

 EXPERIENCE

 COMMITMENT

 **riverview**
Innovation & Technology Campus

 VISION

 INNOVATION













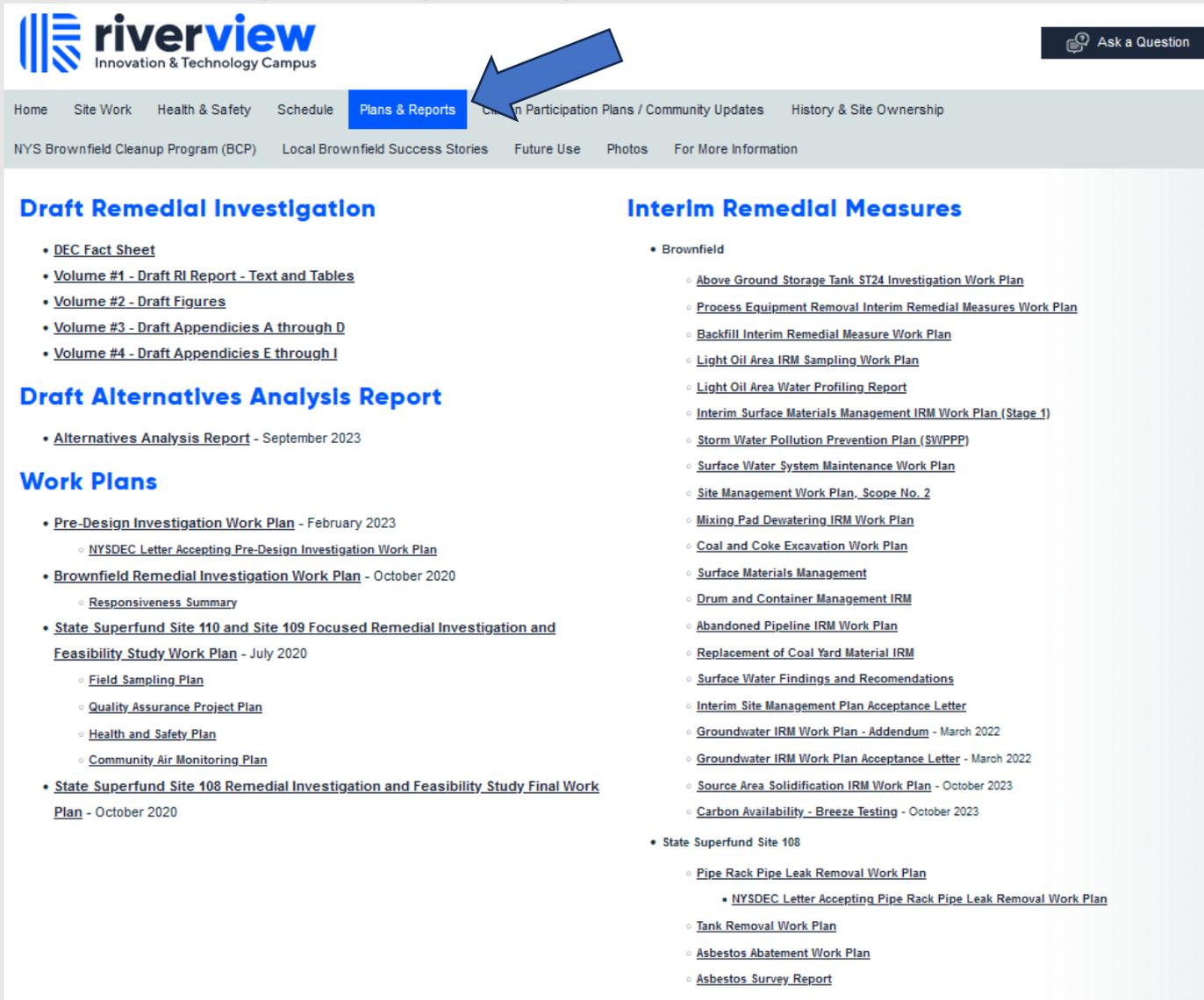








http://riverviewtechcampus.com/plans-reports/



 Innovation & Technology Campus

Home Site Work Health & Safety Schedule **Plans & Reports** Community Participation Plans / Community Updates History & Site Ownership

NYS Brownfield Cleanup Program (BCP) Local Brownfield Success Stories Future Use Photos For More Information

