

Appendix 3.D, Assumed Construction Schedule for the Proposed Action

3.D Assumed Construction Schedule for the Proposed Action

Dates are provided to indicate duration and relative timing of activities. Note that all construction, regardless of dates shown here, will comply with applicable timing windows for in-water work and timing restrictions for wildlife species and their habitat.

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Clifton Court Forebay	Mobilization	1/4/2024	1/18/2024	8
Clifton Court Forebay	Contractor Management, Supervision, Administration	1/18/2024	3/8/2029	1,072
Clifton Court Forebay	Access Construction	1/4/2024	3/1/2025	241
Clifton Court Forebay	Temporary Facilities	1/4/2024	4/4/2025	261
Clifton Court Forebay	Batch Plant	5/27/2024	3/8/2029	998
Clifton Court Forebay	Temp Facility Operations	4/4/2025	3/8/2029	819
Clifton Court Forebay	SCCF Dike – Southwest Corner	10/28/2024	1/21/2026	249
Clifton Court Forebay	SCCF Dike – Southeast Corner	1/22/2026	4/19/2027	252
Clifton Court Forebay	SCCF Dike – Gate to Dike	6/26/2024	9/25/2025	253
Clifton Court Forebay	CCF Dredging	1/18/2024	3/14/2028	1,518
Clifton Court Forebay	CCF Partition Dike	4/20/2027	10/23/2028	306
Clifton Court Forebay	NCCF Dike – West Side	9/29/2025	12/22/2026	251
Clifton Court Forebay	NCCF Dike – North Side	12/23/2026	3/21/2028	251
Clifton Court Forebay	Relocate Byron Highway	1/2/2024	6/27/2024	102
Clifton Court Forebay	Relocate Railroad	1/2/2024	6/25/2024	100
Clifton Court Forebay	NCCF Siphon (Phase 1) Excavate	12/29/2023	10/1/2024	278
Clifton Court Forebay	NCCF Siphon (Phase 1) Concrete	5/27/2024	1/9/2025	228
Clifton Court Forebay	NCCF Siphon (Phase 1) Backfill	9/16/2024	2/3/2025	77
Clifton Court Forebay	NCCF Siphon (Phase 2) Excavate	10/2/2024	6/14/2025	256
Clifton Court Forebay	NCCF Siphon (Phase 2) Concrete	1/18/2025	9/3/2025	229
Clifton Court Forebay	NCCF Siphon (Phase 2) Backfill	5/19/2025	9/29/2025	74
Clifton Court Forebay	Byron Highway Bridge over Canal	10/2/2024	4/9/2025	108
Clifton Court Forebay	Southern Pacific Railroad Bridge over Canal	4/4/2025	10/13/2025	110
Clifton Court Forebay	NCCF Outlet Canal	10/28/2024	4/30/2026	306
Clifton Court Forebay	Control Structure #1 Excavate	3/23/2026	9/21/2026	102
Clifton Court Forebay	Control Structure #1 Concrete	9/22/2026	6/17/2027	151
Clifton Court Forebay	Control Structure #2 Excavate	3/23/2026	9/30/2026	108
Clifton Court Forebay	Control Structure #2 Concrete	10/1/2026	7/8/2027	156
Clifton Court Forebay	Control Structure #3 Excavate	10/13/2027	4/18/2028	104
Clifton Court Forebay	Control Structure #3 Concrete	4/19/2028	1/29/2029	156
Clifton Court Forebay	Control Structure #4 Excavate	10/13/2027	4/18/2028	104
Clifton Court Forebay	Control Structure #4 Concrete	4/19/2028	3/8/2029	179
Clifton Court Forebay	Old River Structure Excavate	10/1/2026	4/6/2027	104
Clifton Court Forebay	Old River Structure Concrete	4/7/2027	1/10/2028	152

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Clifton Court Forebay	New Spillway Excavate	4/7/2027	10/12/2027	105
Clifton Court Forebay	New Spillway Concrete	10/13/2027	7/13/2028	152
Clifton Court Forebay	Routine Supply Delivery for Duration of Construction	12/29/2023	3/8/2029	1561
Clifton Court Forebay	On-land Geotechnical Explorations	1/1/2016	9/15/2018	823
Geotech	Overwater Geotechnical Explorations	1/1/2016	9/15/2018	823
Geotech	Temporary Access Roads for Exploration Sites	1/1/2016	9/15/2018	823
Intakes	Contractor Mobilization	11/1/2021	1/23/2022	48
Intakes	Contractor Staff	11/1/2021	12/5/2028	1,850
Intakes	Erect Temporary Contractor Facilities	12/1/2021	5/5/2022	88
Intakes	Operate Temporary Facilities	1/1/2022	12/5/2028	1,810
Intakes	Erect Batch Plant	12/6/2021	4/15/2022	76
Intakes	Operate Batch Plant	4/14/2022	8/11/2028	1,650
Intakes	Intake 5 Construction Wharf	4/15/2022	8/13/2022	68
Intakes	Intake 5 Substation and Electrical Distribution	4/4/2023	6/19/2023	44
Intakes	Intake 5 Initial Site Work	1/1/2022	6/16/2023	304
Intakes	Intake 5 State Route 16 Bridge	4/14/2022	4/14/2023	108
Intakes	Intake 5 Cofferdam	4/14/2023	10/26/2023	140
Intakes	Intake 5 Final Site Work	3/2/2026	12/6/2026	160
Intakes	Intake 5 Ground Improvement	8/16/2023	1/30/2024	120
Intakes	Intake 5 Excavate Inside Cofferdam	1/7/2024	3/16/2024	40
Intakes	Intake 5 Drilled Piers	2/28/2024	11/19/2024	190
Intakes	Intake 5 Tremie Concrete	11/6/2024	12/10/2024	20
Intakes	Intake 5 Dewater Cofferdam	12/11/2024	1/28/2025	28
Intakes	Intake 5 Structure Concrete	1/27/2025	6/14/2026	288
Intakes	Intake 5 Gates	5/8/2026	7/2/2026	32
Intakes	Intake 5 Fish Screens	5/2/2025	7/9/2026	248
Intakes	Intake 5 MEP	5/12/2026	8/31/2026	64
Intakes	Intake 5 Finish Out	8/2/2026	10/10/2026	40
Intakes	Intake 5 Sedimentation Basin Deep Wells	3/28/2023	5/31/2025	456
Intakes	Intake 5 Sedimentation Basin Excavation	4/26/2023	6/11/2024	236
Intakes	Intake 5 Sedimentation Basin Finish Grade and Pavement	7/7/2024	8/31/2024	32
Intakes	Intake 5 Sedimentation Basin Piles	1/1/2024	7/7/2024	108
Intakes	Intake 5 Sedimentation Basin Concrete	2/1/2024	7/24/2025	308
Intakes	Intake 5 Sedimentation Basin Gates	6/10/2025	9/29/2025	64
Intakes	Intake 5 Sedimentation Basin MEP and Finish	9/1/2025	11/23/2025	48
Intakes	Intake 3 Construction Wharf	4/17/2023	8/13/2023	68
Intakes	Intake 3 Substation and Electrical Distribution	4/12/2024	7/18/2024	56
Intakes	Intake 3 Initial Site Work	1/25/2023	4/16/2024	256
Intakes	Intake 3 State Route 16 Bridge	4/17/2023	4/12/2024	108

