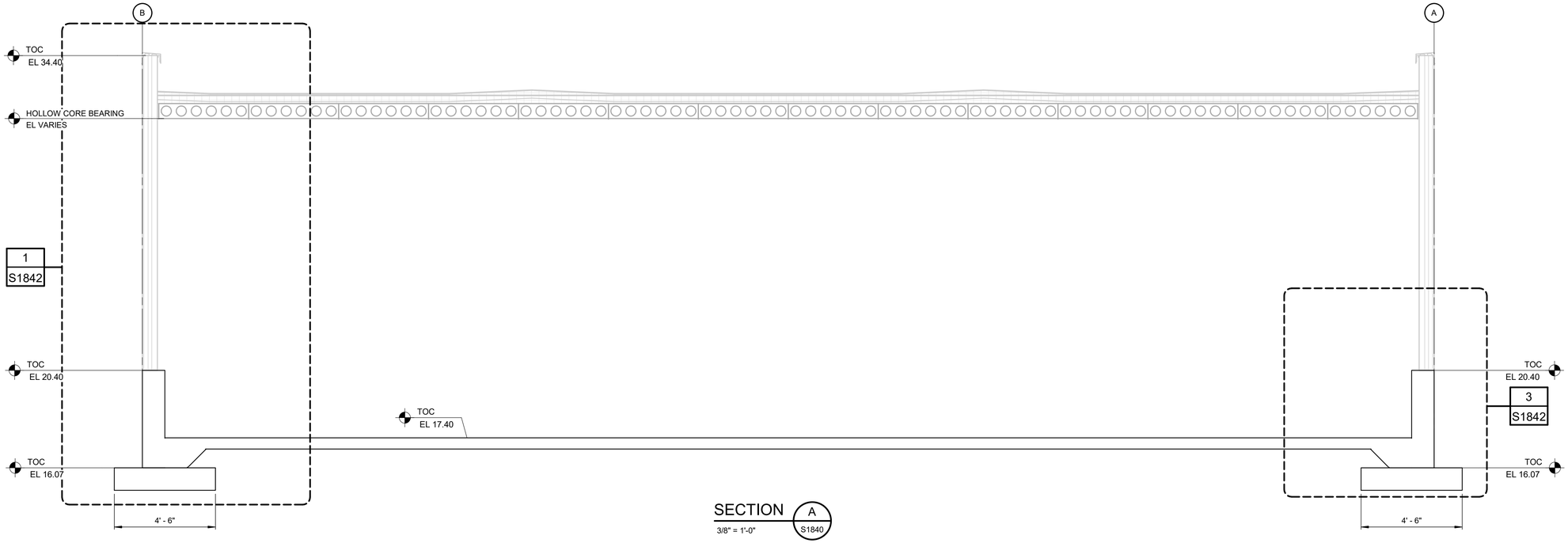
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SOUTH ELECTRICAL BUILDING FOUNDATION & ROOF PLAN

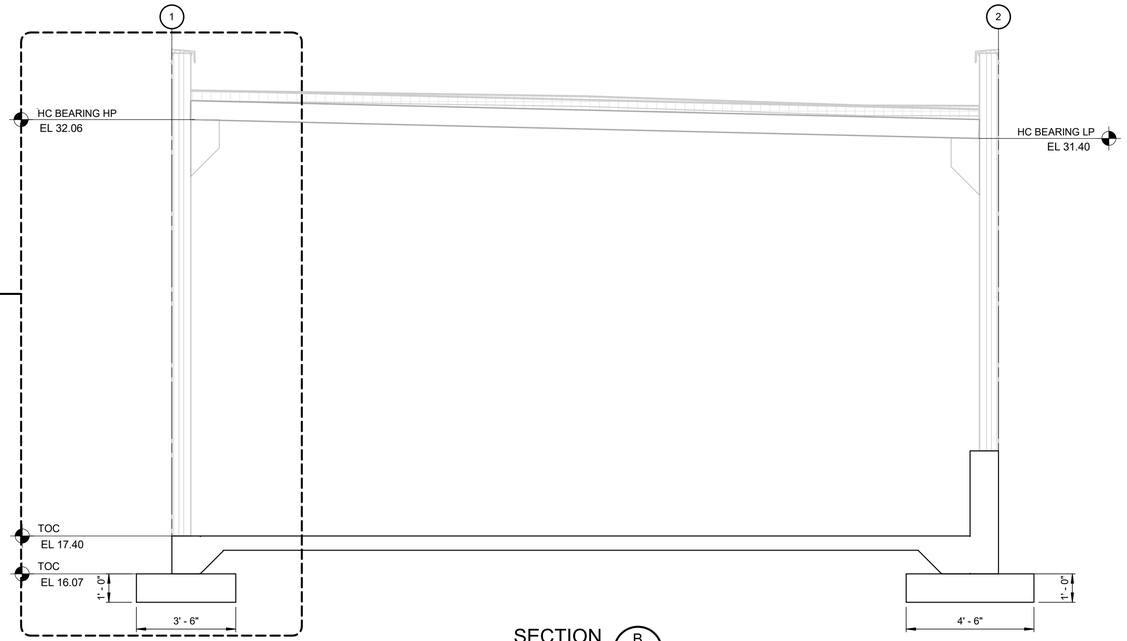
0 1" 2"

FILENAME	10292462-1840-SELE-S.rvt
SCALE	As indicated
DWG NO.	S1840

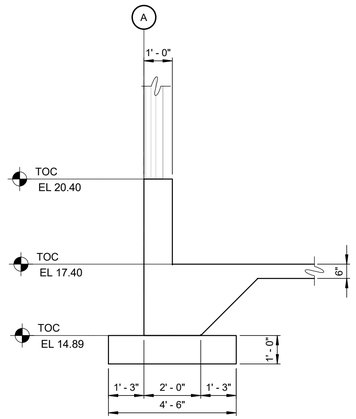
BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1840-SELE-S.rvt
10/5/2021 9:15:17 AM



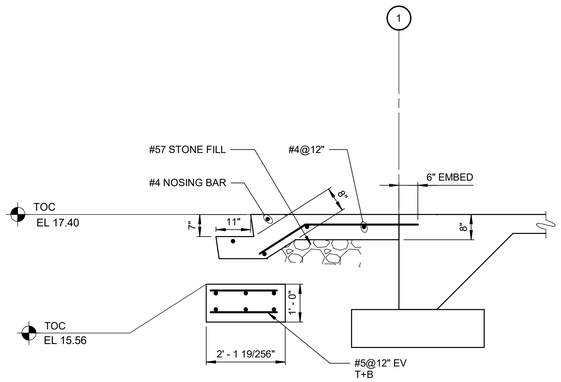
SECTION A
3/8" = 1'-0"
S1840



SECTION B
3/8" = 1'-0"
S1840



SECTION C
3/8" = 1'-0"
S1840



SECTION D
1/2" = 1'-0"
S1840

GENERAL NOTES:

1. --

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	10/2021	30% DESIGN SUBMITTAL

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PROJECT ENGINEER	JASON R. KERNS
DESIGNED BY	E. MARTIN
CHECKED BY	V. PATEL
DRAWN BY	J. ARROYO
PROJECT NUMBER	10292462

PRELIMINARY
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CONSTRUCTION
OR
RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SOUTH ELECTRICAL BUILDING SECTIONS

0 1" 2"

FILENAME 10292462-1840-SELE-S.rvt
SCALE As indicated

DWG NO. S1841

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BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1840-SELE-S.rvt
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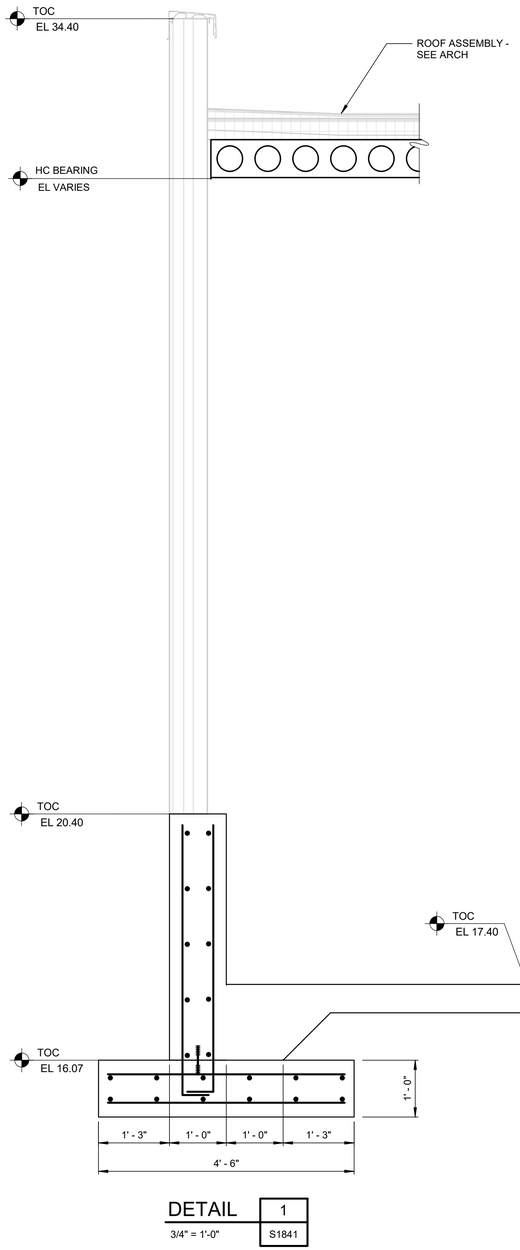
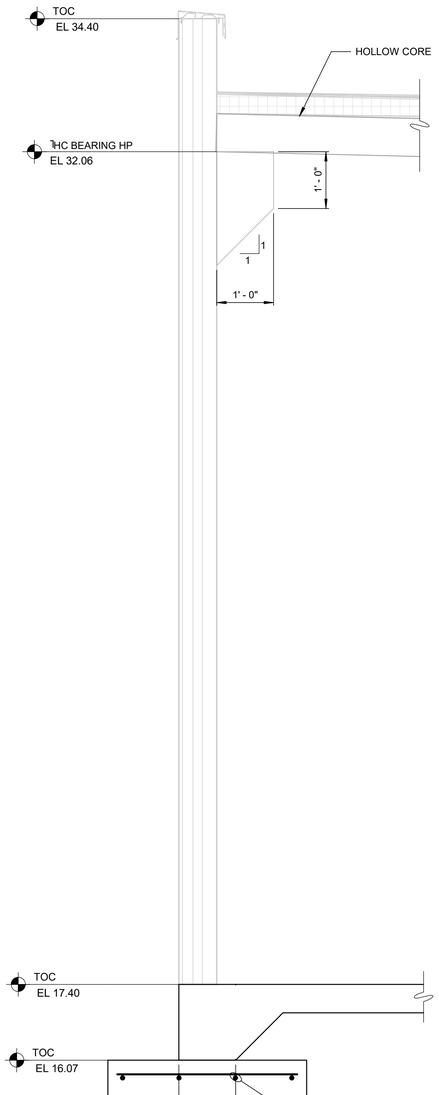
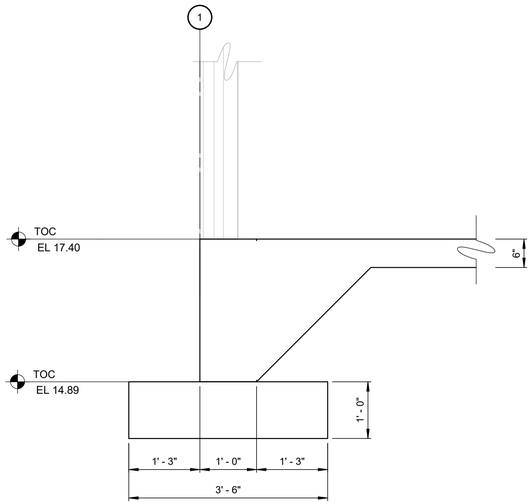
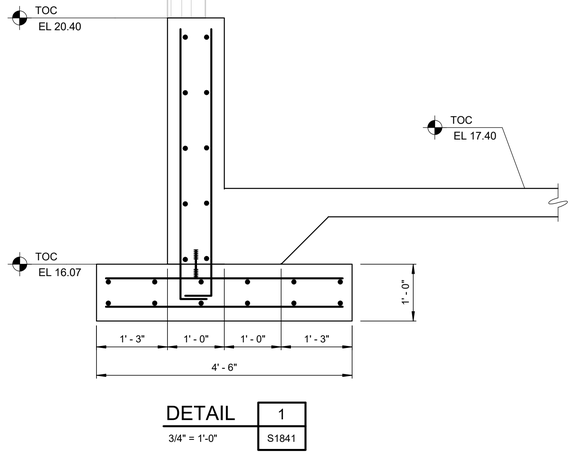