Draft Remedial Investigation

- [DEC Fact Sheet](#)
- [Volume #1 - Draft RI Report - Text and Tables](#)
- [Volume #2 - Draft Figures](#)
- [Volume #3 - Draft Appendicies A through D](#)
- [Volume #4 - Draft Appendicies E through I](#)

Draft Alternatives Analysis Report

- [Alternatives Analysis Report](#) - September 2023

Work Plans

- [Pre-Design Investigation Work Plan](#) - February 2023
 - [NYSDEC Letter Accepting Pre-Design Investigation Work Plan](#)
- [Brownfield Remedial Investigation Work Plan](#) - October 2020
 - [Responsiveness Summary](#)
- [State Superfund Site 110 and Site 109 Focused Remedial Investigation and Feasibility Study Work Plan](#) - July 2020
 - [Field Sampling Plan](#)
 - [Quality Assurance Project Plan](#)
 - [Health and Safety Plan](#)
 - [Community Air Monitoring Plan](#)
- [State Superfund Site 108 Remedial Investigation and Feasibility Study Final Work Plan](#) - October 2020

Interim Remedial Measures

- Brownfield
 - [Above Ground Storage Tank ST24 Investigation Work Plan](#)
 - [Process Equipment Removal Interim Remedial Measures Work Plan](#)
 - [Backfill Interim Remedial Measure Work Plan](#)
 - [Light Oil Area IRM Sampling Work Plan](#)
 - [Light Oil Area Water Profiling Report](#)
 - [Interim Surface Materials Management IRM Work Plan \(Stage 1\)](#)
 - [Storm Water Pollution Prevention Plan \(SWPPP\)](#)
 - [Surface Water System Maintenance Work Plan](#)
 - [Site Management Work Plan, Scope No. 2](#)
 - [Mixing Pad Dewatering IRM Work Plan](#)
 - [Coal and Coke Excavation Work Plan](#)
 - [Surface Materials Management](#)
 - [Drum and Container Management IRM](#)
 - [Abandoned Pipeline IRM Work Plan](#)
 - [Replacement of Coal Yard Material IRM](#)
 - [Surface Water Findings and Recommendations](#)
 - [Interim Site Management Plan Acceptance Letter](#)
 - [Groundwater IRM Work Plan - Addendum](#) - March 2022
 - [Groundwater IRM Work Plan Acceptance Letter](#) - March 2022
 - [Source Area Solidification IRM Work Plan](#) - October 2023
 - [Carbon Availability - Breeze Testing](#) - October 2023
- State Superfund Site 108
 - [Pipe Rack Pipe Leak Removal Work Plan](#)
 - [NYSDEC Letter Accepting Pipe Rack Pipe Leak Removal Work Plan](#)
 - [Tank Removal Work Plan](#)
 - [Asbestos Abatement Work Plan](#)
 - [Asbestos Survey Report](#)

- Remedial Action Objectives – Standard NYSDEC defined RAOs
- Identification and Screening of Technologies
- Development and Screening of Alternatives
 - Threshold Criteria
 - Overall Protection of Human Health and the Environment
 - Compliance with Standards, Criteria and Guidance (SCGs)
 - Primary Balancing Criteria
 - Long-term Effectiveness and Permanence
 - Reduction of Toxicity, Mobility or Volume of Contamination through Treatment
 - Short Term Impact and Effectiveness
 - Implementability
 - Cost Effectiveness
 - Land Use
 - Modifying Criteria
 - Community Acceptance
- Recommendation

| | | | | |
|------------------------------|---------------------------------------|--|--|------------------------|
| Surface Water | Collection, Conveyance, and Treatment | Ditches | At grade surface water collection and conveyance. | Potentially applicable |
| | | Catch Basins and Underground Stormwater Piping | Below grade surface water collection and conveyance. | Potentially applicable |
| | | Rain Gardens | Collection ponds with passive plantings to filter and support native vegetation and wildlife habitat. | Potentially applicable |
| | | Bio-retention Ponds | Collection ponds with active biological collection and passive treatment. | Potentially applicable |
| | | Retention Ponds | Passive or Active collection and sedimentation pond(s). The active components can include aeration and filtration. | Potentially applicable |
| Remnant Materials Management | Buried Utility Management | No Action | No action of any utility that is not creating a conduit for migration of impacted water or acting as a source of compounds to groundwater. | Potentially applicable |
| | | Reuse | Reuse of underground utilities that are suitable for long-term operation; electrical conduit, north-south storm sewer, etc. | Potentially applicable |
| | | Crush and Use as Fill | Crush clean concrete underground utilities that do not meet the determination of solid waste and use as onsite fill below a cover system. | Potentially applicable |
| | | Grout | Fill underground conduits in place that could provide a migration pathway. | Potentially applicable |
| | | Removal and Offsite Disposal | Remove underground conduits that contain residuals that exceed SCGs or that provide a conduit for groundwater migration from the site. | Potentially applicable |

