



**Washington Suburban
Sanitary Commission**

BROAD CREEK WWPS AUGMENTATION PROJECT

Broad Creek Community Meeting
March 08, 2011



Introduction



- Austin M. Freeman, PMP – Project Manager
- Kira Calm Lewis – Communications



- Dan Keck, P.E. – Hatch Mott MacDonald
- Steve Gerlach, P.E.; Dennis Funk, P.E. – Gannett Fleming

Presentation Overview

- **Project Overview and Status**
- **Broad Creek Pump Station Improvements**
- **Piscataway WWTP Modifications**
- **Conveyance System**

Project Overview



Project Status

- **Studies**

- Project Concept Design Report
- **Conveyance System**
 - Alignment Study
 - Design Criteria and 30% Design
- **Broad Creek Pump Station**
 - Design Development Report
 - Design Criteria and 30% Design
- **Piscataway WWTP Concept**
 - Alternatives Evaluation Report
 - Design Criteria and 30% Design

Project Status

- **Design**

- **Pump Station Site Piping**
 - 100% Design Submittal – March 4, 2011
- **Conveyance System Design**
 - Final Permit Package – March 11, 2011
 - 100% Design Submittal – June 2011
- **Piscataway WWTP Headworks and Storage Improvements**
 - 100% Design Submittal – March 22, 2011
- **Pump Station Mechanical & Electrical**
 - 100% Design Submittal – May 2011

Project Status

- **Permits**

- **MDE and USACOE Joint Permit (Wetlands)**
 - Application Submitted – January 2011
 - Comments Received – March 4, 2011
- **Forest Conservation**
 - FSD approved, FCP in Public Notice
- **Stormwater Management and Erosion and Sediment Control Permits – Initial review submittal**
- **Broad Creek Historic Area Work Permit**
 - Pump Station Architectural – March 8, 2011
 - Archeological Investigations
 - Conveyance System

Broad Creek Conveyance System

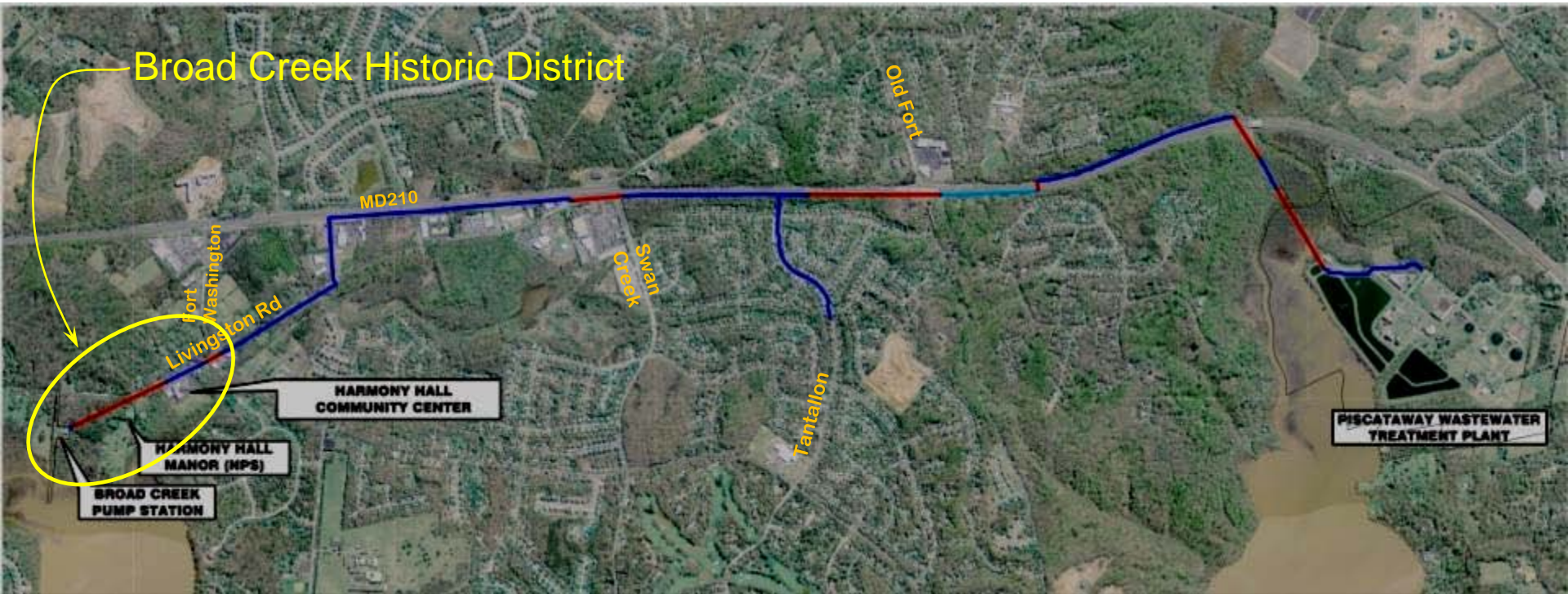
GOALS: PROVIDE CAPACITY OF AT LEAST 55 MGD