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Intakes	Intake 3 Cofferdam	4/16/2024	10/7/2024	125
Intakes	Intake 3 Final Site Work	2/20/2027	11/26/2027	160
Intakes	Intake 3 Ground Improvement	9/10/2024	3/31/2025	145
Intakes	Intake 3 Excavate Inside Cofferdam	2/9/2025	6/7/2025	68
Intakes	Intake 3 Drilled Piers	6/7/2025	11/21/2025	120
Intakes	Intake 3 Tremie Concrete	11/22/2025	1/2/2026	24
Intakes	Intake 3 Dewater Cofferdam	1/3/2026	2/27/2026	32
Intakes	Intake 3 Structure Concrete	2/28/2026	4/23/2027	240
Intakes	Intake 3 Gates	4/10/2027	5/28/2027	28
Intakes	Intake 3 Fish Screens	5/18/2026	5/30/2027	116
Intakes	Intake 3 MEP	5/29/2027	9/3/2027	56
Intakes	Intake 3 Finish Out	8/15/2027	10/23/2027	40
Intakes	Intake 3 Sedimentation Basin Deep Wells	4/15/2024	2/22/2027	596
Intakes	Intake 3 Sedimentation Basin Excavation	4/16/2024	6/23/2025	128
Intakes	Intake 3 Sedimentation Basin Finish Grade and Pave	6/26/2025	10/8/2025	60
Intakes	Intake 3 Sedimentation Basin Piles	2/28/2025	9/4/2025	108
Intakes	Intake 3 Sedimentation Basin Concrete	8/8/2025	11/19/2026	268
Intakes	Intake 3 Sedimentation Basin Gates	10/3/2026	1/22/2027	64
Intakes	Intake 3 Sedimentation Basin MEP and Finish	1/23/2027	4/16/2027	18
Intakes	Intake 3 Conveyance to Junction Structure	4/10/2026	6/3/2027	240
Intakes	Intake 3 Concrete Junction Structure	7/29/2026	3/30/2027	140
Intakes	Intake 3 Junction Structure MEP	10/25/2026	4/17/2027	100
Intakes	Intake 3 Junction Structure Final Finish and Cleanup	3/27/2027	6/4/2027	40
Intakes	Intake 2 Construction Wharf	4/14/2024	8/10/2024	68
Intakes	Intake 2 Substation and Electrical Distribution	4/7/2025	6/22/2025	44
Intakes	Intake 2 Initial Site Work	1/25/2024	7/9/2025	304
Intakes	Intake 2 State Route 16 Bridge	4/13/2024	4/12/2025	108
Intakes	Intake 2 Cofferdam	4/14/2025	11/16/2025	155
Intakes	Intake 2 Final Site Work	3/1/2028	12/5/2028	160
Intakes	Intake 2 Ground Improvement	9/20/2025	3/6/2026	120
Intakes	Intake 2 Excavate Inside Cofferdam	2/28/2026	5/8/2026	40
Intakes	Intake 2 Drilled Piers	4/25/2026	1/15/2027	190
Intakes	Intake 2 Tremie Concrete	1/2/2027	2/5/2027	20
Intakes	Intake 2 Dewater Cofferdam	2/6/2027	3/26/2027	28
Intakes	Intake 2 Structure Concrete	3/27/2027	8/11/2028	288
Intakes	Intake 2 Gates	7/8/2028	9/1/2028	32
Intakes	Intake 2 Fish Screens	7/3/2027	9/5/2028	248
Intakes	Intake 2 MEP	7/9/2028	10/28/2028	64
Intakes	Intake 2 Finish Out	9/16/2028	11/24/2028	40

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Intakes	Intake 2 Sedimentation Basin Deep Wells	12/1/2025	5/21/2028	516
Intakes	Intake 2 Sedimentation Basin Excavation	1/12/2026	3/28/2027	252
Intakes	Intake 2 Sedimentation Basin Finish Grade and Pave	3/28/2027	7/10/2027	60
Intakes	Intake 2 Sedimentation Basin Piles	11/15/2026	5/22/2027	108
Intakes	Intake 2 Sedimentation Basin Concrete	12/15/2026	2/28/2028	252
Intakes	Intake 2 Sedimentation Basin Gates	1/5/2028	4/25/2028	64
Intakes	Intake 2 Sedimentation Basin MEP and Finish	2/29/2028	5/22/2028	48
Intakes	Routine Supply Delivery for Duration of Construction	11/1/2021	12/5/2028	2,016
Intermediate Forebay	Mobilization	7/1/2024	8/1/2024	65
Intermediate Forebay	Contractor Management, Supervision, Administration	7/1/2024	7/11/2029	1,300
Intermediate Forebay	Access Construction	7/15/2024	11/15/2024	84
Intermediate Forebay	Temporary Facilities	8/1/2024	12/30/2024	52
Intermediate Forebay	Batch Plant	4/13/2028	3/23/2029	260
Intermediate Forebay	Temporary Facility Operations	7/1/2024	7/11/2029	1,300
Intermediate Forebay	Intermediate Forebay Earthworks	7/1/2024	12/25/2027	650
Intermediate Forebay	Intermediate Forebay Inlet Ground Improvements	1/14/2027	10/12/2028	195
Intermediate Forebay	Intermediate Forebay Inlet Site Work	10/14/2027	4/12/2028	130
Intermediate Forebay	Intermediate Forebay Inlet Concrete	4/13/2028	4/11/2029	260
Intermediate Forebay	Intermediate Forebay Inlet Gates	1/11/2029	7/11/2029	130
Intermediate Forebay	Intermediate Forebay Inlet Mechanical and Electrical	4/12/2029	7/11/2029	65
Intermediate Forebay	Intermediate Forebay Outlet Ground Improvements	12/28/2026	9/23/2028	195
Intermediate Forebay	Intermediate Forebay Outlet Site Work	9/27/2027	3/24/2028	130
Intermediate Forebay	Intermediate Forebay Outlet Concrete	3/27/2028	3/23/2029	260
Intermediate Forebay	Intermediate Forebay Outlet Gates	12/25/2028	6/22/2029	130
Intermediate Forebay	Intermediate Forebay Outlet Mechanical and Electrical	3/26/2029	6/22/2029	65
Intermediate Forebay	Routine supply delivery for duration of construction	7/1/2024	7/11/2029	1,300
Power	Repurposing Temporary Lines to Permanent	1/1/2027	6/30/2027	128
Tunnel Reach 7 and Combined Pumping Plant	Mobilization	1/2/2018	3/26/2018	60
Tunnel Reach 7 and Combined Pumping Plant	Contractor's Site Staff – Surface Tunnel Support	1/2/2018	7/29/2024	1,715
Tunnel Reach 7 and Combined Pumping Plant	Contractor's Site Staff – Pump Plants	12/3/2026	12/25/2028	540
Tunnel Reach 7 and Combined Pumping Plant	Access Construction	2/5/2018	5/20/2018	60

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	Temporary Facility Construction	3/5/2018	8/12/2018	92
Tunnel Reach 7 and Combined Pumping Plant	Batch Plant Operation	9/10/2018	9/15/2028	2,092
Tunnel Reach 7 and Combined Pumping Plant	Temporary Facility Operations – Surface Tunnel Support	2/1/2018	7/29/2024	1,695
Tunnel Reach 7 and Combined Pumping Plant	Temporary Facility Operations – Pump Plant	12/3/2026	12/25/2028	540
Tunnel Reach 7 and Combined Pumping Plant	Clifton Court Cofferdam	5/20/2018	9/8/2018	64
Tunnel Reach 7 and Combined Pumping Plant	Old River Wharf	8/13/2018	12/16/2018	72
Tunnel Reach 7 and Combined Pumping Plant	Initial Earthwork	5/21/2018	10/21/2018	88
Tunnel Reach 7 and Combined Pumping Plant	Complete Embankment to elevation +25	12/27/2027	6/4/2028	92
Tunnel Reach 7 and Combined Pumping Plant	Final Site Work	6/4/2028	12/30/2028	120
Tunnel Reach 7 and Combined Pumping Plant	East and West Tunnel Completion Dates	12/3/2026	3/4/2027	52
Tunnel Reach 7 and Combined Pumping Plant	West Pump Shaft Slab Concrete at elevation -50	3/5/2027	4/29/2027	32
Tunnel Reach 7 and Combined Pumping Plant	West Pump Shaft Wall Concrete below Operating Deck	4/30/2027	10/7/2027	92
Tunnel Reach 7 and Combined Pumping Plant	West Pump Shaft Operating Deck Concrete	9/14/2027	12/27/2027	60
Tunnel Reach 7 and Combined Pumping Plant	West Pump Shaft Pumps and Operators	6/9/2028	10/26/2028	80
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Pipe to Discharge Splash Area	12/27/2027	4/9/2028	60
Tunnel Reach 7 and Combined Pumping Plant	East Pump Shaft Slab Concrete at elevation -50	12/3/2026	1/27/2027	32
Tunnel Reach 7 and Combined Pumping Plant	East Pump Shaft Wall Concrete below Operating Deck	1/27/2027	7/6/2027	92
Tunnel Reach 7 and Combined Pumping Plant	East Pump Shaft Operating Deck Concrete	5/1/2027	8/13/2027	60
Tunnel Reach 7 and Combined Pumping Plant	East Pump Shaft Pumps and Operators	3/1/2028	7/18/2028	80
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Pipe to Discharge Splash Basin	7/22/2027	11/3/2027	60
Tunnel Reach 7 and Combined Pumping Plant	Pump Plants Surge Channel and Splash Basin	5/13/2027	12/8/2027	120
Tunnel Reach 7 and Combined Pumping Plant	Excavation and Piling for Splash Basin	3/4/2027	5/12/2027	40
Tunnel Reach 7 and Combined Pumping Plant	Backfill Splash Basin	12/8/2027	1/11/2028	20