Page 4

| Technology Type | General Response Action Process Option | Alternative | | | | | | | | | | Comments | |
|--|--|-----------------|-------|-----------|--------------------|---|---|--|---|--|-----------------|---|--|
| | | Area or Volume | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| | | Quantity | Units | No Action | Source Containment | Source Containment, Groundwater Control | Source Containment, NAPL Stabilization, Groundwater Control | Insitu Stabilization, Containment, Groundwater Control | Ex Situ Thermal and Stabilization, Containment, Groundwater Control | Source Removal, Containment, Groundwater Control | Track 1 Cleanup | | |
| Access Restrictions | Environmental Easement | Track 4 Area | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Deed Restriction - No Drinking Water Wells | Track 4 Area | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Deed Restriction - No Residential Development | Track 4 Area | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Routine Long-term Care | Site Management Plan | Track 4 Area | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Excavation Work Plan | Track 4 Area | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Stormwater Best Management Practices | Entire BCP Site | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Monitoring | Monitoring Surface for Erosion/damage | Entire BCP Site | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Surface Water Monitoring | Entire BCP Site | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | Groundwater Monitoring | Entire BCP Site | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Groundwater Treatment | Onsite Pre-treatment | Impacted Areas | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Discharge to POTW v SPDES Permit Equivalence | |
| | Onsite Primary, Secondary and Tertiary Treatment | Impacted Areas | | | | | | | ✓ | ✓ | ✓ | Capacity of 120 GPM, surface water discharge under SPDES Permit Equivalence | |
| Collection and Conveyance | Stormwater Management/Retention Ponds | 7 | Acres | | | | ✓ | ✓ | ✓ | ✓ | ✓ | The proposed retention pond(s) will occupy the north west corner of the BCP Site. | |
| Page 1 | | | | | | | | | | | | | |
| General Fill Exceeding Commercial SCDs | Soil Cover | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Asphalt or Concrete Pavement | 80 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Building or Structure | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Consolidation Areas | 4.5 | Acres | | | | | ✓ | ✓ | ✓ | ✓ | Entire Site less the retention pond and consolidation areas under Alternative No. 6. Topsoil cover required in Alternative No. 8 as vegetation will not grow effectively on clay. Other Covers Reduce to 15.5 Acres. | |
| Fill/Soil Excavation | Excavation and Onsite Placement | 4.7 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Clear Perimeter of all soil that exceeds unrestricted SCDs |
| | Excavation and Onsite Placement | 1,000 | Ton | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | EPA Soil Pile |
| | Excavation and Onsite Placement | 160 | Ton | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Fill moved to access viscous tar and NAPL |
| | Excavation and Onsite Placement | 0 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Clear Perimeter south of retention basin |
| | Excavation and Onsite Placement | 7 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Clear Retention Basin Area, use to fill low areas in Coke Yard |
| | Excavation and Onsite Placement | 23 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Regrade Coke Yard to eliminate low areas created by the coke recovery. |
| | Excavation and Onsite Placement | 5 | Acres | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Final subgrade grading |
| | Excavation and Onsite Placement | 2,600 | Ton | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Dredge pile near sedimentation pool #002 |