- Parallel Conveyance System
- Permit operation of single or parallel pipelines
- Transition Structures for interconnections




Existing Conveyance System



Current Alignment



Legend:

- Cut and Cover 
- Tunnel 
- Gravity Sewer 

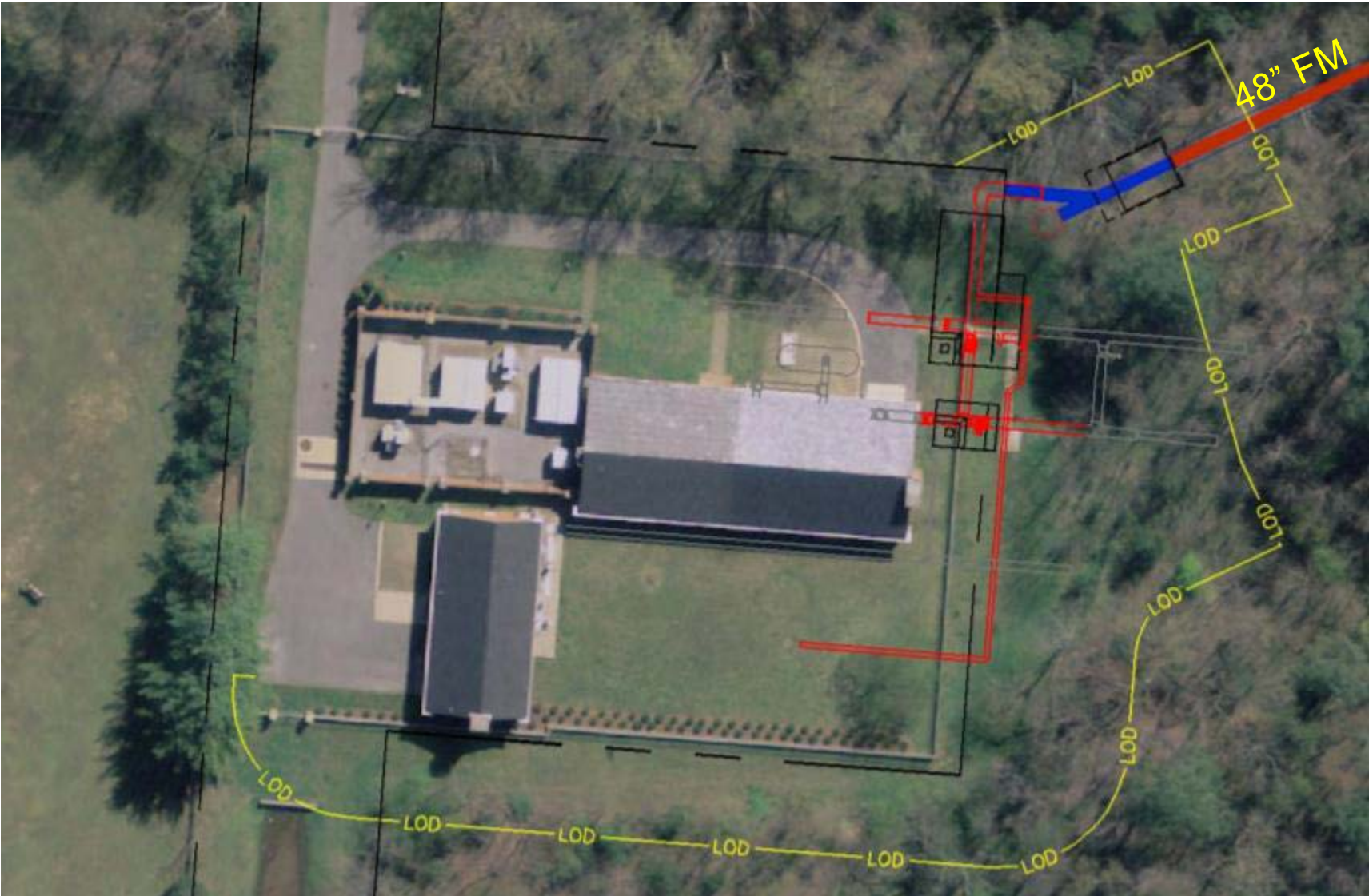
Tunnel 1 - NPS Site



BCHD - South



Broad Creek Pump Station



Piscataway WWTP Improvements

GOAL: PRIMARY TREATMENT AND STORAGE FOR PEAK FLOWS

- Screening and Grit Removal Systems
- Coverage Storage Tank
- Emergency Storage Pond