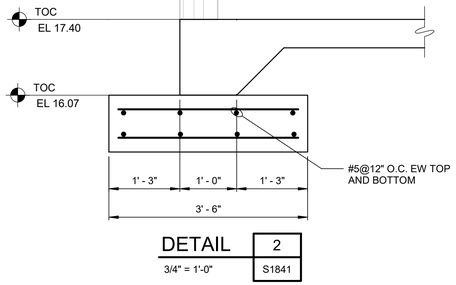




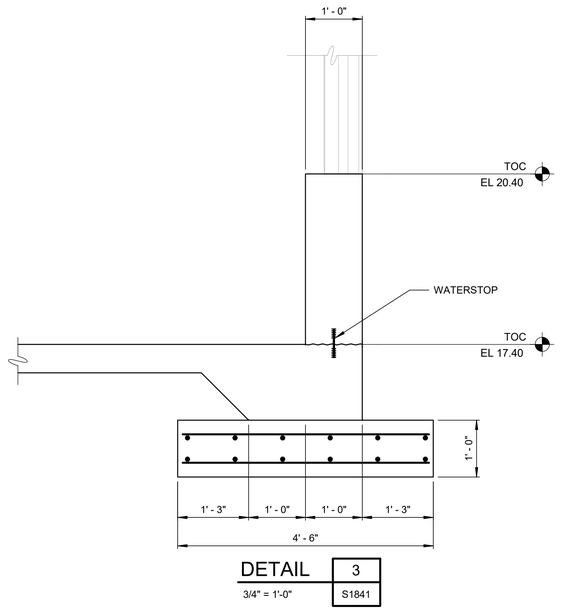
SECTION E
3/4" = 1'-0"
S1840



DETAIL 1
3/4" = 1'-0"
S1841



DETAIL 2
3/4" = 1'-0"
S1841



DETAIL 3
3/4" = 1'-0"
S1841

GENERAL NOTES:

1. --

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DRAWN BY	J. ARROYO
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

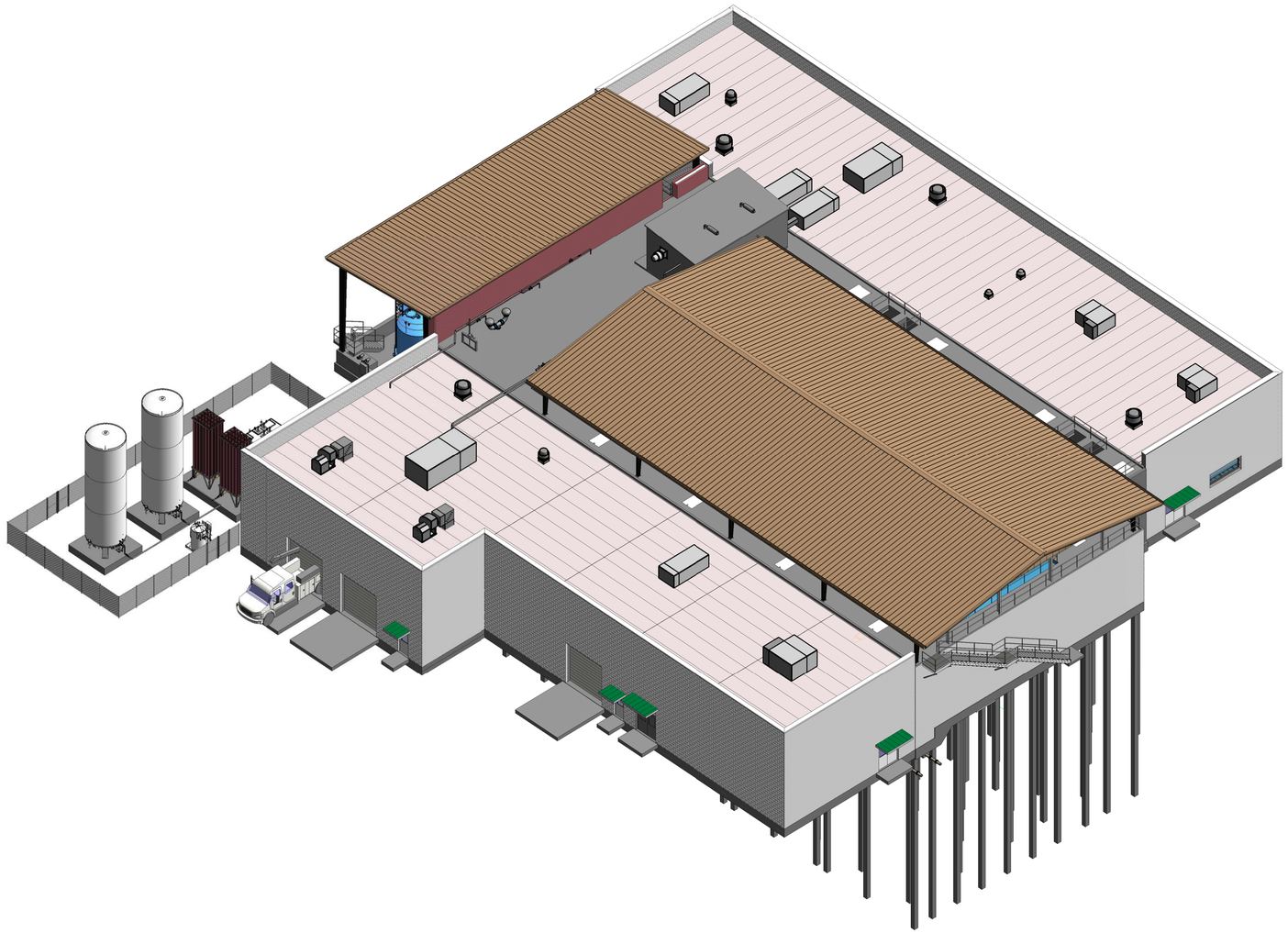
SOUTH ELECTRICAL BUILDING SECTIONS & DETAILS

0 1" 2"

FILENAME 10292462-1840-SELE-S.rvt
SCALE As indicated

DWG NO. **S1842**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-1840-SELE-S.rvt
10/5/2021 9:15:17 AM



ISOMETRIC VIEW

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ISOMETRIC VIEW

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE

DWG NO. **S2200**

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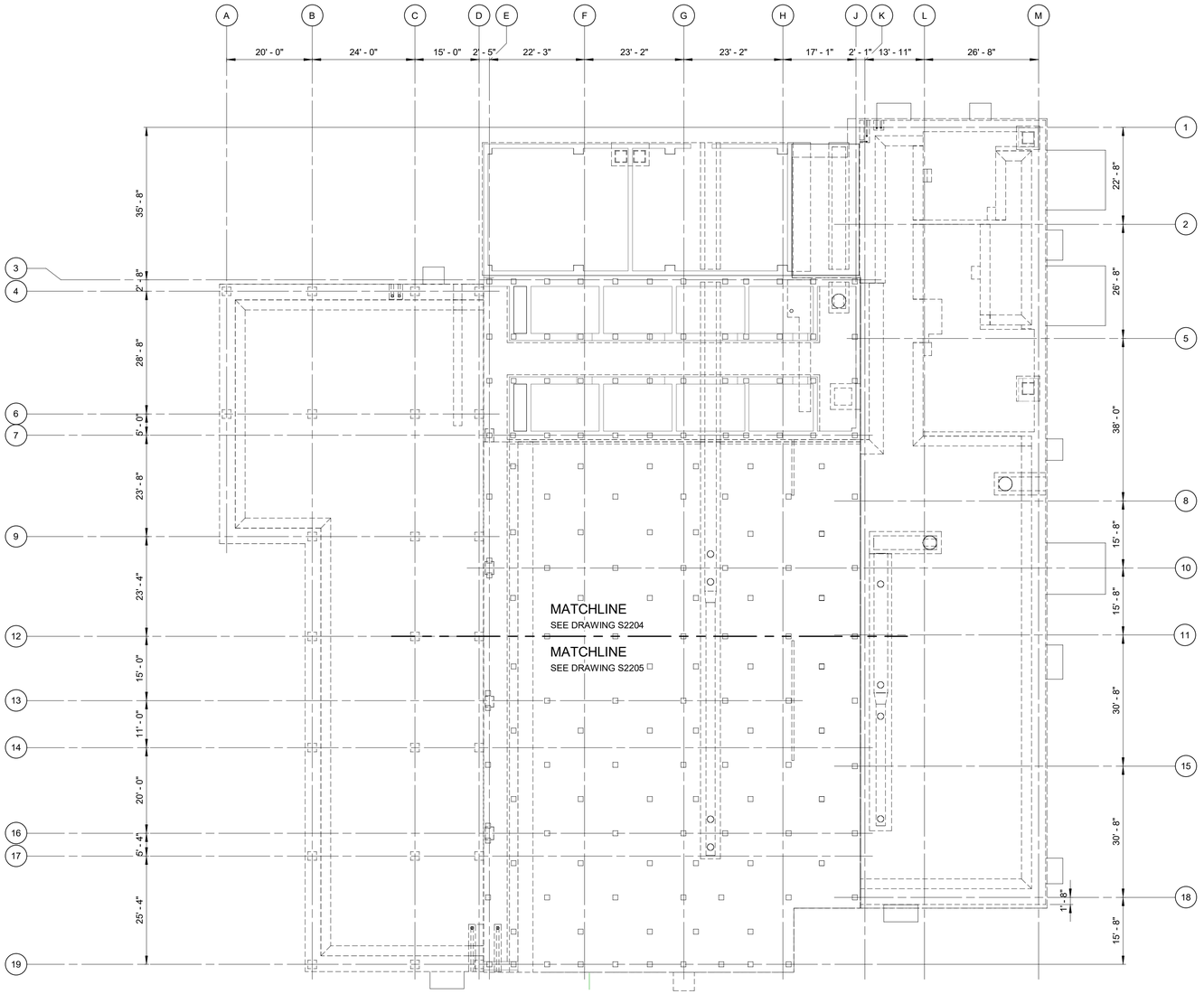


OVERALL PILING PLAN
1/16" = 1'-0"

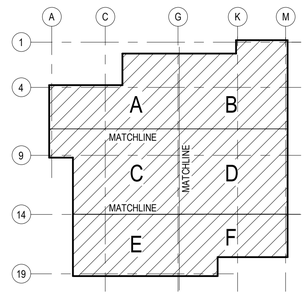
N

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:16:54 AM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