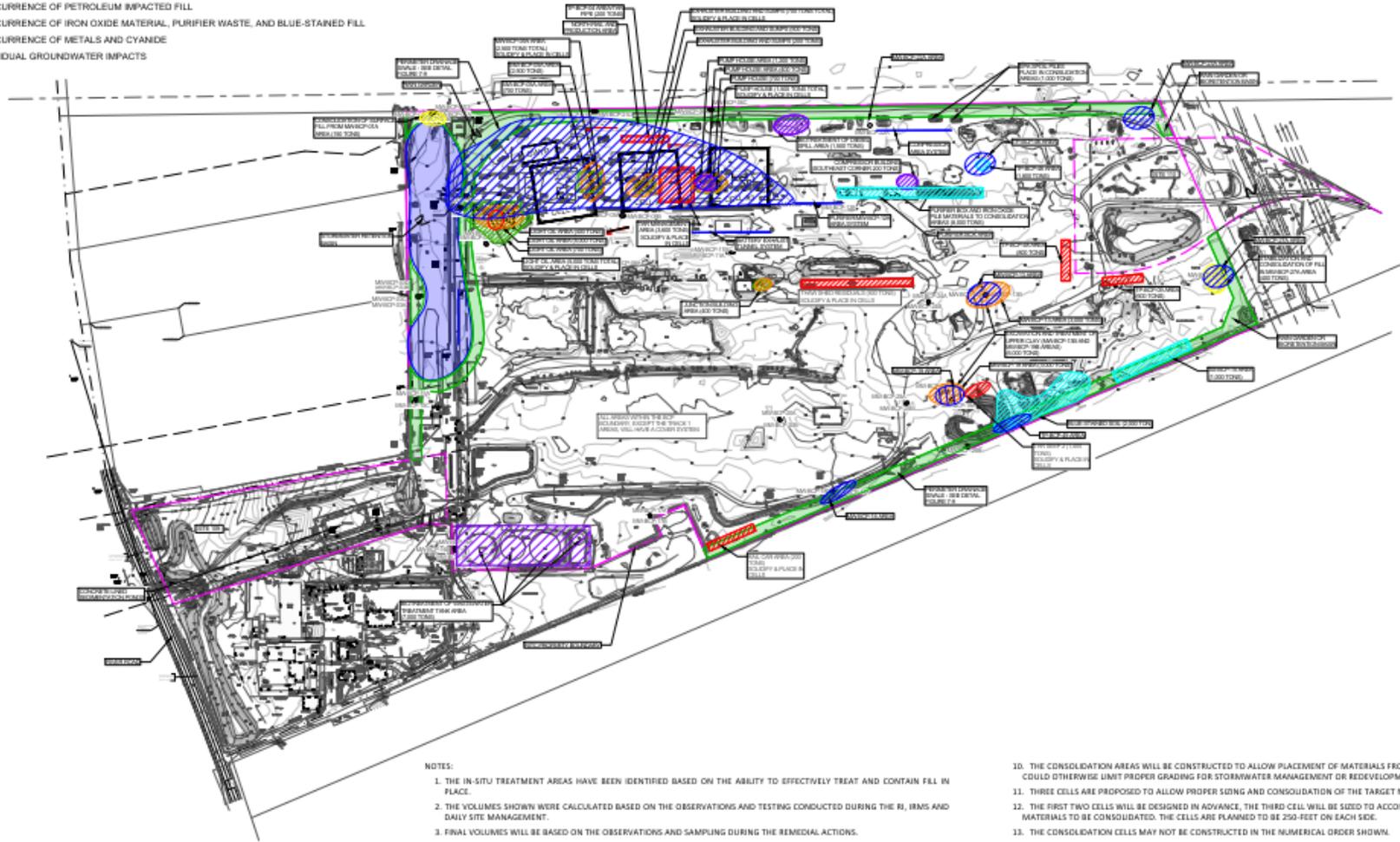
| Alternative | Description | Evaluation Criteria | | | | | | | | | | Overall Score |
|---------------------|---|---|--|--|--|-------------------------------------|------|------------------|--------------------|----------|-------------------------|---------------|
| | | Threshold Criteria | | | | Primary Balancing Criteria | | | | | Modifying Consideration | |
| | | Overall Protectiveness of the Public Health and the Environment | Compliance with Standards Criteria and Guidance (SCGs) | Long-term Effectiveness and Permanence | Reduction of Toxicity, Mobility or Volume of Contamination through Treatment | Short-term Impact and Effectiveness | | Implementability | Cost Effectiveness | Land Use | Community Acceptance | |
| Weighting Factor >> | 10 | 10 | 8 | 8 | 5 | 4 | 6 | 4 | 4 | N.A. | | |
| 1 | No Action | 0 | 0 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| 2 | Source Containment | 5 | 5 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| 3 | Source Containment, Groundwater Control | 7 | 7 | 8 | 5 | 7 | 5 | 8 | 10 | 8 | To be determined | 419 |
| 4 | Source Containment, NAPL Solidification, Groundwater Control | 10 | 10 | 10 | 7 | 9 | 5 | 7 | 9 | 9 | To be determined | 515 |
| 5 | In Situ Stabilization, Containment, Groundwater Control | 10 | 10 | 10 | 9 | 9 | 5 | 7 | 8 | 10 | To be determined | 531 |
| 6 | Ex Situ Thermal and Stabilization, Containment, Groundwater Control | 10 | 10 | 10 | 9 | 7 | 2 | 4 | 4 | 8 | To be determined | 467 |
| 7 | Source Removal, Containment, Groundwater Control | 7 | 10 | 10 | 9 | 6 | 2 | 3 | 4 | 5 | To be determined | 414 |
| 8 | Track 4 Remediation | 5 | 10 | 10 | 10 | 2 | 2 | 0 | 0 | 10 | To be determined | 368 |