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	Pump Plant Construction Plant Operation	10/22/2026	4/8/2028	304
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Walls above Operating Deck	12/27/2027	5/14/2028	80
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Walls above Operating Deck	8/13/2027	12/30/2027	80
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Overhead Crane	4/8/2028	6/9/2028	36
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Overhead Crane	12/30/2027	3/1/2028	36
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Roof	4/8/2028	5/26/2028	28
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Roof	12/30/2027	2/16/2028	28
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Finish Out	9/26/2028	12/25/2028	52
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Finish Out	6/19/2028	9/17/2028	52
Tunnel Reach 7 and Combined Pumping Plant	Pump Plant MCC/Electrical Buildings (two each)	6/4/2028	9/30/2028	68
Tunnel Reach 7 and Combined Pumping Plant	Pump Plant Substation and Electrical Distribution	8/4/2028	11/30/2028	68
Tunnel Reach 7 and Combined Pumping Plant	Pump Plants Drywell Access Buildings and Finish	7/1/2028	11/17/2028	80
Tunnel Reach 7 and Combined Pumping Plant	Pump Plants Water Treatment Facility	7/17/2028	12/3/2028	80
Tunnel Reach 7 and Combined Pumping Plant	Tunnel Mobilization Concurrent with Surface Activities	1/2/2019	1/31/2019	22
Tunnel Reach 7 and Combined Pumping Plant	Set Up East Pump Plant	2/1/2019	2/14/2019	10
Tunnel Reach 7 and Combined Pumping Plant	Slurry Wall Installation	9/10/2018	3/14/2019	130
Tunnel Reach 7 and Combined Pumping Plant	Excavate East Wet Well	5/9/2019	8/26/2019	76
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Tremie Slab	8/27/2019	9/3/2019	6
Tunnel Reach 7 and Combined Pumping Plant	Set Up and Place Tremie Slab	9/4/2019	9/10/2019	4
Tunnel Reach 7 and Combined Pumping Plant	Pump Water from Shaft	9/11/2019	9/13/2019	3
Tunnel Reach 7 and Combined Pumping Plant	Cure Time Tremie Slab	9/16/2019	9/24/2019	7
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Work Slab	9/25/2019	10/2/2019	6
Tunnel Reach 7 and Combined Pumping Plant	Setup and Place Work Slab	10/3/2019	10/3/2019	1

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Thrust Ring	10/4/2019	10/21/2019	12
Tunnel Reach 7 and Combined Pumping Plant	Set Breakout Forms and Assemble Wall Forms	10/22/2019	10/25/2019	4
Tunnel Reach 7 and Combined Pumping Plant	Form Thrust Ring	10/28/2019	11/7/2019	9
Tunnel Reach 7 and Combined Pumping Plant	Jet Grout Annular Ring	3/15/2019	5/8/2019	39
Tunnel Reach 7 and Combined Pumping Plant	Assemble East TBM	11/21/2019	3/13/2020	78
Tunnel Reach 7 and Combined Pumping Plant	Place Thrust Ring	11/8/2019	11/20/2019	9
Tunnel Reach 7 and Combined Pumping Plant	Order and Manufacture East TBM	1/2/2018	6/28/2019	380
Tunnel Reach 7 and Combined Pumping Plant	Order and Manufacture West TBM	4/5/2018	10/2/2019	380
Tunnel Reach 7 and Combined Pumping Plant	Excavate East Tunnel	3/16/2020	4/2/2025	1,283
Tunnel Reach 7 and Combined Pumping Plant	East Pump Plant Set and Strip Elbow Forms	4/20/2026	4/30/2026	9
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar	5/1/2026	5/11/2026	7
Tunnel Reach 7 and Combined Pumping Plant	Set and Strip Shaft Forms	5/12/2026	5/25/2026	10
Tunnel Reach 7 and Combined Pumping Plant	Place Wet Well Shaft Concrete	5/26/2026	7/14/2026	34
Tunnel Reach 7 and Combined Pumping Plant	Excavate Pump Plant Annular Ring	8/6/2026	9/23/2026	34
Tunnel Reach 7 and Combined Pumping Plant	Pump Plant Wall Rebar below elevation -2	9/24/2026	10/21/2026	20
Tunnel Reach 7 and Combined Pumping Plant	Assemble Pump Plant Wall Forms	10/22/2026	10/28/2026	5
Tunnel Reach 7 and Combined Pumping Plant	Set and Strip Pump Plant Wall Forms	10/29/2026	11/13/2026	12
Tunnel Reach 7 and Combined Pumping Plant	Place Pump Wall Concrete	11/16/2026	12/2/2026	12
Tunnel Reach 7 and Combined Pumping Plant	Muck Disposal Conveyor Set Up	2/1/2019	3/25/2019	36
Tunnel Reach 7 and Combined Pumping Plant	Backfill around Wet Well	7/15/2026	8/5/2026	16
Tunnel Reach 7 and Combined Pumping Plant	Set Up West Pump Plant	2/1/2019	2/14/2019	10
Tunnel Reach 7 and Combined Pumping Plant	Slurry Wall Installation	12/10/2018	7/31/2019	130
Tunnel Reach 7 and Combined Pumping Plant	Jet Grout Annular Ring	8/1/2019	9/25/2019	39

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	Excavate West Wet Well	9/26/2019	1/14/2020	76
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Tremie Slab	1/15/2020	1/22/2020	6
Tunnel Reach 7 and Combined Pumping Plant	Set Up and Place Tremie Slab	1/23/2020	1/28/2020	4
Tunnel Reach 7 and Combined Pumping Plant	Pump Water from Shaft	1/29/2020	1/31/2020	3
Tunnel Reach 7 and Combined Pumping Plant	Cure Time Tremie Slab	2/3/2020	2/11/2020	7
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Work Slab	2/12/2020	2/20/2020	6
Tunnel Reach 7 and Combined Pumping Plant	Set Up and Place Work Slab	2/21/2020	2/21/2020	1
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar Thrust Ring	2/24/2020	3/10/2020	12
Tunnel Reach 7 and Combined Pumping Plant	Set Breakout Forms and Assemble Wall Forms	3/11/2020	3/16/2020	4
Tunnel Reach 7 and Combined Pumping Plant	Form Thrust Ring	3/17/2020	3/27/2020	9
Tunnel Reach 7 and Combined Pumping Plant	Place Thrust Ring	3/30/2020	4/9/2020	9
Tunnel Reach 7 and Combined Pumping Plant	Assemble West TBM	4/10/2020	7/30/2020	78
Tunnel Reach 7 and Combined Pumping Plant	West Pump Plant Set and Strip Elbow Forms	8/26/2026	9/8/2026	9
Tunnel Reach 7 and Combined Pumping Plant	Tie Rebar	9/9/2026	9/17/2026	7
Tunnel Reach 7 and Combined Pumping Plant	Set and Strip Shaft Forms	9/18/2026	9/30/2026	9
Tunnel Reach 7 and Combined Pumping Plant	Place Wet Well Shaft Concrete	10/1/2026	10/12/2026	8
Tunnel Reach 7 and Combined Pumping Plant	Excavate Pump Plant Annular Ring	11/4/2026	12/22/2026	34
Tunnel Reach 7 and Combined Pumping Plant	Pump Plant Wall Rebar below elevation -2	12/23/2026	1/20/2027	19
Tunnel Reach 7 and Combined Pumping Plant	Assemble Pump Plant Wall Forms	1/21/2027	1/27/2027	5
Tunnel Reach 7 and Combined Pumping Plant	Set and Strip Pump Plant Wall Forms	1/28/2027	2/12/2027	12
Tunnel Reach 7 and Combined Pumping Plant	Place Pump Wall Concrete	2/15/2027	3/3/2027	12
Tunnel Reach 7 and Combined Pumping Plant	Excavate West Tunnel	7/31/2020	8/11/2025	1,277
Tunnel Reach 7 and Combined Pumping Plant	West TBM Conveyor, Grout, Utilities	8/12/2025	8/25/2026	264