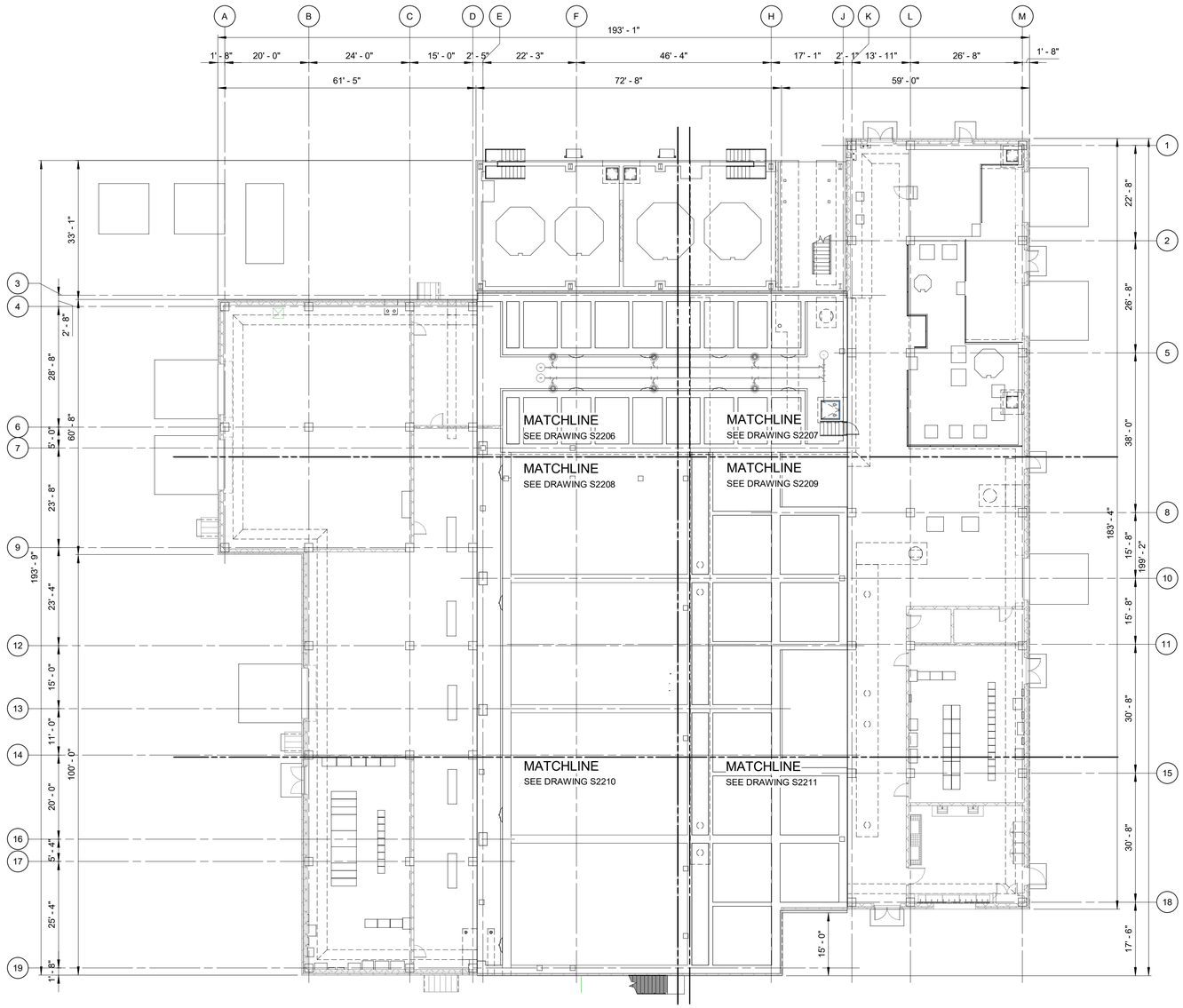
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
OVERALL PILING PLAN

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt
SCALE 1/16" = 1'-0"

DWG NO. **S2201**



OVERALL FOUNDATION PLAN

1/16" = 1'-0"

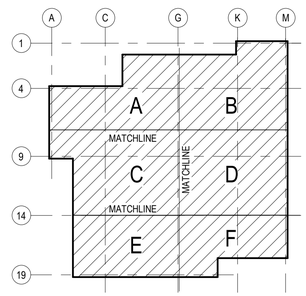
N

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
OVERALL FOUNDATION PLAN

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 1/16" = 1'-0"

DWG NO. **S2202**

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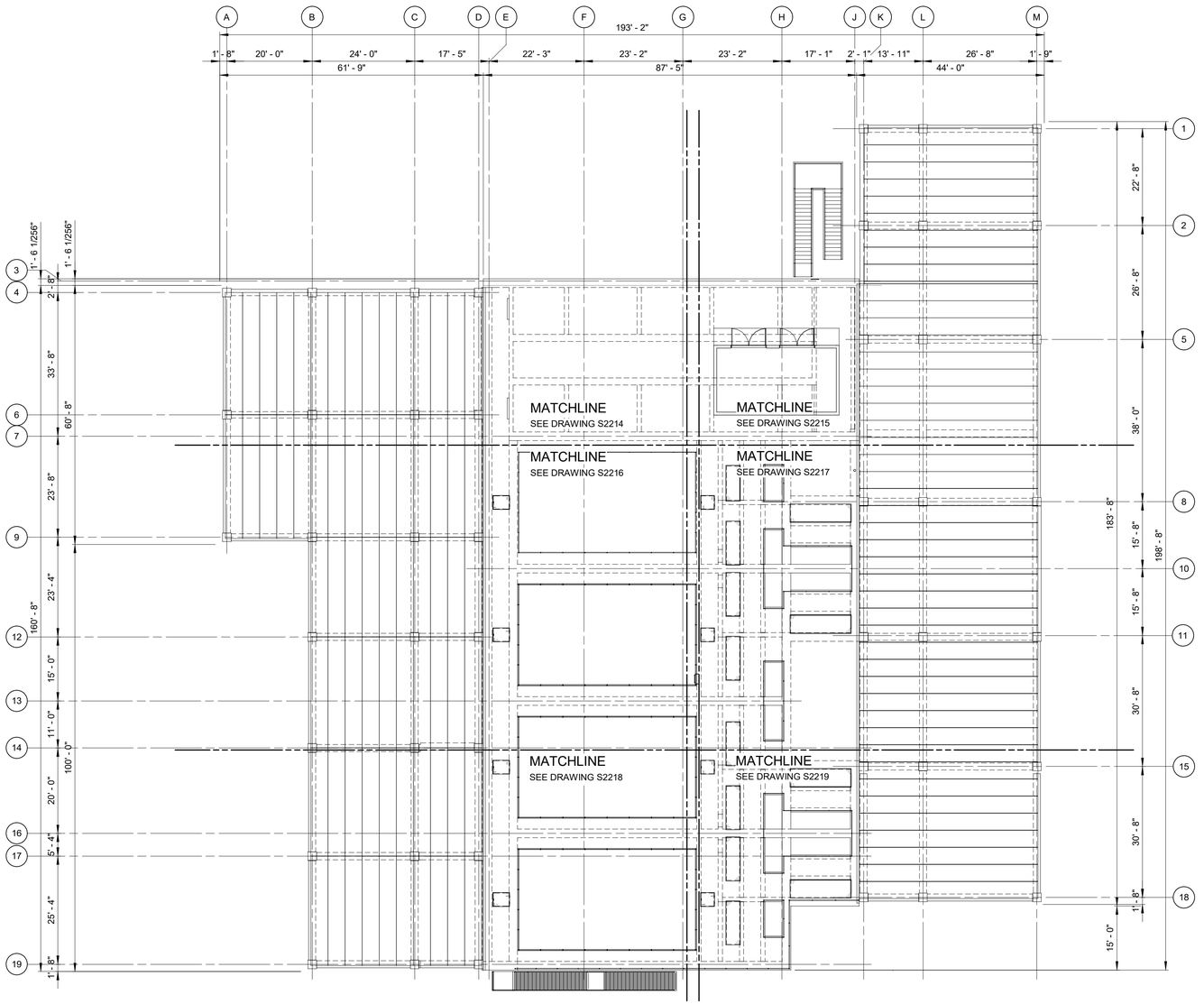


OVERALL OPERATING FLOOR

1/16" = 1'-0"

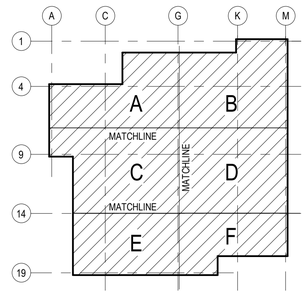
N

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
OVERALL OPERATING LEVEL PLAN

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 1/16" = 1'-0"

DWG NO. **S2203**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
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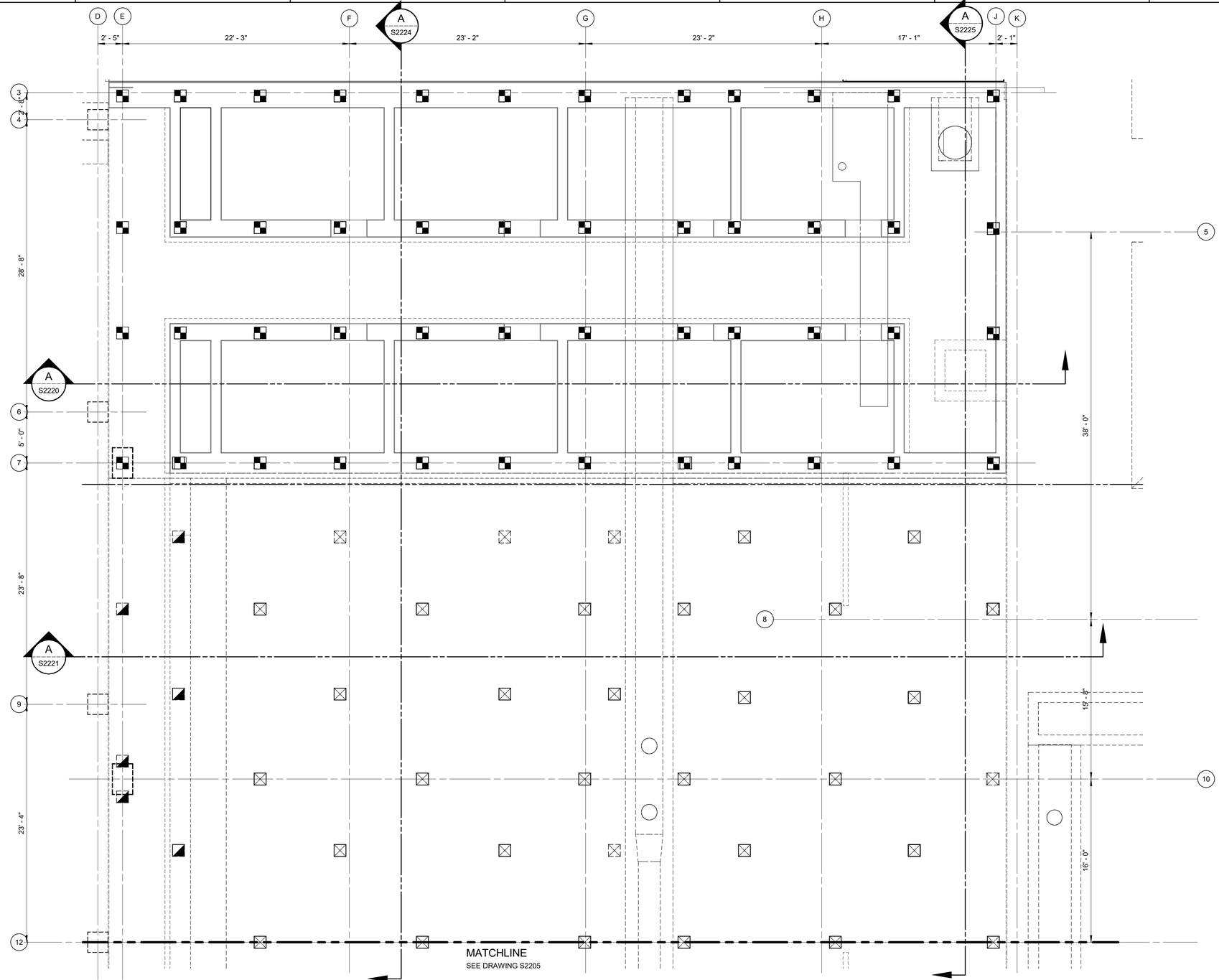


PARTIAL PILING PLAN 1

3/16" = 1'-0"

N

GENERAL NOTES

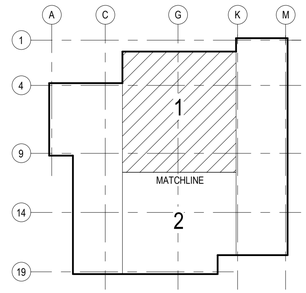
1. --

KEY NOTES (#)