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2. The Overall Score is the sum of the products of the weighting factors and the individual scores.
 3. Community Acceptance cannot be evaluated until after the Draft Alternative Analysis has a public comment period, hence the TBD reference.



- LEGEND**
- ▬ PERIMETER FILL REMOVAL AREA (TRACK 1)
 - ▬ STORM WATER RETENTION BASIN (TRACK 1)
 - ▨ OCCURRENCE OF VISCOUS TAR
 - ▨ OCCURRENCE OF NAPL
 - ▨ OCCURRENCE OF VOC IMPACTED FILL
 - ▨ OCCURRENCE OF PETROLEUM IMPACTED FILL
 - ▨ OCCURRENCE OF IRON OXIDE MATERIAL, PURIFIER WASTE, AND BLUE-STAINED FILL
 - ▨ OCCURRENCE OF METALS AND CYANIDE
 - ▨ RESIDUAL GROUNDWATER IMPACTS



NOTES:

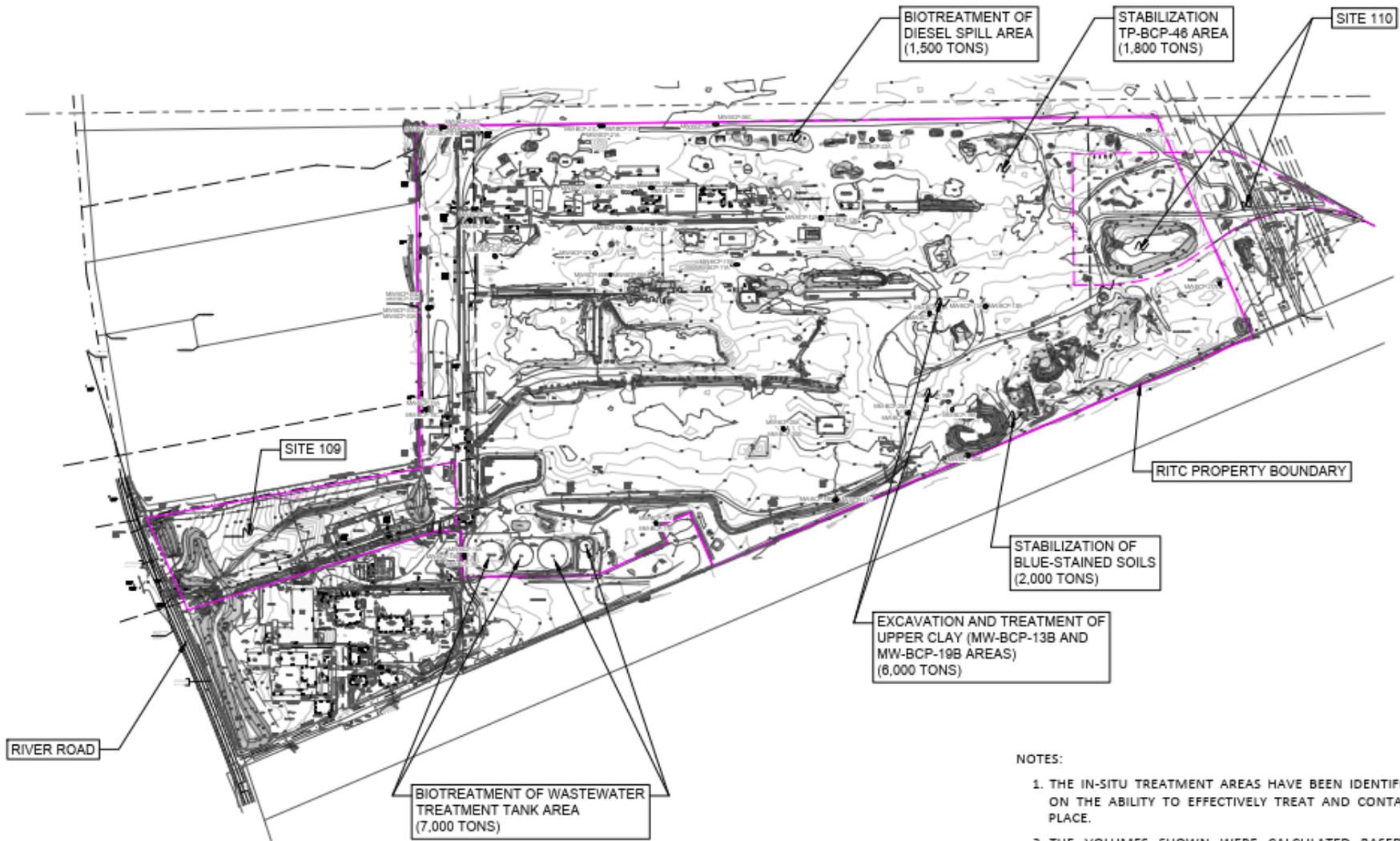
1. THE IN-SITU TREATMENT AREAS HAVE BEEN IDENTIFIED BASED ON THE ABILITY TO EFFECTIVELY TREAT AND CONTAIN FILL IN PLACE.
2. THE VOLUMES SHOWN WERE CALCULATED BASED ON THE OBSERVATIONS AND TESTING CONDUCTED DURING THE RI, IRMS AND DAILY SITE MANAGEMENT.
3. FINAL VOLUMES WILL BE BASED ON THE OBSERVATIONS AND SAMPLING DURING THE REMEDIAL ACTIONS.
4. THE MATERIALS IN AREAS TO BE PLACED IN THE CONSOLIDATION AREAS (FIGURE 7-5) HAVE BEEN IDENTIFIED BASED ON MATERIALS THAT WOULD ADVERSELY AFFECT THE STORMWATER MANAGEMENT OR EXCAVATION DURING REDEVELOPMENT.
5. THE VOLUMES SHOWN WERE CALCULATED BASED ON THE OBSERVATIONS AND TESTING CONDUCTED DURING THE RI, IRMS AND DAILY SITE MANAGEMENT.