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	Slurry Wall East Access Shaft	3/18/2019	4/11/2019	16
Tunnel Reach 7 and Combined Pumping Plant	Excavate and Support East Access Shaft	4/12/2019	4/24/2019	9
Tunnel Reach 7 and Combined Pumping Plant	Excavate and Support East Access Tunnel	4/25/2019	5/1/2019	5
Tunnel Reach 7 and Combined Pumping Plant	Line East Access Tunnel and Shaft	5/2/2019	6/7/2019	26
Tunnel Reach 7 and Combined Pumping Plant	Operate Muck Disposal Area	3/26/2019	9/8/2025	1,640
Tunnel Reach 7 and Combined Pumping Plant	Slurry Wall West Access Shaft	8/1/2019	8/28/2019	16
Tunnel Reach 7 and Combined Pumping Plant	Excavate and Support West Access Shaft	8/29/2019	9/11/2019	9
Tunnel Reach 7 and Combined Pumping Plant	Excavate and Support West Access Tunnel	9/12/2019	9/18/2019	5
Tunnel Reach 7 and Combined Pumping Plant	Line West Access Tunnel and Shaft	9/19/2019	10/24/2019	26
Tunnel Reach 7 and Combined Pumping Plant	Operate Tunnel Water Treatment Plant	2/1/2019	3/2/2027	2,051
Tunnel Reach 7 and Combined Pumping Plant	East and West Intervention Grout Zone #1	9/26/2019	1/24/2020	84
Tunnel Reach 7 and Combined Pumping Plant	Indirect Tunnel and Shaft	3/12/2019	3/4/2027	2,027
Tunnel Reach 7 and Combined Pumping Plant	East and West Site, Grout, and Slurry Wall Safe Haven	1/27/2020	10/28/2020	155
Tunnel Reach 7 and Combined Pumping Plant	East Excavate Safe Haven Shaft #1	10/29/2020	12/21/2020	37
Tunnel Reach 7 and Combined Pumping Plant	Excavate and Berm Muck Disposal Area	7/30/2018	12/27/2018	85
Tunnel Reach 7 and Combined Pumping Plant	East Concrete Safe Haven Shaft #1	12/22/2020	2/4/2021	31
Tunnel Reach 7 and Combined Pumping Plant	Final Dress and Cleanup Muck Disposal Area	9/9/2025	3/9/2026	100
Tunnel Reach 7 and Combined Pumping Plant	East Backfill Safe Haven Shaft #1	6/10/2021	7/9/2021	21
Tunnel Reach 7 and Combined Pumping Plant	West Excavate Safe Haven Shaft #1	12/22/2020	2/12/2021	37
Tunnel Reach 7 and Combined Pumping Plant	Backfill around Wet Well Shaft	10/13/2026	11/3/2026	16
Tunnel Reach 7 and Combined Pumping Plant	West Concrete Safe Haven Shaft #1	2/15/2021	3/30/2021	31
Tunnel Reach 7 and Combined Pumping Plant	Turn Over to East Pump Plant Crew	12/3/2026	12/3/2026	1
Tunnel Reach 7 and Combined Pumping Plant	West Safe Haven Shaft #1 Backfill	6/1/2021	6/29/2021	21

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 7 and Combined Pumping Plant	East TBM, Grout, Conveyor, Utilities	4/3/2025	4/17/2026	265
Tunnel Reach 7 and Combined Pumping Plant	East and West Restore Safe Haven Shaft #1	7/12/2021	8/17/2021	22
Tunnel Reach 7 and Combined Pumping Plant	Turn Over to West Pump Plant Crew	3/4/2027	3/4/2027	1
Tunnel Reach 7 and Combined Pumping Plant	East and West Intervention Grout Zone #2	10/29/2020	3/2/2021	85
Tunnel Reach 7 and Combined Pumping Plant	East and West Site, Grout, and Slurry Wall Safe Haven	3/3/2021	10/8/2021	155
Tunnel Reach 7 and Combined Pumping Plant	East Safe Haven #2 Shaft Excavate	10/11/2021	12/20/2021	50
Tunnel Reach 7 and Combined Pumping Plant	East Safe Haven Shaft #2 Concrete	12/21/2021	2/3/2022	31
Tunnel Reach 7 and Combined Pumping Plant	West Safe Haven Shaft #2 Excavate	12/21/2021	3/3/2022	50
Tunnel Reach 7 and Combined Pumping Plant	West Safe Haven Shaft #2 Concrete	3/4/2022	4/15/2022	31
Tunnel Reach 7 and Combined Pumping Plant	East and West Intervention Grout Zone #3	10/11/2021	2/14/2022	88
Tunnel Reach 7 and Combined Pumping Plant	East Backfill Safe Haven Shaft #2	8/19/2022	9/19/2022	21
Tunnel Reach 7 and Combined Pumping Plant	West Backfill Safe Haven Shaft #2	1/7/2023	1/31/2023	21
Tunnel Reach 7 and Combined Pumping Plant	East and West Intervention Grout Zone #4	2/15/2022	6/15/2022	85
Tunnel Reach 7 and Combined Pumping Plant	East and West Site, Grout, and Slurry Wall Recovery Shaft	10/17/2022	7/31/2023	200
Tunnel Reach 7 and Combined Pumping Plant	East Excavate Reception Shaft	8/1/2023	12/22/2023	102
Tunnel Reach 7 and Combined Pumping Plant	East Recovery Shaft Concrete	12/26/2023	3/5/2024	49
Tunnel Reach 7 and Combined Pumping Plant	West Recovery Excavate Shaft	12/26/2023	5/17/2024	102
Tunnel Reach 7 and Combined Pumping Plant	West Recovery Concrete	5/20/2024	7/29/2024	49
Tunnel Reach 7 and Combined Pumping Plant	East and West Intervention Grout Zone #5	6/16/2022	10/14/2022	85
Tunnel Reach 7 and Combined Pumping Plant	Routine Supply Delivery for Duration of Construction	1/2/2018	12/30/2028	2,878
Tunnel Reach 4	Tunnel Mob Concurrent with Surface Activities	10/9/2019	11/7/2019	22
Tunnel Reach 4	Setup East Launch Shaft Station 0+00	11/8/2019	11/21/2019	10
Tunnel Reach 4	East Slurry Wall Installation	8/6/2019	11/21/2019	77
Tunnel Reach 4	Excavate East Launch Shaft	2/26/2020	6/25/2020	86
Tunnel Reach 4	East Tie Rebar Tremie Slab	6/26/2020	7/10/2020	10

