

Department of Environmental Conservation

Division of Environmental Remediation

Remedial Construction Project

Former Hettling Farm Site, Site Number E411015

Location: Town of Clermont, Columbia County, New York

Former Scolite, Site Number E442037

Location: Troy, Rensselaer County, New York

Proposed Schuyler Heights Fire District Station House Site,
Site Number E401050

Location: Town of Colonie, Albany County, New York

Contract Number D007618

Contract Documents

ARCADIS CE, Inc.

NOVEMBER 2015

PAGE LEFT BLANK INTENTIONALLY

TABLE OF CONTENTS

VOLUME 1 OF 1

<u>Document or Section Number</u>	<u>Name or Description</u>	<u>Initial Page</u>
<u>DIVISION 00 – BIDDING AND CONTRACTING REQUIREMENTS</u>		
INTRODUCTORY INFORMATION		
00 01 01	Project Title Page	00 01 00-1
00 01 07	Seals and Certifications Page	00 01 07-1
00 01 10	Table of Contents	00 01 10-1
BIDDING REQUIREMENTS		
00 11 13	Request for Proposal	00 11 13-1
00 21 13	Instructions to Bidders	00 21 13-1
00 41 13	Bid Form	00 41 13-1
CONTRACTING REQUIREMENTS		
00 52 53	Agreement	00 52 53-1
00 61 13.13	Performance Bond Form	00 61 13.13-1
00 61 13.16	Payment Bond Form	00 61 13.16-1
<u>SPECIFICATIONS</u>		
<u>DIVISION 01 – GENERAL REQUIREMENTS</u>		
01 11 13	Summary of Work	01 11 13-1
01 14 33	Work in Highway Rights-of-way	01 14 33-1
01 22 13	Measurement and Payment	01 22 13-1
01 26 00	Contract Modification Procedures	01 26 00-1
01 29 73	Schedule of Values	01 29 73-1
01 29 76	Progress Payment Procedures	01 29 76-1
01 31 13	Project Coordination	01 31 13-1
01 31 19.13	Pre-Construction Conference	01 31 19.13-1
01 31 19.23	Progress Meetings	01 31 19.23-1
01 32 16.00	Progress Schedule	01 32 16.00.10-1
01 33 00	Submittal Procedures	01 33 00-1
01 35 29	Subcontractor's Health and Safety Plan	01 35 29-1
01 35 43.13	Environmental Procedures for Hazardous Materials	01 35 43.13-1

01 35 44	Spill Prevention Control and Countermeasures Plan	01 35 44-1
01 41 26	Stormwater Pollution Prevention Plan and Permit	01 41 26-1
01 41 27	Earthmoving Permit and Dust Control	01 41 27-1
01 42 00	References	01 42 00-1
01 45 29.13	Testing Laboratory Services Furnished by Subcontractor	01 45 29.13-1
01 45 29.23	Testing Laboratory Services Furnished by Department	01 45 29.23-1
01 51 05	Temporary Utilities	01 51 05-1
01 52 13	Subcontractor's Field Office and Sheds	01 52 13-1
01 52 16	First Aid Facilities	01 52 16-1
01 52 19	Sanitary Facilities	01 52 19-1
01 55 13	Access Roads and Parking Areas	01 55 13-1
01 55 26	Maintenance and Protection of Traffic	01 55 26-1
01 57 05	Temporary Controls	01 57 05-1
01 57 33	Security	01 57 33-1
01 58 00	Project Identification and Signs	01 58 00-1
01 65 00	Product Delivery Requirements	01 65 00-1
01 66 00	Product Storage and Handling Requirements	01 66 00-1
01 71 23	Field Engineering	01 71 23-1
01 71 33	Protection of the Work and Property	01 71 33-1
01 73 24	Connections to Existing Facilities	01 73 24-1
01 73 29	Cutting and Patching	01 73 29-1
01 77 19	Closeout Requirements	01 77 19-1
01 78 39	Project Record Documents	01 78 39-1

DIVISION 02 – EXISTING CONDITIONS

02 41 00	Demolition	02 41 00-1
02 51 41	Off-Site Transportation and Disposal	02 51 41-1