6. FINAL VOLUMES WILL BE BASED ON THE OBSERVATIONS AND SAMPLING DURING THE REMEDIAL ACTIONS.
7. THE EXISTING FILL AROUND THE PERIMETER OF THE BCP SITE VARIES FROM 6- TO 36-INCHES THICK.
8. THE FILL AROUND THE PERIMETER WILL BE REMOVED AND PLACED AS FILL WITHIN THE BCP SITE. SEE DETAIL ON FIGURE 7-9.
9. THE STORMWATER RETENTION BASIN AND PERIMETER BUFFER AREAS WILL BE EXCAVATED TO THE UNDERLYING CLAY AND WILL MEET TRACK 1 STANDARDS.

10. THE CONSOLIDATION AREAS WILL BE CONSTRUCTED TO ALLOW PLACEMENT OF MATERIALS FROM WITHIN THE BCP SITE THAT COULD OTHERWISE LIMIT PROPER GRADING FOR STORMWATER MANAGEMENT OR REDEVELOPMENT.
11. THREE CELLS ARE PROPOSED TO ALLOW PROPER SLOPE AND CONSOLIDATION OF THE TARGET MATERIALS.
12. THE FIRST TWO CELLS WILL BE DESIGNED IN ADVANCE. THE THIRD CELL WILL BE SIZED TO ACCOMMODATE THE REMAINING MATERIALS TO BE CONSOLIDATED. THE CELLS ARE PLANNED TO BE 250-FEET ON EACH SIDE.
13. THE CONSOLIDATION CELLS MAY NOT BE CONSTRUCTED IN THE NUMERICAL ORDER SHOWN.
14. GROUNDWATER COLLECTION TRENCHES NOS. 1 AND 2 WILL BE RELOCATED TO THE SOUTH OF THE CONSOLIDATION CELL AREAS. ALL SHALLOW GROUNDWATER AT THE EXISTING COLLECTION TRENCH NO. 1 AND NO. 2 LOCATIONS WILL BE ELIMINATED.
15. THE PROPOSED LONG-TERM GROUNDWATER TREATMENT PLANT (IGWTT) WILL BE LOCATED NORTH OF THE CONSOLIDATION CELLS AND WILL BE CONSTRUCTED AND STARTUP TESTING WILL BE COMPLETE BEFORE THE EXISTING FACILITY IN THE MAINTENANCE BUILDING IS REMOVED FOR CONSOLIDATION AREA CONSTRUCTION.