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 4	East Setup and Place Tremie Slab	7/13/2020	7/20/2020	6
Tunnel Reach 4	East Pump Water from Shaft	7/30/2020	8/3/2020	3
Tunnel Reach 4	East Cure Time Tremie Slab	7/21/2020	7/29/2020	7
Tunnel Reach 4	East Setup and Place Work Slab	8/4/2020	8/4/2020	1
Tunnel Reach 4	East Tie Rebar Thrust Ring	8/5/2020	9/2/2020	21
Tunnel Reach 4	East Set Breakout Forms	9/3/2020	9/4/2020	2
Tunnel Reach 4	East Form Thrust Ring	9/11/2020	9/24/2020	10
Tunnel Reach 4	East Jet Gout Break in Breakout Blocks	11/22/2019	2/25/2020	64
Tunnel Reach 4	East Place Thrust Ring	9/25/2020	10/5/2020	7
Tunnel Reach 4	Setup for West Launch Shaft Station 0+00	6/15/2020	6/26/2020	10
Tunnel Reach 4	West Slurry Wall Installation	11/22/2019	3/13/2020	77
Tunnel Reach 4	Excavate West Launch Shaft	6/29/2020	10/28/2020	86
Tunnel Reach 4	West Jet Grout Break in Breakout Blocks	3/16/2020	6/12/2020	64
Tunnel Reach 4	West Tie Rebar Tremie Slab	10/29/2020	11/11/2020	10
Tunnel Reach 4	West Setup and Place Tremie Slab	11/12/2020	11/19/2020	6
Tunnel Reach 4	West Tie Rebar Thrust Ring	12/8/2020	1/7/2021	21
Tunnel Reach 4	West Breakout Ring Forms	1/8/2021	1/11/2021	2
Tunnel Reach 4	West Assemble Thrust Ring Forms	1/12/2021	1/14/2021	3
Tunnel Reach 4	West Set and Strip Thrust Ring Forms	1/15/2021	1/28/2021	10
Tunnel Reach 4	West Place Thrust Ring Concrete	1/29/2021	2/8/2021	7
Tunnel Reach 4	Excavate East Tunnel	1/27/2021	9/4/2026	1,425
Tunnel Reach 4	West Pump Water From Shaft	12/2/2020	12/4/2020	3
Tunnel Reach 4	West Cure Time Tremie Slab	11/20/2020	12/1/2020	7
Tunnel Reach 4	East Assemble Thrust Ring Forms	9/8/2020	9/10/2020	3
Tunnel Reach 4	West Working Slab	12/7/2020	12/7/2020	1
Tunnel Reach 4	East Launch Shaft Backfill and Line	7/20/2027	11/16/2027	85
Tunnel Reach 4	West Launch Shaft Backfill and Line	5/23/2028	9/21/2028	85
Tunnel Reach 4	Muck Disposal Conveyor Setup	11/8/2019	12/31/2019	36
Tunnel Reach 4	Assemble West TBM	2/9/2021	5/28/2021	78
Tunnel Reach 4	Assemble East TBM	10/6/2020	1/26/2021	78
Tunnel Reach 4	Excavate West Tunnel	6/1/2021	1/11/2027	1,425
Tunnel Reach 4	West TBM Conveyor, Utilities, Grout	7/13/2027	5/22/2028	220
Tunnel Reach 4	Operate Muck Disposal Area	1/2/2020	1/22/2027	1,793
Tunnel Reach 4	Operate Tunnel Water Treatment Plant	11/8/2019	3/21/2028	2,123
Tunnel Reach 4	East and West Intervention Grout Zones Station 48+33	6/15/2020	10/16/2020	88
Tunnel Reach 4	Indirect Tunnel and Shaft	11/11/2019	3/23/2028	2,124
Tunnel Reach 4	East and West Grout/Slurry Wall Safe Haven Shaft Site	10/19/2020	5/27/2021	155
Tunnel Reach 4	Set Up Docks, Berm, and Work Site	11/6/2018	11/7/2019	256
Tunnel Reach 4	East Excavate Safe Haven Shaft Station 96+66	5/28/2021	7/15/2021	33

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 4	Excavate and Berm Muck Disposal Area	6/11/2019	11/7/2019	85
Tunnel Reach 4	East Concrete Safe Haven Shaft Station 96+66	7/16/2021	9/21/2021	47
Tunnel Reach 4	Final Dress and Cleanup Muck Disposal Area	8/9/2027	2/3/2028	100
Tunnel Reach 4	East Backfill Safe Haven Shaft Station 96+66	7/25/2022	8/17/2022	18
Tunnel Reach 4	Batch Plant Operations	11/8/2019	9/11/2028	2,244
Tunnel Reach 4	West Excavate Safe Haven Shaft Station 96+66	7/16/2021	8/31/2021	33
Tunnel Reach 4	West Concrete Safe Haven Shaft Station 96+66	9/1/2021	11/5/2021	47
Tunnel Reach 4	East TBM Conveyor, Utilities, Grout	9/8/2026	7/19/2027	219
Tunnel Reach 4	East and West Restore Safe Haven Shaft Station 96+66	12/21/2022	4/10/2023	60
Tunnel Reach 4	East and West Intervention Grout Zone Station 148+50+	5/28/2021	10/1/2021	88
Tunnel Reach 4	West Safe Haven Backfill Station 252+18	11/8/2024	12/4/2024	18
Tunnel Reach 4	East and West Safe Haven Restoration Station 252+18	12/5/2024	4/10/2025	70
Tunnel Reach 4	East and West Intervention Grout Zone Station 200+34	5/13/2022	9/16/2022	88
Tunnel Reach 4	East and West Grout/Slurry Wall Safe Haven Station 2	10/4/2021	5/12/2022	155
Tunnel Reach 4	East Excavate Safe Haven w/Shaft Station 25	5/13/2022	6/29/2022	33
Tunnel Reach 4	West Excavate Safe Haven w/Shaft Station 2	6/30/2022	8/16/2022	33
Tunnel Reach 4	East Safe Haven w/Shaft Concrete Station 252+18	6/30/2022	9/5/2022	47
Tunnel Reach 4	West Safe Haven w/Shaft Concrete Station 252+18	8/17/2022	10/21/2022	47
Tunnel Reach 4	East Safe Haven Backfill Station 252+18	7/9/2024	8/1/2024	18
Tunnel Reach 4	West Backfill Safe Haven Shaft Station 96+66	11/24/2022	12/20/2022	18
Tunnel Reach 4	East and West Intervention Grout Zone Station 309+22	9/19/2022	1/23/2023	88
Tunnel Reach 4	E/W Complete Recovery Shaft Area	12/28/2027	4/5/2028	70
Tunnel Reach 4	East and West Intervention Grout Zone Station 425+38	5/29/2023	10/2/2023	88
Tunnel Reach 4	East Recovery Shaft Liner Concrete	10/5/2026	2/22/2027	97
Tunnel Reach 4	East and West Intervention Grout Zone Station 366+20	1/24/2023	5/26/2023	88
Tunnel Reach 4	West Recovery Shaft Liner Concrete	8/10/2027	12/27/2027	97
Tunnel Reach 4	Routine Supply Delivery for Duration of Construction	11/6/2018	9/21/2028	2,462
Tunnel Reach 5	Tunnel Mob Concurrent with Surface Activities	1/27/2021	2/26/2021	22
Tunnel Reach 5	Grout/Slurry Wall East and West Recovery Shafts	11/5/2020	3/12/2021	88
Tunnel Reach 5	Set Up East Recovery Shaft	3/15/2021	3/26/2021	10
Tunnel Reach 5	Excavate East Recovery Shaft	3/29/2021	6/24/2021	63
Tunnel Reach 5	East Tie Rebar Tremie Slab	6/25/2021	7/9/2021	10
Tunnel Reach 5	East Setup and Place Tremie Slab	7/12/2021	7/19/2021	6