PILE LEGEND

- PILE TIP EL 18.25
- PILE TIP EL 19.33
- PILE TIP EL 19.83
- PILE TIP EL 22.83

KEY PLAN



US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
PARTIAL PILING PLAN 1

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2204**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
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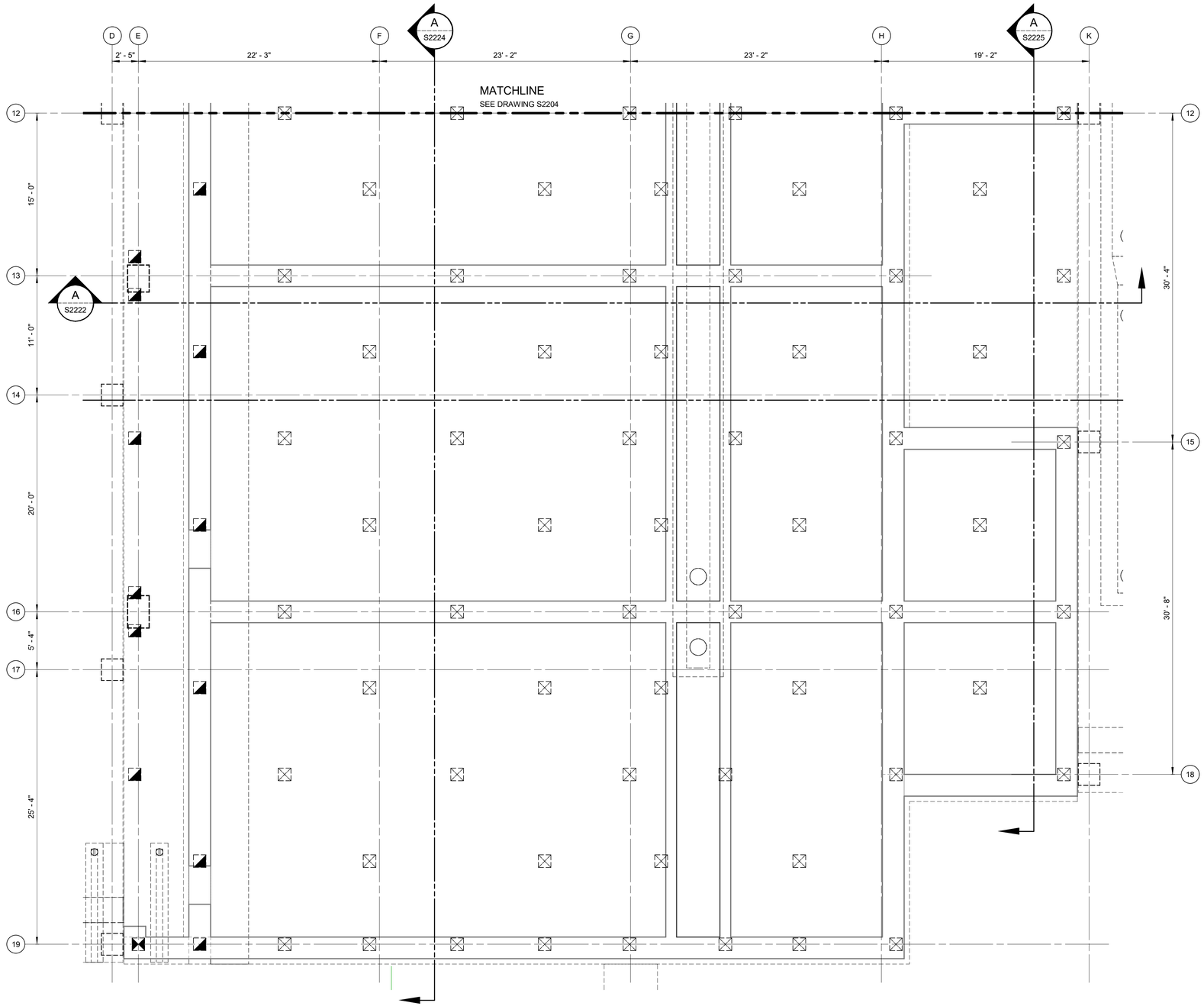


PARTIAL PILING PLAN 2

3/16" = 1'-0"

N

GENERAL NOTES

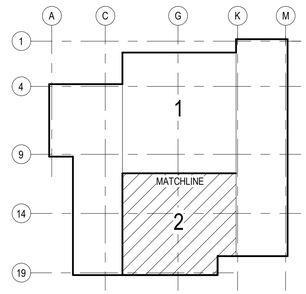
1. --

KEY NOTES (#)

PILE LEGEND

- PILE TIP EL 18.25
- PILE TIP EL 19.33
- PILE TIP EL 19.83
- PILE TIP EL 22.83

KEY PLAN



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10/6/2021 8:17:07 AM

US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

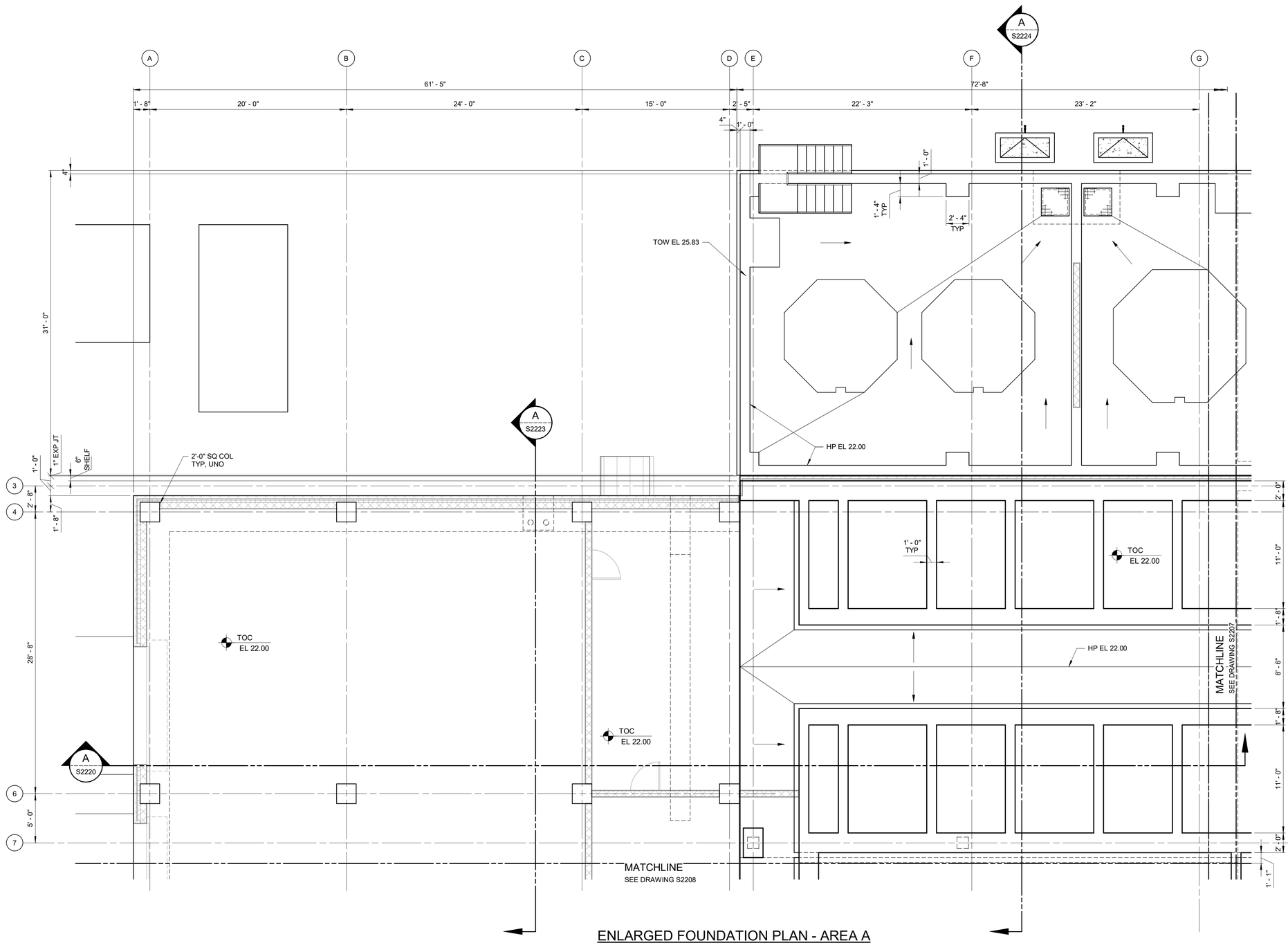
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
PARTIAL PILING PLAN 2

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2205**



ENLARGED FOUNDATION PLAN - AREA A

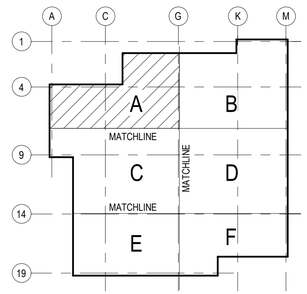
3/16" = 1'-0"

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



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10/6/2021 12:41:46 PM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

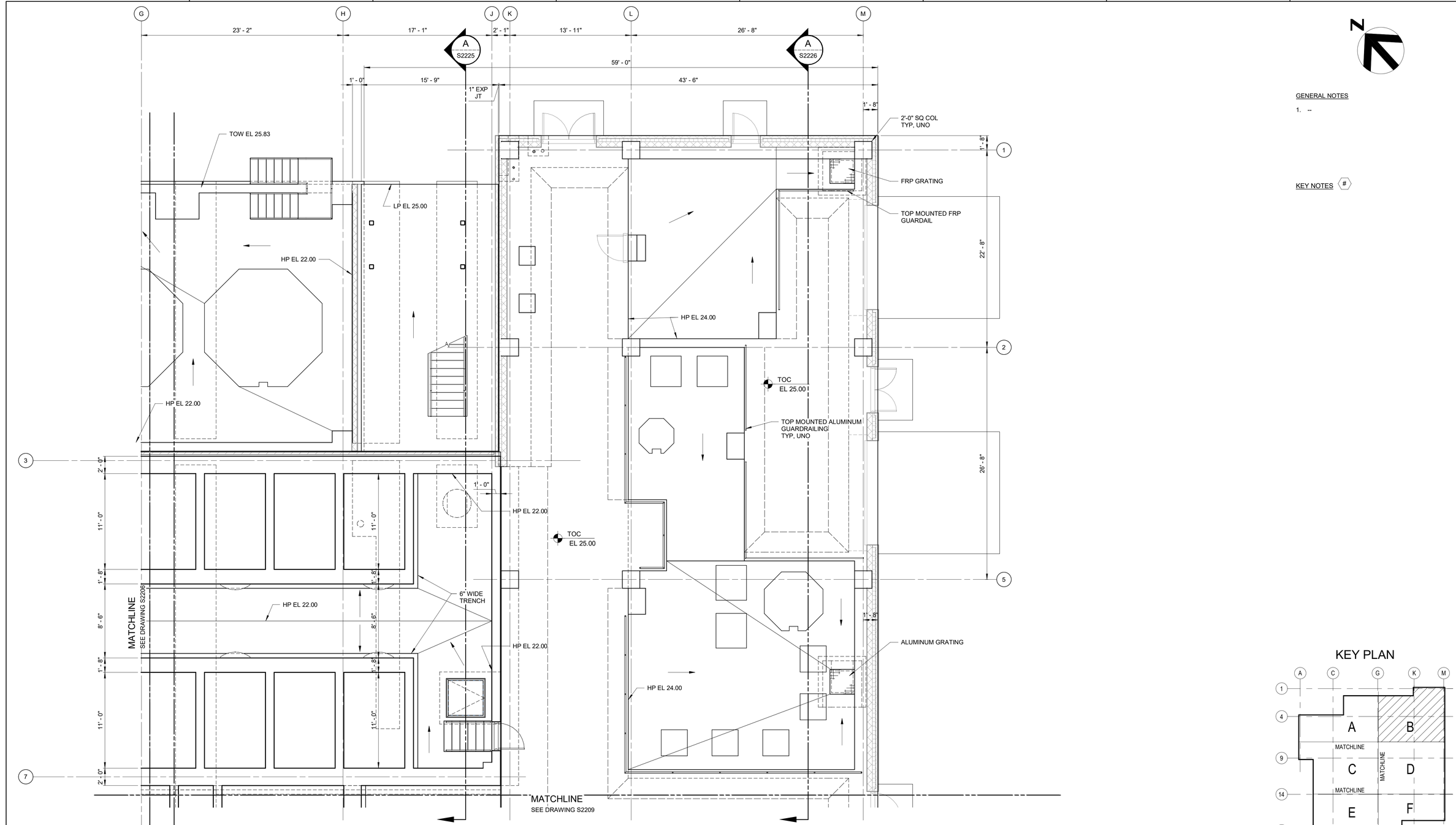
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED FOUNDATION PLAN AREA A