- Modifications to Site Piping

Piscataway WWTP



Piscataway WWTP Work Areas

**Proposed Wet Weather Storage Area
(5 MG covered storage)**



Broad Creek Pump Station Improvements

**GOAL: INCREASE PUMPING CAPACITY
TO AT LEAST 55 MGD**

- Site Piping Modifications
- Pump Replacement
- 3 New Electrical Drives (VFDs)
- Improvements to HVAC System
- Operational Modifications

Existing View From Livingston Rd.



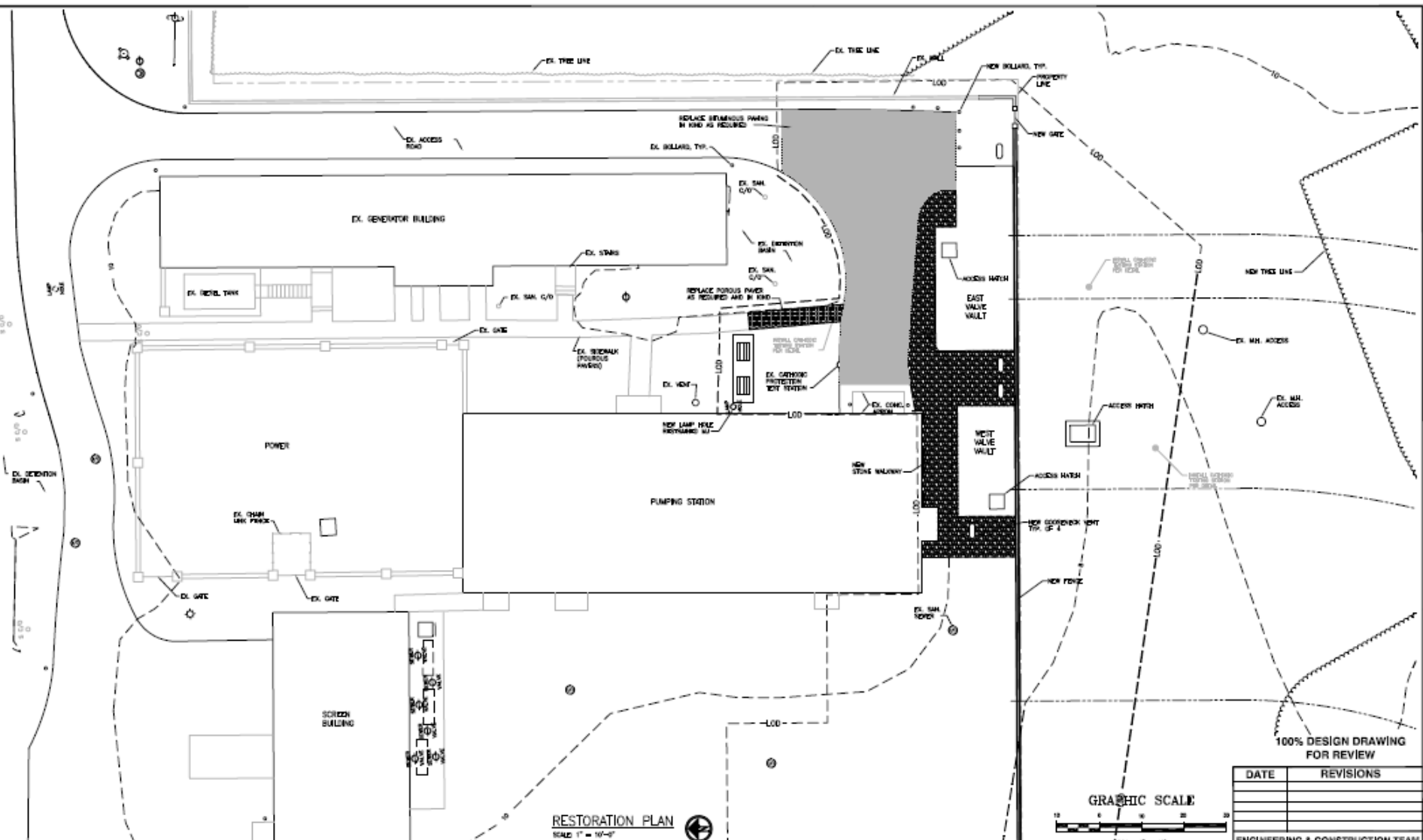
Broad Creek Pump Station - Existing Site