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 5	East Pump Water From Shaft	7/29/2021	8/2/2021	3
Tunnel Reach 5	East Cure Time Tremie Slab	7/20/2021	7/28/2021	7
Tunnel Reach 5	East Setup and Place Work Slab	8/3/2021	8/3/2021	1
Tunnel Reach 5	East Tie Rebar Thrust Ring	8/4/2021	9/7/2021	24
Tunnel Reach 5	East Set Breakout Forms	9/8/2021	9/9/2021	2
Tunnel Reach 5	East Form Thrust Ring	9/15/2021	9/28/2021	10
Tunnel Reach 5	East Place Thrust Ring	9/29/2021	10/7/2021	7
Tunnel Reach 5	Setup for West Recovery Shaft	6/25/2021	7/9/2021	10
Tunnel Reach 5	Excavate West Recovery Shaft	7/12/2021	10/7/2021	63
Tunnel Reach 5	West Tie Rebar Tremie Slab	10/8/2021	10/21/2021	10
Tunnel Reach 5	West Setup and Place Tremie Slab	10/22/2021	10/29/2021	6
Tunnel Reach 5	West Tie Rebar Thrust Ring	11/16/2021	12/20/2021	24
Tunnel Reach 5	West Breakout Ring Forms	12/21/2021	12/22/2021	2
Tunnel Reach 5	West Assemble Thrust Ring Forms	12/23/2021	12/28/2021	3
Tunnel Reach 5	West Set and Strip Thrust Ring Forms	12/29/2021	1/12/2022	10
Tunnel Reach 5	West Place Thrust Ring Concrete	1/13/2022	1/21/2022	7
Tunnel Reach 5	Excavate East Tunnel	2/11/2022	11/8/2024	698
Tunnel Reach 5	West Pump Water from Shaft	11/10/2021	11/12/2021	3
Tunnel Reach 5	West Cure Time Tremie Slab	11/1/2021	11/9/2021	7
Tunnel Reach 5	East Assemble Thrust Ring Forms	9/10/2021	9/14/2021	3
Tunnel Reach 5	West Working Slab	11/15/2021	11/15/2021	1
Tunnel Reach 5	Muck Disposal Conveyor Setup	3/11/2021	4/29/2021	36
Tunnel Reach 5	Assemble West TBM	2/11/2022	6/15/2022	87
Tunnel Reach 5	Assemble East TBM	10/8/2021	2/10/2022	87
Tunnel Reach 5	Excavate West Tunnel	6/16/2022	3/20/2025	701
Tunnel Reach 5	West Remove TBM Conveyor, Utilities, Grout	3/21/2025	8/18/2025	105
Tunnel Reach 5	Operate Muck Disposal Area	4/30/2021	4/11/2025	1,003
Tunnel Reach 5	Operate Batch Plant	3/1/2021	6/9/2025	1,087
Tunnel Reach 5	Operate Tunnel Water Treatment Plant	3/1/2021	3/6/2024	767
Tunnel Reach 5	East and West Intervention Grout Zones Station 668+39	3/15/2021	7/16/2021	88
Tunnel Reach 5	Indirect Tunnel and Shaft	3/1/2021	9/12/2025	1,154
Tunnel Reach 5	East and West Grout/Slurry Wall Safe Haven Shafts	11/19/2021	6/30/2022	155
Tunnel Reach 5	Surface Mobilize Work Site	3/3/2020	2/26/2021	252
Tunnel Reach 5	East Excavate Safe Haven Shaft Station 577+/-	7/1/2022	8/16/2022	32
Tunnel Reach 5	Excavate and Berm Muck Disposal Area	10/27/2020	2/26/2021	85
Tunnel Reach 5	East Concrete Safe Haven Shaft Station 577+/-	8/17/2022	10/13/2022	41
Tunnel Reach 5	Final Dress and Cleanup Muck Disposal Area	4/14/2025	9/2/2025	80
Tunnel Reach 5	East Backfill Safe Haven Shaft Station 577+	10/10/2023	11/1/2023	17
Tunnel Reach 5	West Excavate Safe Haven Shaft Station 577+	8/17/2022	9/30/2022	32

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 5	West Backfill Safe Haven Shaft Station 577	2/13/2024	3/7/2024	17
Tunnel Reach 5	East Remove TBM Conveyor, Utilities, Grout and	11/11/2024	4/10/2025	105
Tunnel Reach 5	East and West Restore Safe Haven Shaft Station 577+/-	3/11/2024	4/16/2024	22
Tunnel Reach 5	East and West Intervention Grout Zone Station 622+60	7/19/2021	11/18/2021	88
Tunnel Reach 5	East and West Intervention Grout Zone Station 529+90	7/1/2022	11/3/2022	88
Tunnel Reach 5	West Concrete Safe Haven Shaft Station 577+	10/3/2022	11/29/2022	41
Tunnel Reach 5	Routine Supply Delivery for Duration of Construction	3/3/2020	9/12/2025	1,503
Tunnel Reach 6	Tunnel Mob Concurrent with Surface Activities	1/29/2020	2/28/2020	22
Tunnel Reach 6	Set Up East Launch Shaft	3/2/2020	3/13/2020	10
Tunnel Reach 6	East Launch Shaft Slurry Wall Installation	11/6/2019	2/26/2020	77
Tunnel Reach 6	Excavate East Launch Shaft	3/16/2020	6/2/2020	56
Tunnel Reach 6	East Tie Rebar Tremie Slab	6/3/2020	6/16/2020	10
Tunnel Reach 6	East Setup and Place Tremie Slab	6/17/2020	6/24/2020	6
Tunnel Reach 6	East Pump Water from Shaft	7/7/2020	7/9/2020	3
Tunnel Reach 6	East Cure Time Tremie Slab	6/25/2020	7/6/2020	7
Tunnel Reach 6	East Muck/Service Shaft Slurry Wall	2/27/2020	8/3/2020	111
Tunnel Reach 6	East Setup and Place Work Slab	7/10/2020	7/13/2020	2
Tunnel Reach 6	East Tie Rebar Thrust Ring	7/14/2020	8/12/2020	22
Tunnel Reach 6	East Set Breakout Forms	8/13/2020	8/14/2020	2
Tunnel Reach 6	East Form Thrust Ring	8/20/2020	9/2/2020	10
Tunnel Reach 6	East Launch Jet Gout Break in Breakout	2/27/2020	5/26/2020	64
Tunnel Reach 6	East Muck/Service Excavation and Concrete	6/2/2020	9/15/2020	74
Tunnel Reach 6	East Place Thrust Ring	9/3/2020	9/11/2020	6
Tunnel Reach 6	Setup for West Launch Shaft	6/16/2020	6/29/2020	10
Tunnel Reach 6	West Launch Shaft Slurry Wall Installation	2/27/2020	6/15/2020	77
Tunnel Reach 6	Excavate West Launch Shaft	6/30/2020	9/17/2020	56
Tunnel Reach 6	West Launch Jet Grout Break in Breakout	5/27/2020	8/26/2020	64
Tunnel Reach 6	West Tie Rebar Tremie Slab	9/18/2020	10/1/2020	10
Tunnel Reach 6	West Setup and Place Tremie Slab	10/2/2020	10/9/2020	6
Tunnel Reach 6	West Tie Rebar Thrust Ring	10/28/2020	11/27/2020	22
Tunnel Reach 6	West Breakout Ring Forms	11/30/2020	12/1/2020	2
Tunnel Reach 6	West Assemble Thrust Ring Forms	12/2/2020	12/4/2020	3
Tunnel Reach 6	West Set and Strip Thrust Ring Forms	12/7/2020	12/18/2020	10
Tunnel Reach 6	West Place Thrust Ring Concrete	12/21/2020	12/29/2020	6
Tunnel Reach 6	Excavate East Tunnel	1/18/2021	4/6/2026	1,325
Tunnel Reach 6	West Pump Water from Shaft	10/21/2020	10/23/2020	3
Tunnel Reach 6	West Cure Time Tremie Slab	10/12/2020	10/20/2020	7

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 6	East Assemble Thrust Ring Forms	8/17/2020	8/19/2020	3
Tunnel Reach 6	West Working Slab	10/1/2020	10/27/2020	20
Tunnel Reach 6	West Muck/Service Shaft Slurry Wall	6/16/2020	11/19/2020	111
Tunnel Reach 6	East Muck/Service Shaft Backfill	4/27/2027	6/2/2027	26
Tunnel Reach 6	West Muck/Service Excavate and Concrete	9/21/2020	1/5/2021	74
Tunnel Reach 6	West Muck/Service Shaft Backfill	8/6/2027	9/15/2027	28
Tunnel Reach 6	Muck Disposal Conveyor Setup	3/2/2020	4/20/2020	36
Tunnel Reach 6	East Launch Shaft Liner and Backfill	5/12/2025	7/21/2025	49
Tunnel Reach 6	West Launch Shaft Liner and Backfill	8/28/2025	11/5/2025	49
Tunnel Reach 6	East Launch Shaft Area Complete Pad	6/3/2027	6/24/2027	18
Tunnel Reach 6	West Launch Shaft Area Complete Pad	9/16/2027	10/7/2027	18
Tunnel Reach 6	Assemble West TBM	12/30/2020	5/3/2021	87
Tunnel Reach 6	Assemble East TBM	9/14/2020	1/15/2021	87
Tunnel Reach 6	Excavate West Tunnel	5/4/2021	7/22/2026	1,325
Tunnel Reach 6	West TBM Conveyor, Utilities, Grout	7/23/2026	8/5/2027	264
Tunnel Reach 6	Operate Muck Disposal Area	4/21/2020	7/31/2026	1,595
Tunnel Reach 6	Operate Tunnel Water Treatment Plant	3/2/2020	7/27/2027	1,881
Tunnel Reach 6	East and West Intervention Grout Zones Station 756+/-	8/27/2020	12/31/2020	88
Tunnel Reach 6	Indirect Tunnel and Shaft	3/2/2020	9/16/2027	1,917
Tunnel Reach 6	East and West Grout and Slurry Wall Safe Haven Shafts	1/4/2021	8/11/2021	155
Tunnel Reach 6	Set Up Docks, Berm, and Work Site	3/5/2019	2/28/2020	252
Tunnel Reach 6	East Excavate Safe Haven Shaft Station 796+	8/12/2021	9/27/2021	32
Tunnel Reach 6	Excavate and Berm Muck Disposal Area	10/29/2019	2/28/2020	85
Tunnel Reach 6	East Concrete Safe Haven Shaft Station 796+	9/28/2021	11/24/2021	42
Tunnel Reach 6	Final Dress and Cleanup Muck Disposal Area	8/3/2026	1/28/2027	100
Tunnel Reach 6	East Backfill Safe Haven Shaft Station 796+/-	3/30/2022	4/22/2022	18
Tunnel Reach 6	Operate Batch Plant	3/2/2020	2/14/2025	1,261
Tunnel Reach 6	West Excavate Safe Haven Shaft Station 796+	9/28/2021	11/10/2021	32
Tunnel Reach 6	West Concrete Safe Haven Shaft Station 796+	11/11/2021	1/12/2022	42
Tunnel Reach 6	West Backfill Safe Haven Shaft Station 796	7/15/2022	8/9/2022	18
Tunnel Reach 6	East TBM Conveyor, Utilities, Grout and	4/7/2026	4/26/2027	268
Tunnel Reach 6	East and West Restore Safe Haven Shaft Station 796+/-	8/10/2022	9/19/2022	22
Tunnel Reach 6	East and West Intervention Grout Zone Station 845+/-	8/12/2021	12/15/2021	88
Tunnel Reach 6	East and West Grout and Slurry Wall Safe Haven Shaft	12/16/2021	7/27/2022	155
Tunnel Reach 6	East Excavate Safe Haven Shaft Station 894+/-	7/28/2022	9/12/2022	32
Tunnel Reach 6	East Safe Haven Concrete Station 894+/-	9/13/2022	11/9/2022	42
Tunnel Reach 6	East Backfill Safe Haven Station 894+/-	11/11/2022	12/7/2022	18