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2206**



FOUNDATION PLAN - AREA B

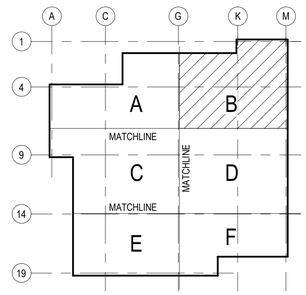
3/16" = 1'-0"

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



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US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

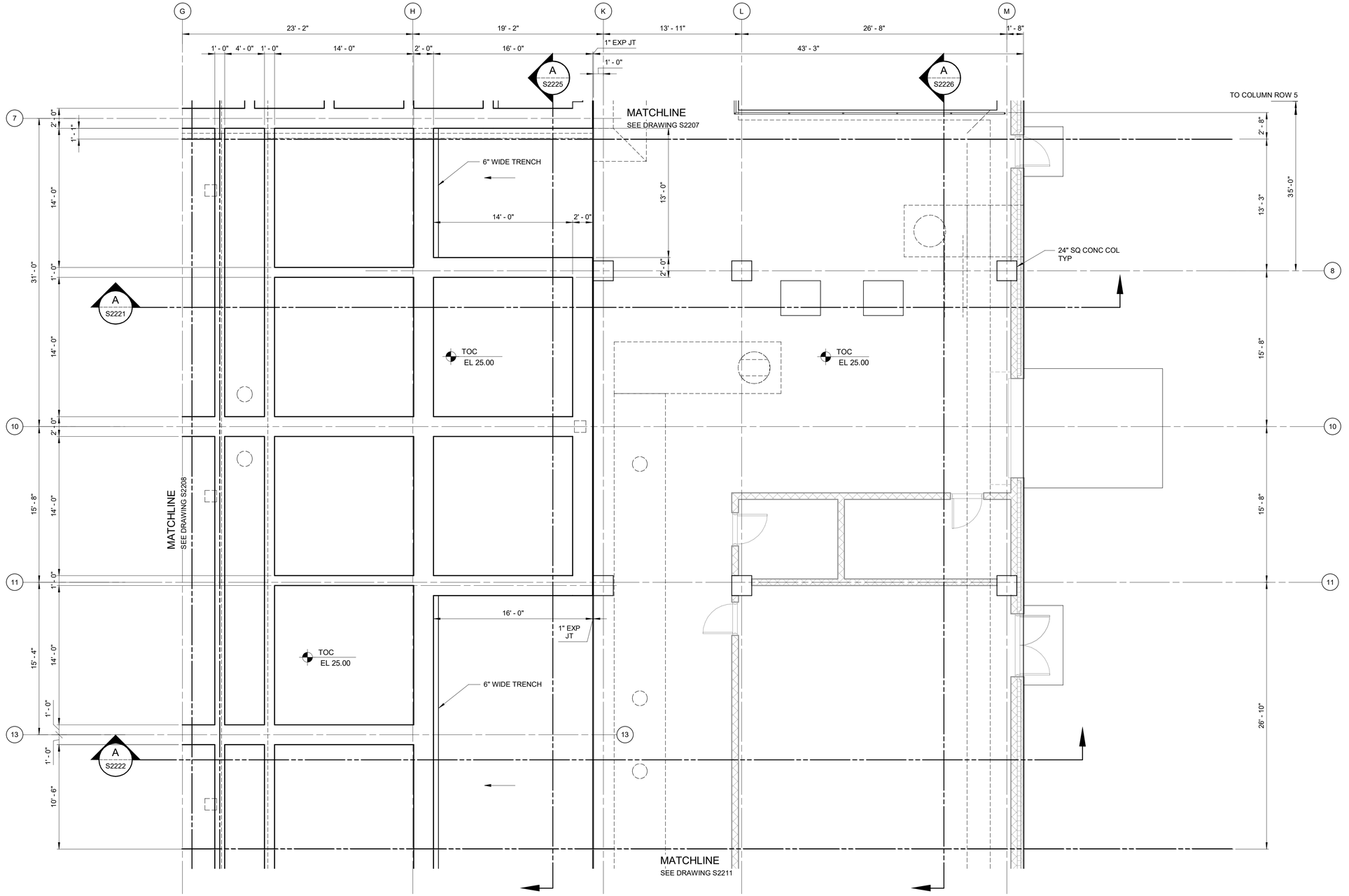
SWIFT PROCESS BUILDING NO. 1
ENLARGED FOUNDATION PLAN AREA B

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2207**

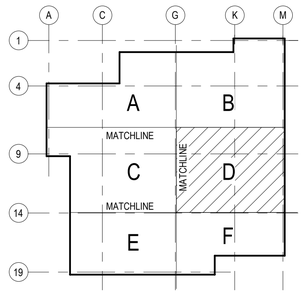


GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



ENLARGED FOUNDATION PLAN - AREA D

3/16" = 1'-0"

US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED FOUNDATION PLAN AREA D

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2209**

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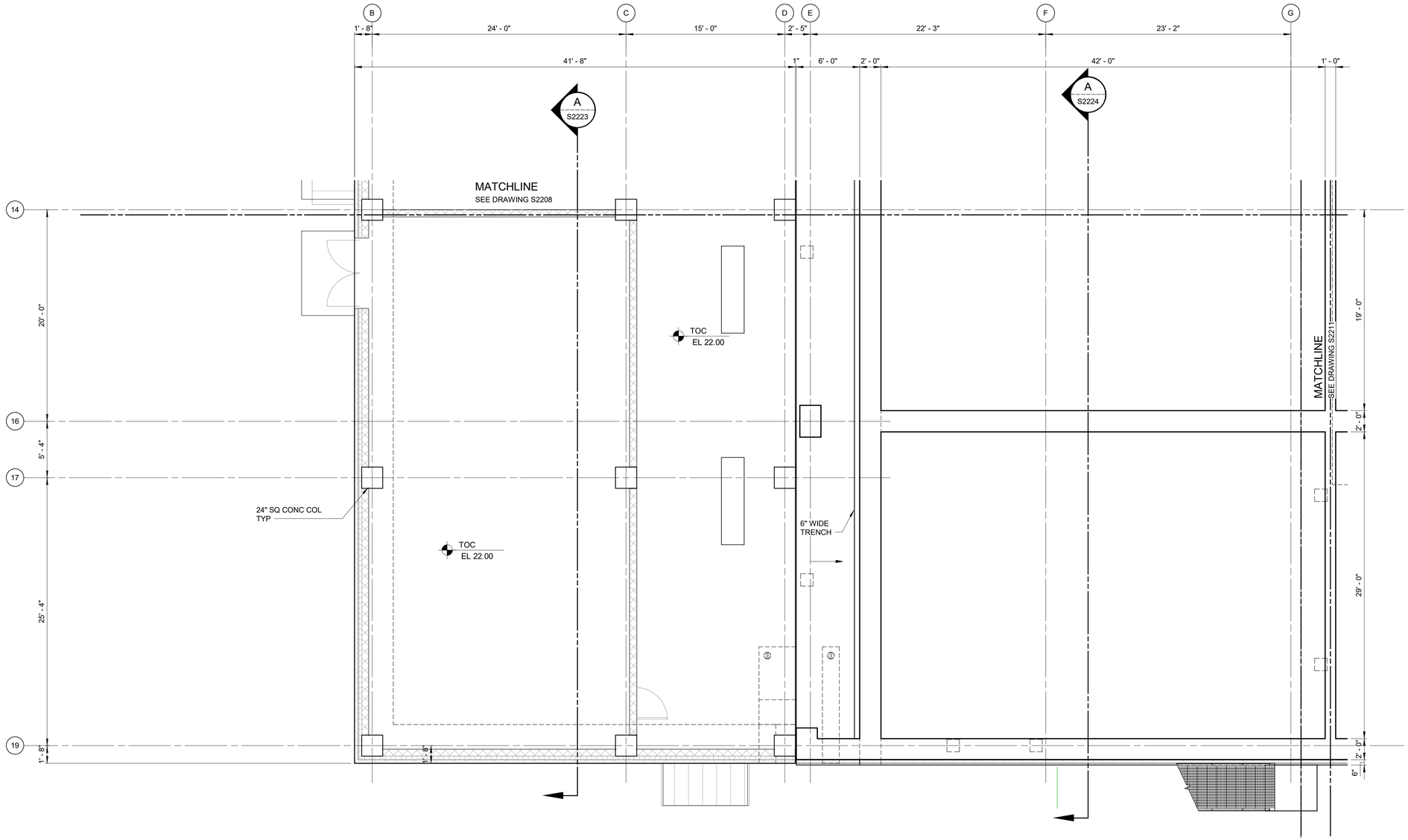


ENLARGED FOUNDATION PLAN - AREA E

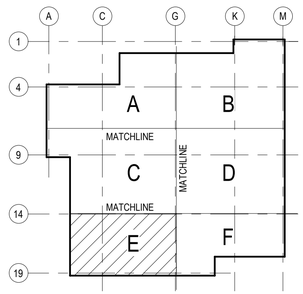
3/16" = 1'-0"

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED FOUNDATION PLAN AREA E

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2210**

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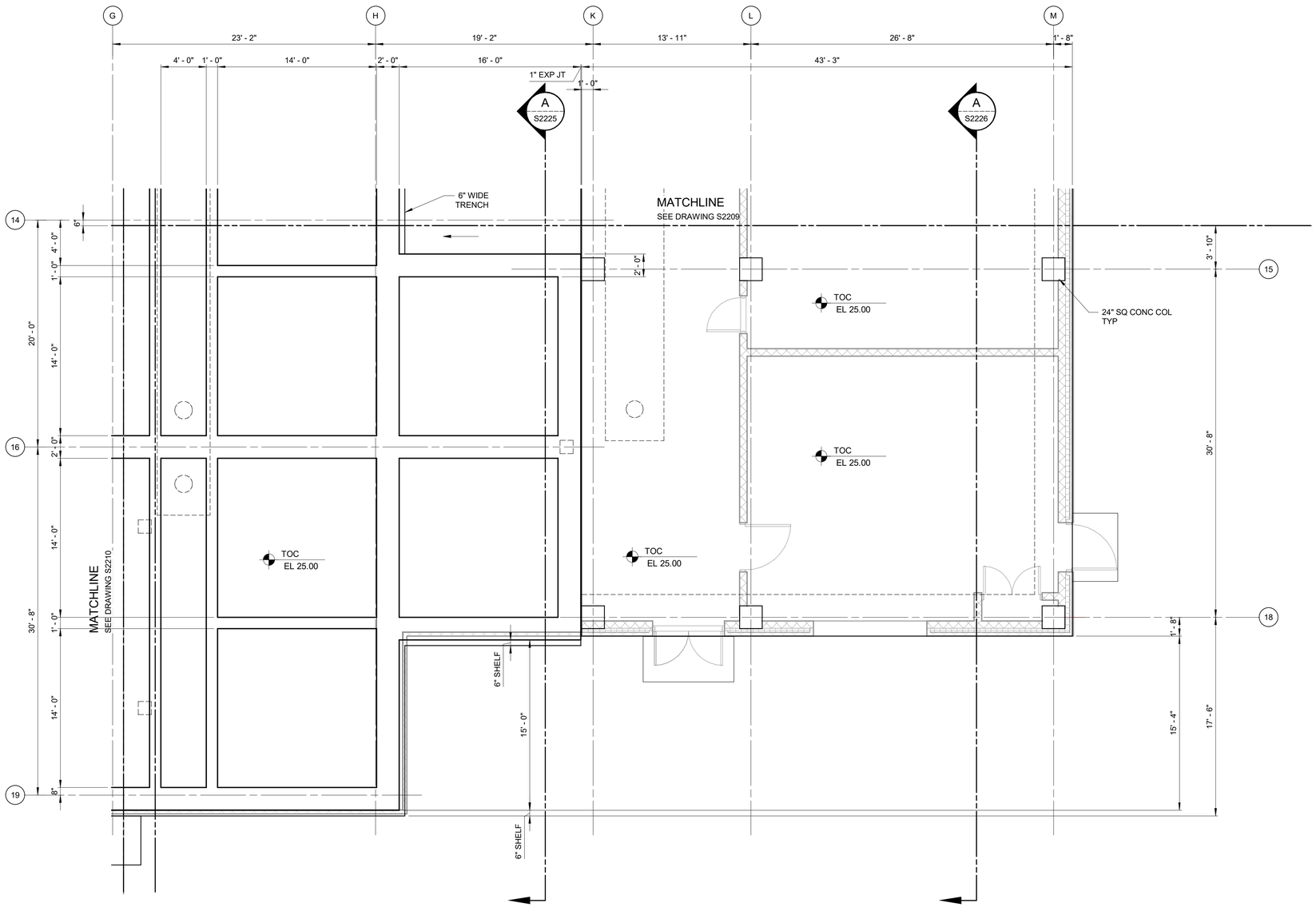