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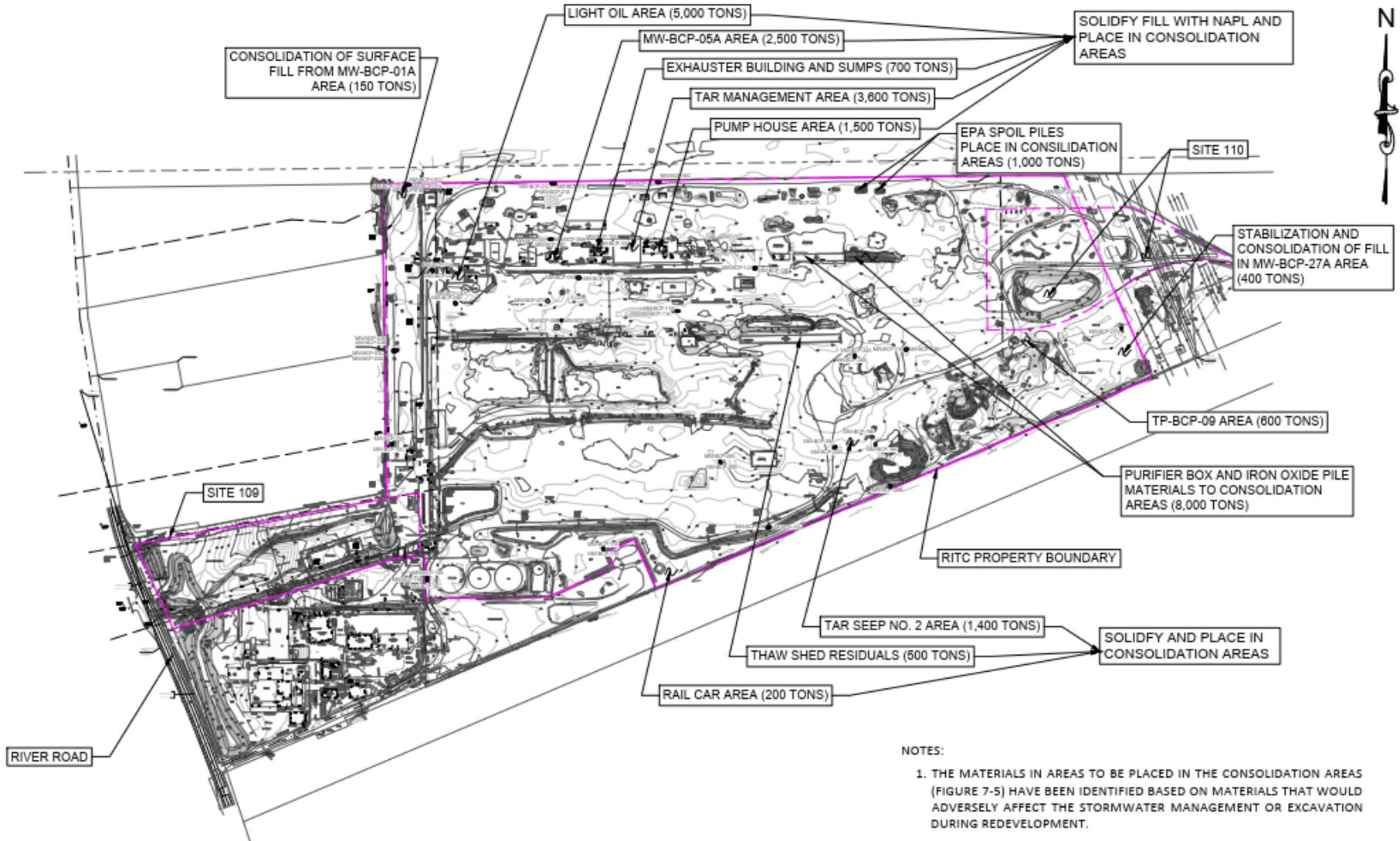