Proposed Piping



Proposed Piping Modifications





Existing North Elevation



Existing South Elevation from Southwest corner

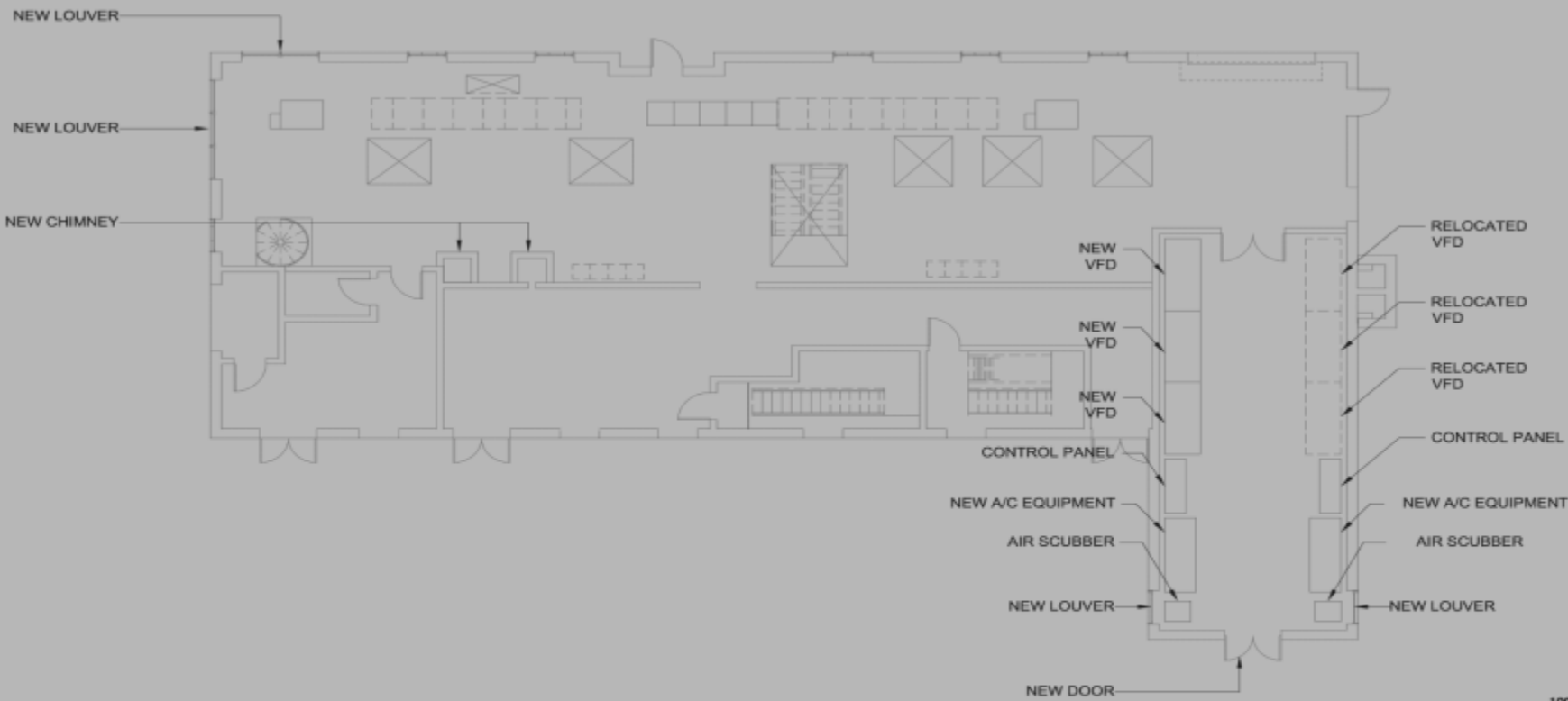


Existing South Elevation from Southeast corner

Broad Creek Pump Station West Side



Proposed Pump Station Extension



Proposed Floor Plan
SCALE: 3/32"=1'-0"

100% DESIGN DRAWING FOR REVIEW

| DATE | REVISIONS |
|------|-----------|
| | |
| | |
| | |

ENGINEERING & CONSTRUCTION TEAM

DATE _____ REGIONAL COORDINATOR
DEVELOPMENT SERVICES GROUP

DATE _____ DEVELOPMENT PROJECT MANAGER
CONTRACT

Hatch Mott MacDonald
A JACOBS COMPANY
Gannett Fleming

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS HAVE BEEN PREPARED OR APPROVED BY ME OR UNDER MY CLOSELY SUPERVISED AND CONTROLLED BY A QUALIFIED LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON.
LICENSURE NO. _____
EXPIRATION DATE _____

DATE _____
SCALE _____

RECORD COPY SIZE OF THIS DWG IS 24 X 36

BROAD CREEK AUGMENTATION PROJECT

Pump Station- Proposed West Elevation



Proposed West Elevation

Pump Station- Proposed North Elevation



Proposed North Elevation

Pump Station - Proposed South Elevation



Proposed South Elevation



| | |
|---------------------|-----------|
| Weathered Ash | 1FDCV5416 |
| 90° Rake | 1R9CS5416 |
| 3-Sided Ridge | 1R3CS5416 |