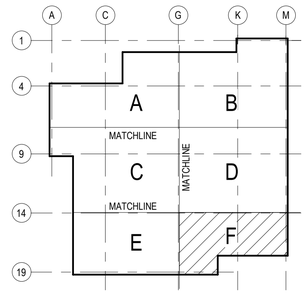
N

GENERAL NOTES

1. --

KEY NOTES (#)

KEY PLAN



ENLARGED FOUNDATION PLAN - AREA F

3/16" = 1'-0"

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 12:42:00 PM

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Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

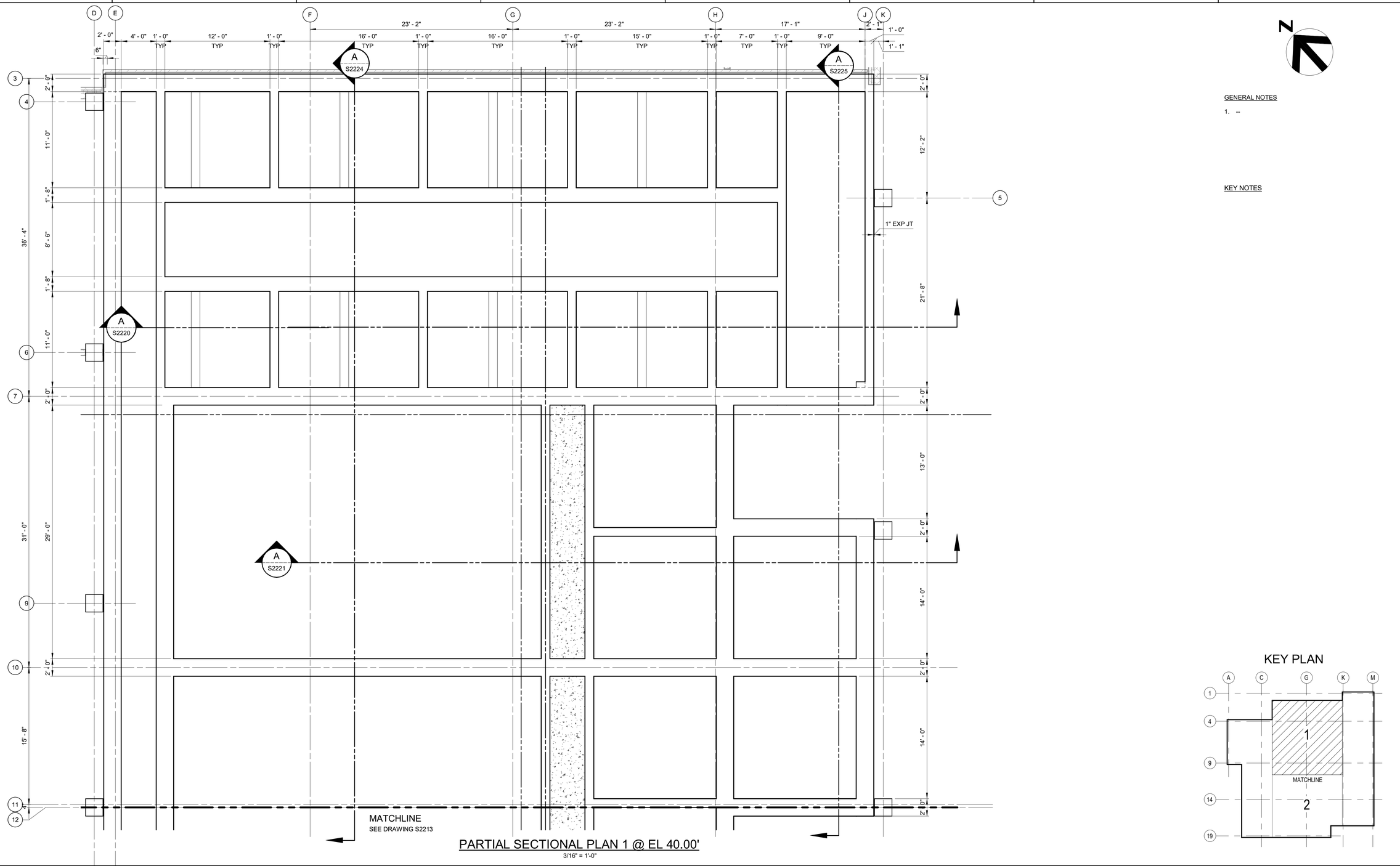
HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED FOUNDATION PLAN AREA F

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt
SCALE 3/16" = 1'-0"
DWG NO. S2211



PARTIAL SECTIONAL PLAN 1 @ EL 40.00'

3/16" = 1'-0"

N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:54 AM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
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Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

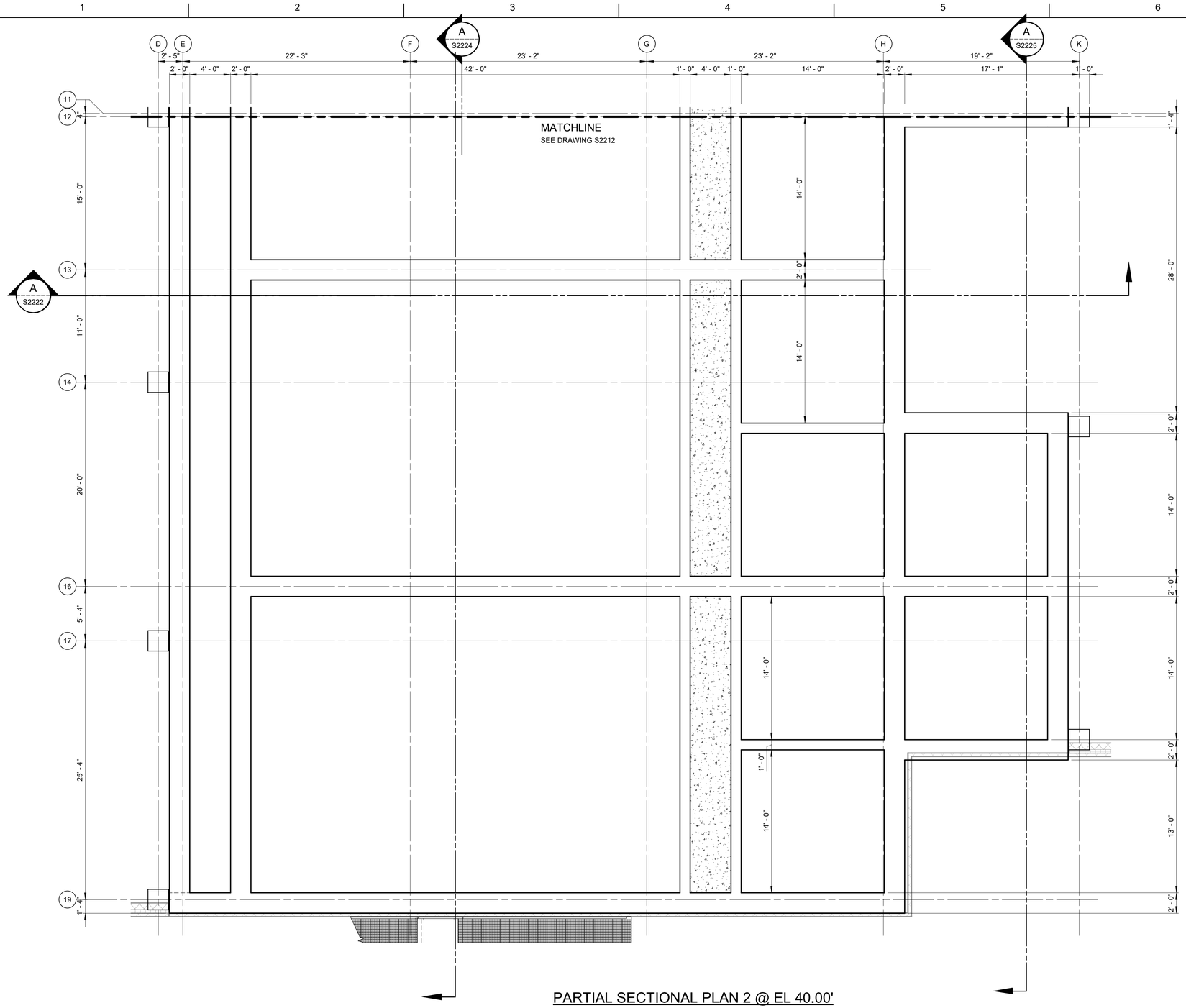
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
PARTIAL SECTIONAL PLAN 1 @ EL 40.00 - OZONE CONTACTORS AND PLATE SETTLERS

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2212**



PARTIAL SECTIONAL PLAN 2 @ EL 40.00'

3/16" = 1'-0"

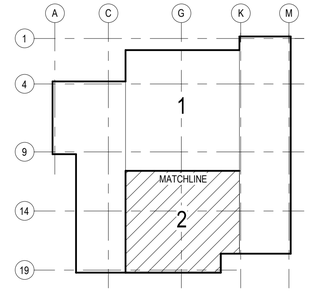
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



D

C

B

A

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:57 AM

US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

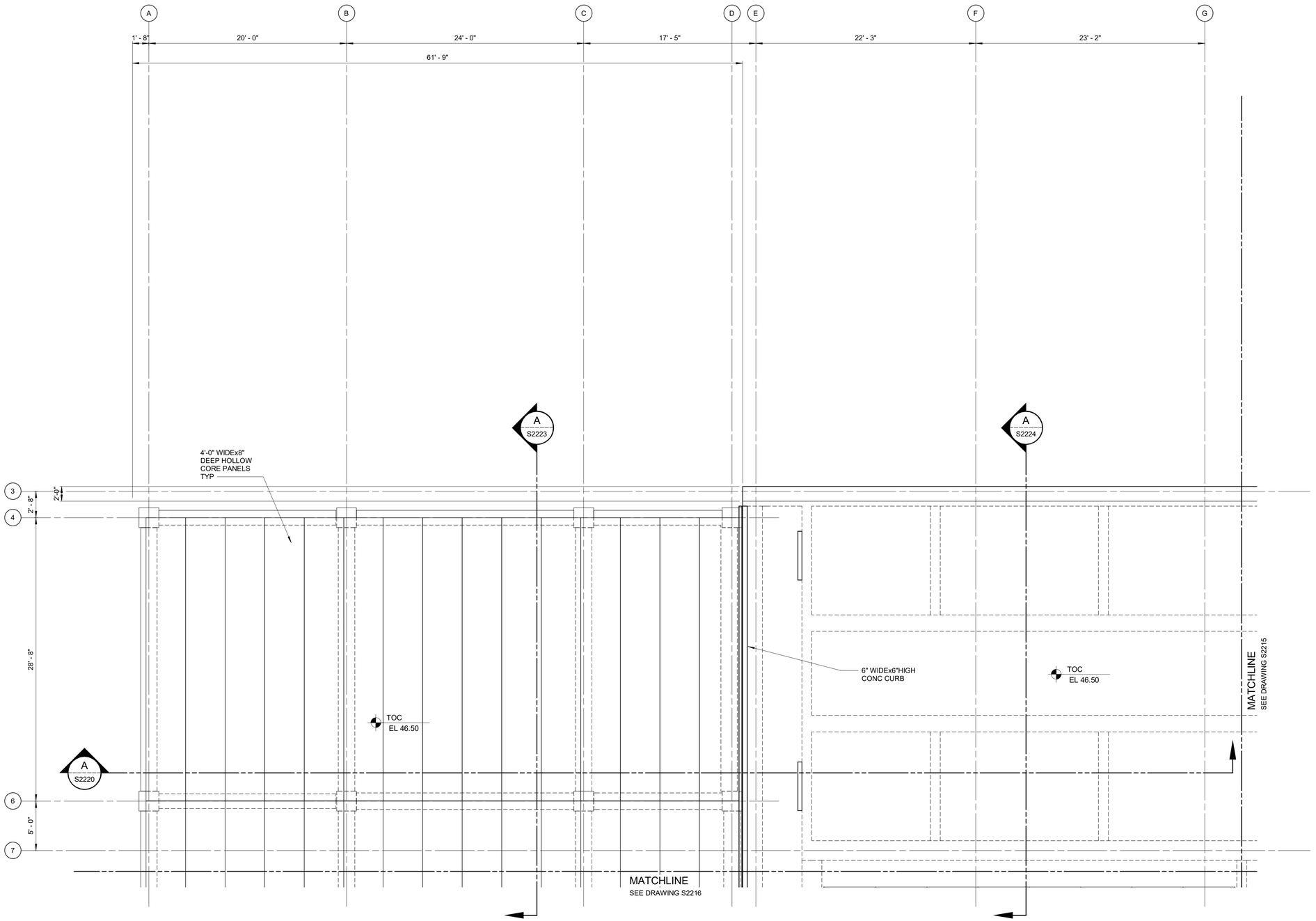
SWIFT PROCESS BUILDING NO. 1
PARTIAL SECTIONAL PLAN 2 @ EL 40.00 - PLATE SETTLERS