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reach 6	West Excavate safe Haven Shaft Station 894+/-	9/13/2022	10/26/2022	32
Tunnel Reach 6	West Concrete Safe Haven Station 894+/-	10/27/2022	12/27/2022	42
Tunnel Reach 6	West Backfill Safe Haven Station 894+/-	3/1/2023	3/24/2023	18
Tunnel Reach 6	East and West Restore Surface Safe Haven Station 894	3/27/2023	5/2/2023	22
Tunnel Reach 6	East and West Intervention Grout Zone Station 947+/-	7/28/2022	11/30/2022	88
Tunnel Reach 6	East and West Intervention Grout Zone Station 1000+/-	12/1/2022	4/6/2023	88
Tunnel Reach 6	East and West Intervention Grout Zone Station 1052+/-	4/7/2023	8/10/2023	88
Tunnel Reach 6	East and West Intervention Grout Zone Station 1105+/-	8/11/2023	12/14/2023	88
Tunnel Reach 6	E/W Complete Recovery Shaft Area	1/4/2027	4/12/2027	70
Tunnel Reach 6	East Recovery Shaft Liner Concrete	7/14/2026	9/21/2026	49
Tunnel Reach 6	West Recovery Shaft Liner Concrete	10/22/2026	12/31/2026	49
Tunnel Reach 6	Routine Supply Delivery for Duration of Construction	3/5/2019	10/7/2027	2,141
Tunnel Reaches 1-3	Tunnel Mob Concurrent with Surface Activities	5/30/2019	7/1/2019	22
Tunnel Reaches 1-3	Setup Reach #2 Launch Shaft Station 0+00	7/2/2019	7/16/2019	10
Tunnel Reaches 1-3	Reach #2 Slurry Wall Installation	3/4/2019	6/19/2019	77
Tunnel Reaches 1-3	Excavate Reach #2 Launch Shaft	9/20/2019	1/22/2020	86
Tunnel Reaches 1-3	Reach #2 Tie Rebar Tremie Slab	1/23/2020	2/5/2020	10
Tunnel Reaches 1-3	Reach #2 Setup and Place Tremie Slab	2/6/2020	2/13/2020	6
Tunnel Reaches 1-3	Reach #2 Pump Water from Shaft	2/26/2020	2/28/2020	3
Tunnel Reaches 1-3	Reach #2 Cure Time Tremie Slab	2/14/2020	2/25/2020	7
Tunnel Reaches 1-3	Reach #2 Setup and Place Work Slab	3/2/2020	3/2/2020	1
Tunnel Reaches 1-3	Reach #2 Tie Rebar Thrust Ring	3/3/2020	3/31/2020	21
Tunnel Reaches 1-3	Reach #2 Set Breakout Forms	4/1/2020	4/2/2020	2
Tunnel Reaches 1-3	Reach #2 Form Thrust Ring	4/8/2020	4/21/2020	10
Tunnel Reaches 1-3	Reach #2 Jet Grout Break in Breakout	6/20/2019	9/19/2019	64
Tunnel Reaches 1-3	Reach #2 Place Thrust Ring	4/22/2020	4/30/2020	7
Tunnel Reaches 1-3	Setup For Reach #3 Launch Shaft Station 0+00	1/10/2020	1/23/2020	10
Tunnel Reaches 1-3	Reach #3 Slurry Wall Installation	6/20/2019	10/8/2019	77
Tunnel Reaches 1-3	Excavate Reach #3 Launch Shaft	1/24/2020	5/25/2020	86
Tunnel Reaches 1-3	Reach #3 Jet Grout Break in Breakout	10/9/2019	1/9/2020	64
Tunnel Reaches 1-3	Reach #3 Tie Rebar Tremie Slab	5/26/2020	6/9/2020	10
Tunnel Reaches 1-3	Reach #3 Setup and Place Tremie Slab	6/10/2020	6/17/2020	6
Tunnel Reaches 1-3	Reach #3 Tie Rebar Thrust Ring	7/6/2020	8/3/2020	21
Tunnel Reaches 1-3	Reach #3 Breakout Ring Forms	8/4/2020	8/5/2020	2
Tunnel Reaches 1-3	Reach #3 Assemble Thrust Ring Forms	8/6/2020	8/10/2020	3