Reference: Vegetation Inventory (Map Showing Topographic Survey of Property, Geomatics, Northern Inland, Technology Campus Inc. April 2004)



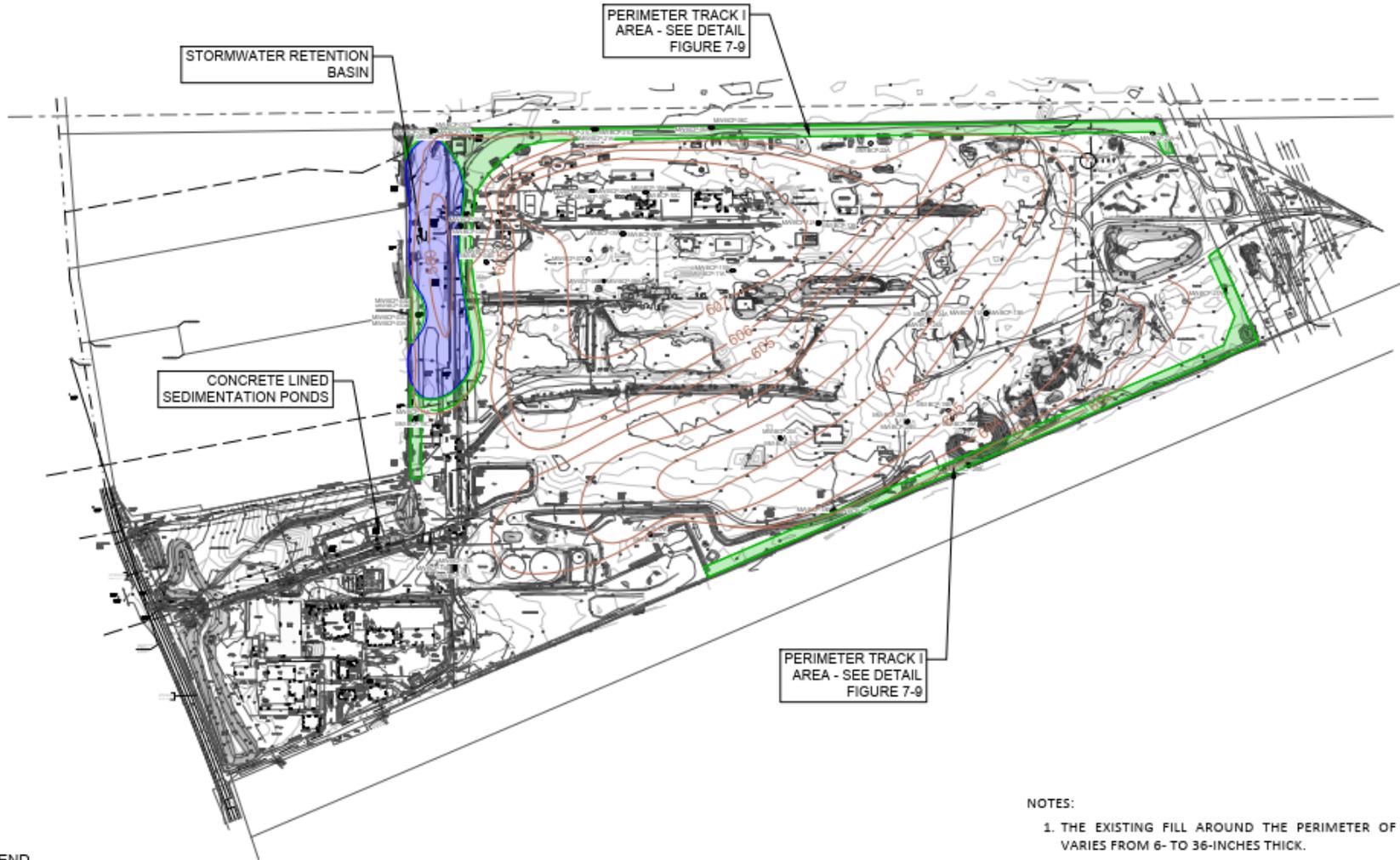
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- LEGEND**
- PERIMETER FILL REMOVAL AREA (TRACK 1)
 - STORM WATER RETENTION BASIN (TRACK 1)

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