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2213**



ENLARGED OPERATING FLOOR - AREA A

3/16" = 1'-0"

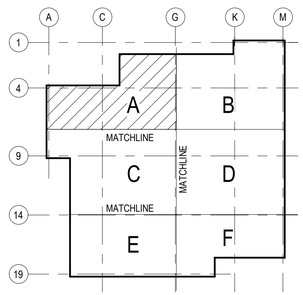
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:38 AM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

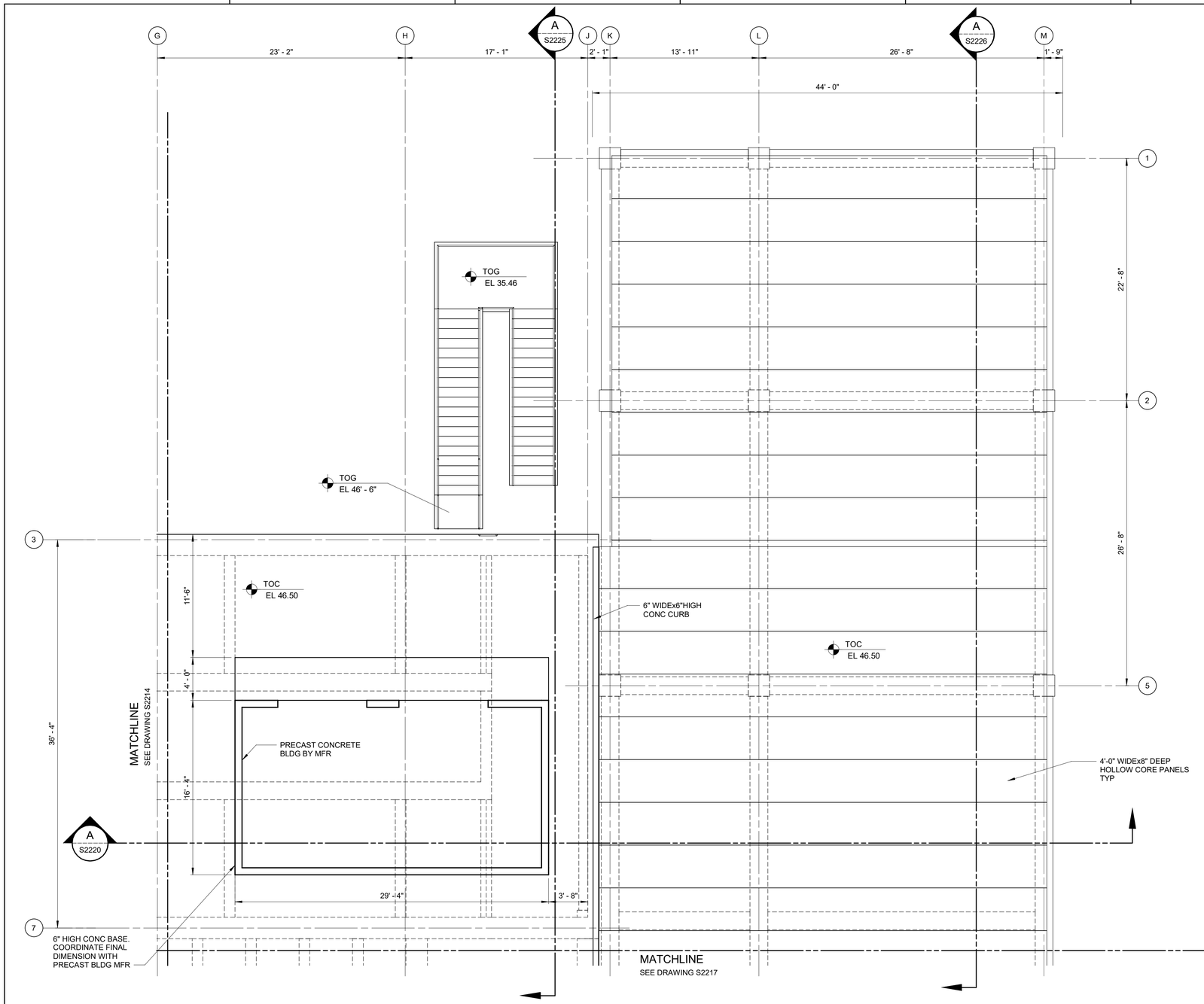
JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA A

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2214**



ENLARGED OPERATING FLOOR - AREA B

3/16" = 1'-0"

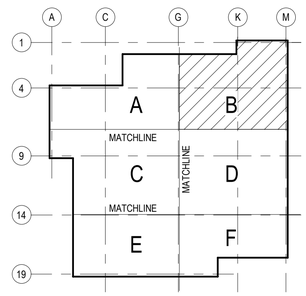
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



D C B A

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:40 AM

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

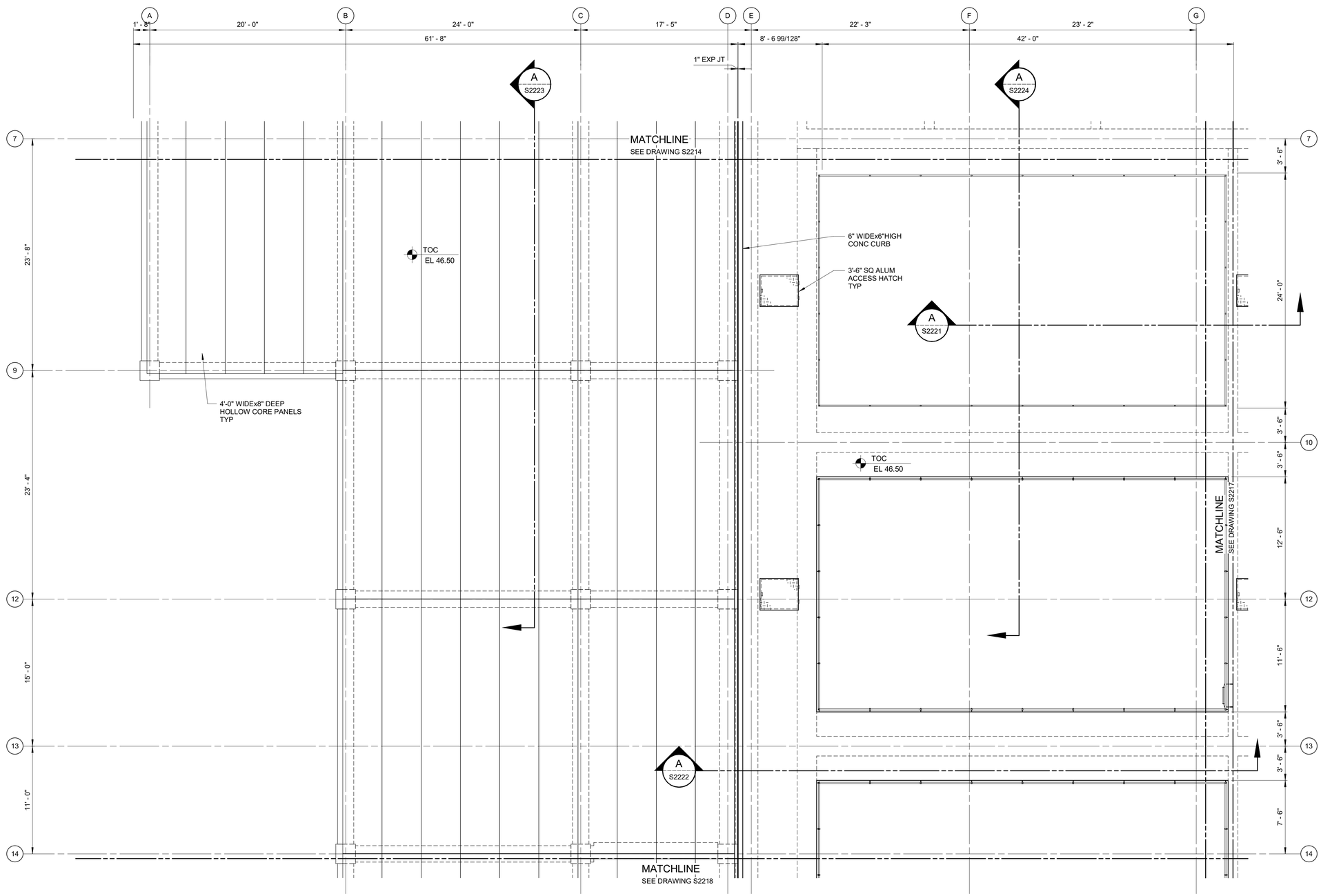
SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA B

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2215**

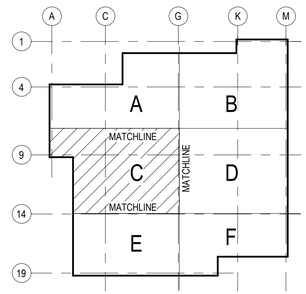


GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



ENLARGED OPERATING FLOOR - AREA C

3/16" = 1'-0"

US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA C

0 1" 2"

FILENAME	10292462-2200-SPB1-S.rvt
SCALE	3/16" = 1'-0"