| 3-Sided Hip Starter | 1FHCS5416 |
| Apex 3-Way | 13ACS5416 |
| Apex 4-Way | 14ACS5416 |



| | |
|---------------------|-----------|
| Hickory | 1FDCV3726 |
| 90° Rake | 1R9CS3726 |
| 3-Sided Ridge | 1R3CS3726 |
| 3-Sided Hip Starter | 1FHCS3726 |
| Apex 3-Way | 13ACS3726 |
| Apex 4-Way | 14ACS3726 |

Split Shake



Saxony 900° Split Shake Hickory



Saxony 900" Shake Charcoal Brown Blend



Hickory
90° Rake
3-Sided Ridge
3-Sided Hip Starter
Apex 3-Way
Apex 4-Way

1FBCF3726
1R9CL3726
1R3CL3726
1FHCL3726
13ACL3726
14ACB3726



Brown Blend
90° Rake
3-Sided Ridge
3-Sided Hip Starter
Apex 3-Way
Apex 4-Way

1FBCF3233
1R9CL3233
1R3CL3233
1FHCL3233
13ACL3233
14ACB3233F



Charcoal Brown Blend
90° Rake
3-Sided Ridge
3-Sided Hip Starter
Apex 3-Way
Apex 4-Way

1FBCF1132
1R9CL1132
1R3CL1132
1FHCL1132
13ACL1132
14ACB1132

Standby Generator Operations

- **Two 2,000 kW Standby Generators**
- **Each Permitted for 500 hrs/ year Operation**
- **One Generator will operate at Predetermined flow to ensure no overflow in case of a utility power supply failure**
- **Generator would run around 24 hours per incident*** (8 hrs to 72 hrs approx.)**
- **Based on Historical Data such incidents are believed to occur 5 to 10 times a year**

Comments and Questions?



*Thank you for attending
tonight's meeting*