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reaches 1-3	Reach #3 Set and Strip Thrust Ring Forms	8/11/2020	8/24/2020	10
Tunnel Reaches 1-3	Reach #3 Place Thrust Ring Concrete	8/25/2020	9/2/2020	7
Tunnel Reaches 1-3	Excavate Reach #2 Tunnel	8/21/2020	11/18/2024	1,078
Tunnel Reaches 1-3	Reach #3 Pump Water from Shaft	6/29/2020	7/1/2020	3
Tunnel Reaches 1-3	Reach #3 Cure Time Tremie Slab	6/18/2020	6/26/2020	7
Tunnel Reaches 1-3	Reach #2 Assemble Thrust Ring Forms	4/3/2020	4/7/2020	3
Tunnel Reaches 1-3	Reach #3 Working Slab	7/2/2020	7/2/2020	1
Tunnel Reaches 1-3	Reach #2 Launch Shaft Backfill and Line	2/1/2027	6/1/2027	85
Tunnel Reaches 1-3	Reach #3 Launch Shaft Backfill and Line	7/11/2023	11/7/2023	85
Tunnel Reaches 1-3	Reach 2 3 Turnover to Complete Launch Shaft	6/2/2027	6/2/2027	1
Tunnel Reaches 1-3	Muck Disposal Conveyor Setup	7/2/2019	8/21/2019	36
Tunnel Reaches 1-3	Assemble Reach #3 TBM	8/25/2020	11/20/2020	63
Tunnel Reaches 1-3	Assemble Reach #2 TBM	5/1/2020	8/20/2020	78
Tunnel Reaches 1-3	Reassemble 28-foot TBM Reach #1	1/22/2025	4/2/2025	50
Tunnel Reaches 1-3	Excavate Reach #3 Tunnel	11/23/2020	2/13/2023	564
Tunnel Reaches 1-3	Reach 3 TBM Conveyor, Utilities, Grout	2/14/2023	7/10/2023	102
Tunnel Reaches 1-3	Excavate Reach #1 Tunnel	4/3/2025	4/10/2026	260
Tunnel Reaches 1-3	Remove Reach #1 and #2 TBM, Conveyor, Grout	4/13/2026	1/29/2027	204
Tunnel Reaches 1-3	Operate Muck Disposal Area	8/22/2019	5/25/2026	1,716
Tunnel Reaches 1-3	Operate Tunnel Water Treatment Plant	7/3/2019	6/1/2027	2,009
Tunnel Reaches 1-3	Reach #2 Intervention Grout Zones Station 4	1/10/2020	3/12/2020	44
Tunnel Reaches 1-3	Indirect Tunnel and Shaft	7/2/2019	6/1/2027	2,010
Tunnel Reaches 1-3	Reach #2 Grout/Wall Safe Haven Shaft	3/13/2020	6/30/2020	77
Tunnel Reaches 1-3	Set Up Docks, Berm, and Work Site	7/3/2018	7/1/2019	253
Tunnel Reaches 1-3	Reach #2 Excavate Safe Haven Shaft Station	7/1/2020	8/17/2020	33
Tunnel Reaches 1-3	Excavate and Berm Muck Disposal Area	3/4/2019	7/1/2019	85
Tunnel Reaches 1-3	Reach #2 Concrete Safe Haven Station 98+79	8/18/2020	10/20/2020	45
Tunnel Reaches 1-3	Final Dress and Cleanup Muck Disposal Area	5/26/2026	11/19/2026	100
Tunnel Reaches 1-3	Reach #2 Backfill Safe Haven Shaft	11/2/2021	11/26/2021	18
Tunnel Reaches 1-3	Batch Plant Operations	7/2/2019	5/28/2027	2,009
Tunnel Reaches 1-3	Reach #3 Grout/Wall Safe Haven Shaft	7/1/2020	10/19/2020	77
Tunnel Reaches 1-3	Reach #3 Excavate Safe Haven Shaft	10/21/2020	12/28/2020	47
Tunnel Reaches 1-3	Reach #2 Remove TBM and Trailing Gear	11/19/2024	1/21/2025	43
Tunnel Reaches 1-3	Reach #2 and Reach #3 Restore Safe Haven Shaft	12/21/2021	4/7/2022	60
Tunnel Reaches 1-3	Reach #2 Intervention Grout Zone Station 20	5/14/2020	7/16/2020	44
Tunnel Reaches 1-3	Reach #2 Grout/Wall Safe Haven w/Shaft	10/20/2020	2/8/2021	77
Tunnel Reaches 1-3	Reach #3 Concrete Safe Haven Shaft Station	12/29/2020	3/3/2021	45
Tunnel Reaches 1-3	Reach #3 Backfill Safe Haven Station 147+47	5/2/2022	5/25/2022	18
Tunnel Reaches 1-3	Reach #2 and Reach #3 Restore Safe Haven at Station 148+/-	5/26/2022	9/13/2022	60
Tunnel Reaches 1-3	Reach #2 Intervention Grout Zone Station 30	11/19/2020	1/22/2021	44

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Tunnel Reaches 1-3	Reach 2 Turnover Junction Shaft to Surf	7/29/2026	7/29/2026	1
Tunnel Reaches 1-3	Reach #2 Intervention Grout Zone Station 254	9/18/2020	11/18/2020	44
Tunnel Reaches 1-3	Reach #2 Excavate Safe Haven Shaft Station	3/4/2021	4/19/2021	33
Tunnel Reaches 1-3	Reach #3 Excavate Safe Haven Station 147+47	7/6/2021	9/8/2021	46
Tunnel Reaches 1-3	Reach #2 Concrete Safe Haven Shaft Station	4/20/2021	6/22/2021	45
Tunnel Reaches 1-3	Reach #3 Safe Haven Concrete Station 147+47	9/9/2021	11/17/2021	50
Tunnel Reaches 1-3	Reach #2 Backfill Safe Haven Station 148+18	6/7/2022	6/30/2022	18
Tunnel Reaches 1-3	Reach #3 Backfill Safe Haven Shaft Station	11/24/2021	12/20/2021	18
Tunnel Reaches 1-3	Reach #3 Intervention Grout Zone Station 49	3/13/2020	5/13/2020	44
Tunnel Reaches 1-3	Reach #3 Backfill Safe Haven Shaft Station 1	5/26/2022	6/21/2022	18
Tunnel Reaches 1-3	Reach #3 Intervention Grout Zone Station 19	7/17/2020	9/17/2020	44
Tunnel Reaches 1-3	Reach #1 Intervention Grout Zone Station 41	1/25/2021	3/26/2021	44
Tunnel Reaches 1-3	Reach #2-1 Junction Shaft Excavation	4/21/2022	11/21/2022	150
Tunnel Reaches 1-3	Reach #3 Recovery Shaft Excavation	8/31/2021	12/16/2021	76
Tunnel Reaches 1-3	Reach #1 Recovery Shaft Lining/Backfill	7/8/2026	9/18/2026	52
Tunnel Reaches 1-3	Reach #3 Recovery Shaft Lining and Backfill	5/10/2023	7/24/2023	52
Tunnel Reaches 1-3	Reach #3 Grout/Wall Safe Haven Station 147+47	2/9/2021	7/2/2021	102
Tunnel Reaches 1-3	Reach #2 Grout and Wall Junction Shaft	12/17/2021	4/20/2022	86
Tunnel Reaches 1-3	Reach #1 Recovery Shaft Grout and Wall	4/21/2022	9/23/2022	109
Tunnel Reaches 1-3	Reach #3 Recovery Shaft Grout and Wall	3/29/2021	8/30/2021	109
Tunnel Reaches 1-3	Reach #1 Recovery Shaft Excavation	11/22/2022	3/13/2023	76
Tunnel Reaches 1-3	Routine Supply Delivery for Duration of Construction	7/3/2018	6/2/2027	2,164
Temporary power (69 kV)	Intake 2 Temporary Power 69 kV	9/1/2023	11/28/2024	325
Temporary power (69 kV)	Intermediate Forebay to Intake 3 Temporary Power 69 kV	7/1/2019	9/25/2020	325
Temporary power (69 kV)	Intermediate Forebay to Intake 5 Temporary Power 69 kV	1/1/2022	3/30/2023	325
Temporary power (230 kV)	Intermediate Forebay to Staten Temporary Power 230/115 kV	9/1/2017	8/29/2019	520
Temporary power (230 kV)	Bouldin to Staten Temporary Power 230/115 kV	8/1/2018	10/29/2019	325
Temporary power (230 kV)	Bouldin to Bacon Temporary Power 230/115 kV	8/1/2018	10/29/2019	325
Temporary power (230 kV)	Clifton Court to Bacon Temporary Power 230 kV	8/1/2017	10/29/2018	325
Delivery	Equipment and Material Delivery	1/2/2018	12/30/2028	2,878
Delivery	Equipment and Material Delivery	12/29/2023	3/8/2029	1,561
Delivery	Equipment and Material Delivery	3/5/2019	10/7/2027	2,141
Delivery	Equipment and Material Delivery	3/3/2020	9/12/2025	1,503
Delivery	Equipment and Material Delivery	11/6/2018	9/21/2028	2,462

Feature	Description	Start (January 1, 2016)	End (July 11, 2029)	Duration (Days)
Delivery	Equipment and Material Delivery	7/3/2018	6/2/2027	2,164
Delivery	Equipment and Material Delivery	7/1/2024	7/11/2029	1,300
Delivery	Equipment and Material Delivery	11/1/2021	12/5/2028	2,016
Delivery	Equipment and Material Delivery (Intake 2)	9/1/2023	11/28/2024	325
Delivery	Equipment and Material Delivery (Intake 3)	7/1/2019	9/25/2020	325
Delivery	Equipment and Material Delivery (Intake 5)	1/1/2022	3/30/2023	325
Delivery	Equipment and Material Delivery (Intermediate Forebay)	9/1/2017	8/29/2019	520
Delivery	Equipment and Material Delivery (Reach 5)	8/1/2018	10/29/2019	325
Delivery	Equipment and Material Delivery (Reach 6)	8/1/2018	10/29/2019	325
Delivery	Equipment and Material Delivery (Reach 7)	8/1/2017	10/29/2018	325
Delivery	Equipment and Material Delivery (CCF)	1/1/2027	6/30/2027	128
Notes: CCF = Clifton Court Forebay kV = kilovolt MEP = mechanical, electrical, and plumbing NCCF = North Clifton Court Forebay SCCF = South Clifton Court Forebay TBM = tunnel boring machine				