DWG NO. **S2216**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
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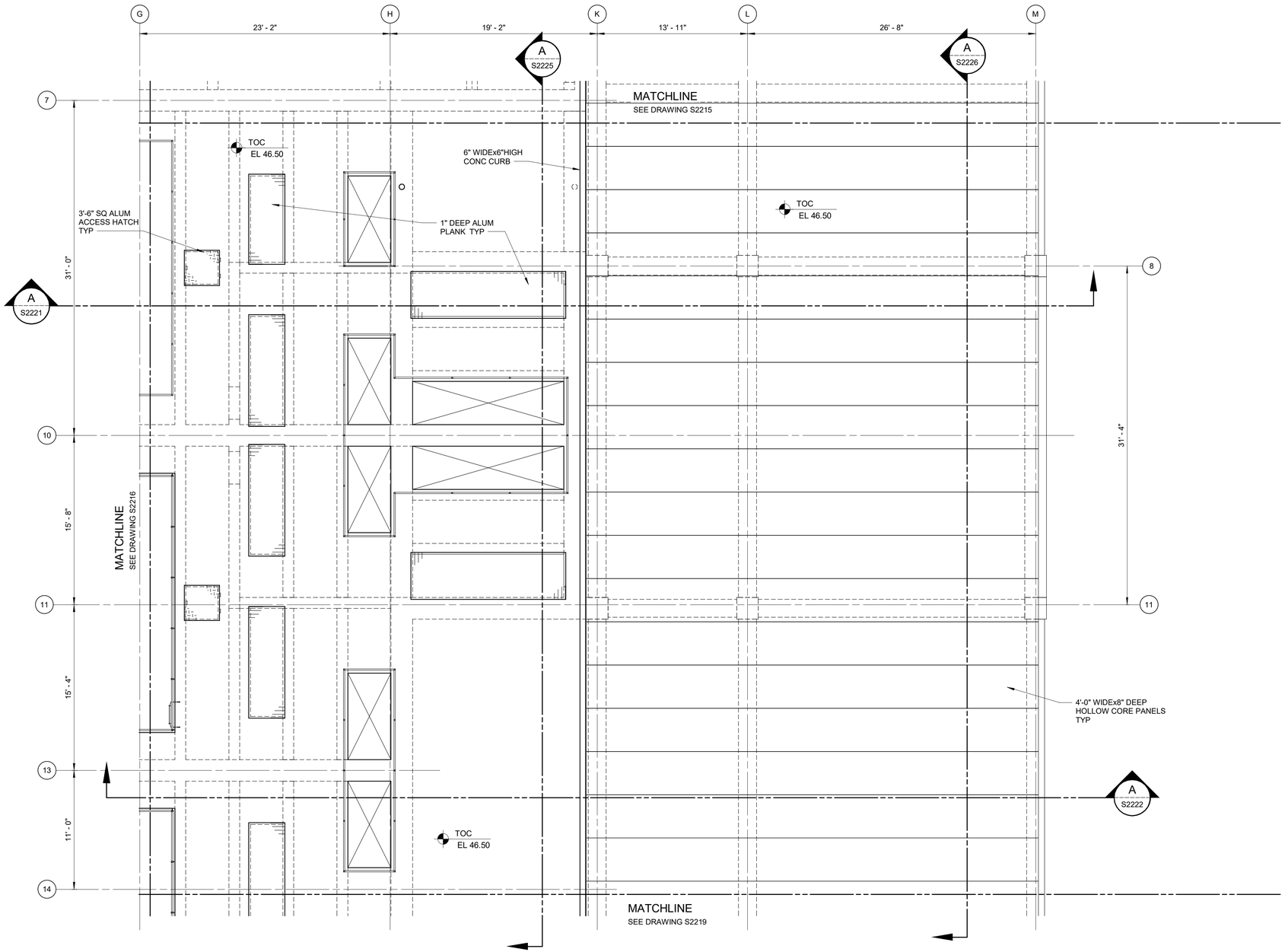


ENLARGED OPERATING FLOOR - AREA D

3/16" = 1'-0"

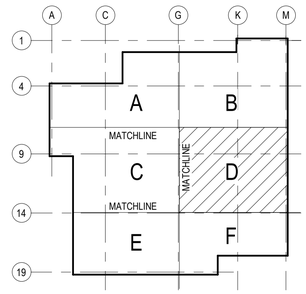
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



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Virginia Beach, VA 23462
757.456.5380

US-A
Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA D

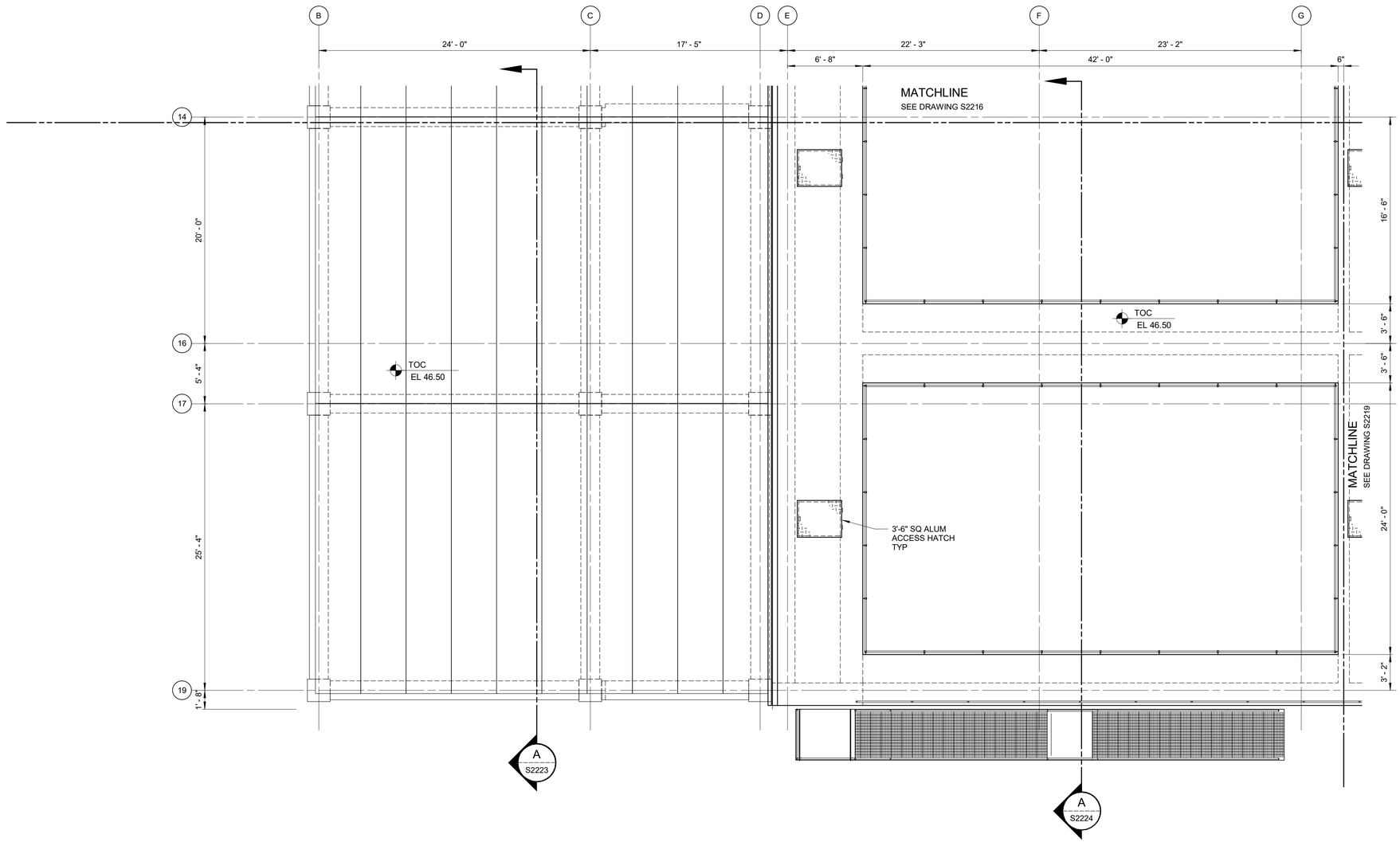
0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2217**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:46 AM



ENLARGED OPERATING FLOOR - AREA E

3/16" = 1'-0"

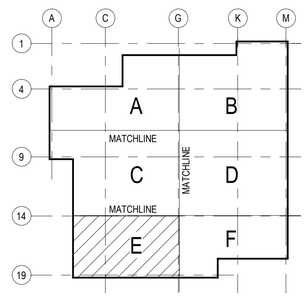
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



US-A
Ulliman Schutte – Alberici Joint Venture
5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
757.456.5380

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HRSD

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA E

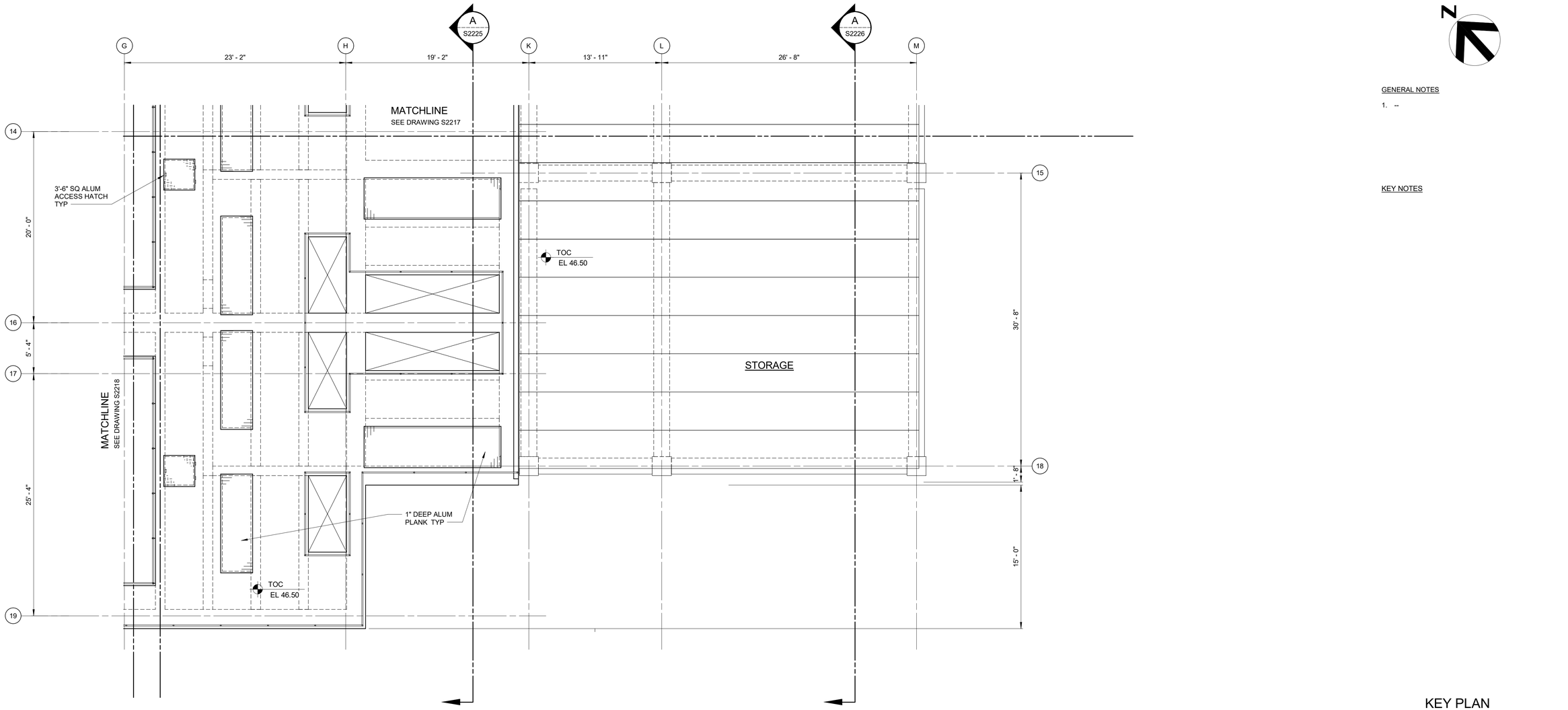
0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt

SCALE 3/16" = 1'-0"

DWG NO. **S2218**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:49 AM



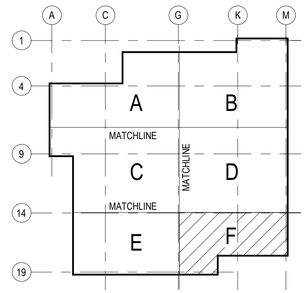
N

GENERAL NOTES

1. --

KEY NOTES

KEY PLAN



ENLARGED OPERATING FLOOR - AREA F

3/16" = 1'-0"

5029 Corporate Woods Dr., Ste 170
Virginia Beach, VA 23462
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Ulliman Schutte – Alberici Joint Venture

ISSUE	DATE	DESCRIPTION
	10/2021	30% DESIGN SUBMITTAL

DESIGN MANAGER	WILLIAM S. M'COY
PROJECT ENGINEER	MICHAEL B. SHAFER
DESIGNED BY	X. XXXXXX
CHECKED BY	X. XXXXXX
DRAWN BY	T. HURD
PROJECT NUMBER	10292462

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

JR SWIFT FACILITY (GN016360) AND
JRTP ANRI (JR013400)
WORK PACKAGE 2

SWIFT PROCESS BUILDING NO. 1
ENLARGED OPERATING PLAN AREA F

0 1" 2"

FILENAME 10292462-2200-SPB1-S.rvt
SCALE 3/16" = 1'-0"

DWG NO. **S2219**

BIM 360://10292462_HRSD_James River SWIFT DB_2020/10292462-2200-SPB1-S.rvt
10/6/2021 8:18:52 AM