DIVISION 03 – CONCRETE – NOT USED

DIVISION 04 – MASONRY – NOT USED

DIVISION 05 – METALS – NOT USED

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES – NOT USED

DIVISION 07 – THERMAL AND MOISTURE PROTECTION – NOT USED

DIVISION 08 – OPENINGS – NOT USED

DIVISION 09 – FINISHES – NOT USED

DIVISION 10 – SPECIALTIES – NOT USED

DIVISION 11 – EQUIPMENT – NOT USED

DIVISION 12 – FURNISHINGS – NOT USED

DIVISION 13 – SPECIAL CONSTRUCTION – NOT USED

DIVISION 14 – CONVEYING EQUIPMENT – NOT USED

DIVISION 21 – FIRE SUPPRESSION – NOT USED

DIVISION 22 – PLUMBING – NOT USED

DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING – NOT USED

DIVISION 25 – INTEGRATED AUTOMATION - NOT USED

DIVISION 26 – ELECTRICAL – NOT USED

DIVISION 27 – COMMUNICATIONS – NOT USED

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY – NOT USED

DIVISION 31 – EARTHWORKS

31 05 19	Geosynthetics for Earthwork	31 05 19-1
31 11 00	Clearing and Grubbing.....	31 11 00-1
31 23 05	Excavation and Fill	31 23 05-1
31 23 07	Site Restoration.....	31 23 07-1

DIVISION 32 – EXTERIOR IMPROVEMENTS – NOT USED

32 12 00	Flexible Pavement.....	32 12 00-1
----------	------------------------	------------

DIVISION 33 – UTILITIES – NOT USED

DIVISION 34 – TRANSPORTATION – NOT USED

DIVISION 35 – WATERWAY AND MARINE - NOT USED

DIVISION 40 – PROCESS INTEGRATION – NOT USED

DIVISION 41 – MATERIAL PROCESSING AND HANDLING EQUIPMENT – NOT USED

DIVISION 42 – PROCESS HEATING, COOLING, AND DRYING EQUIPMENT - NOT USED

DIVISION 43 – PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND
STORAGE EQUIPMENT – NOT USED

DIVISION 44 – POLLUTION CONTROL EQUIPMENT – NOT USED

DIVISION 45 – INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT - NOT
USED

DIVISION 46 – WATER AND WASTEWATER EQUIPMENT – NOT USED

DIVISION 48 – ELECTRICAL POWER GENERATION (NOT USED)

++ END OF TABLE OF CONTENTS ++

TABLE OF CONTENTS

VOLUME 1 OF 1

<u>Document or Section Number</u>	<u>Name or Description</u>	<u>Initial Page</u>
<u>DIVISION 00 – BIDDING AND CONTRACTING REQUIREMENTS</u>		
INTRODUCTORY INFORMATION		
00 01 01	Project Title Page	00 01 00-1
00 01 10	Table of Contents	00 01 10-1
	Addendum 1	
BIDDING REQUIREMENTS		
00 41 13	Bid Form	00 41 13-1
CONTRACTING REQUIREMENTS		
00 52 53	Agreement	00 52 53-1
00 61 13.13	Performance Bond Form.....	00 61 13.13-1
00 61 13.16	Payment Bond Form	00 61 13.16-1
<u>SPECIFICATIONS</u>		
<u>DIVISION 01 – GENERAL REQUIREMENTS</u>		
01 11 13	Summary of Work	01 11 13-1
01 14 33	Work in Highway Rights-of-way	01 14 33-1
01 22 13	Measurement and Payment	01 22 13-1
01 26 00	Contract Modification Procedures	01 26 00-1
01 29 73	Schedule of Values	01 29 73-1
01 29 76	Progress Payment Procedures	01 29 76-1
01 31 13	Project Coordination	01 31 13-1
01 31 19.13	Pre-Construction Conference.....	01 31 19.13-1
01 31 19.23	Progress Meetings	01 31 19.23-1
01 32 16.00	Progress Schedule	01 32 16.00.10-1
01 33 00	Submittal Procedures	01 33 00-1
01 35 29	Subcontractor's Health and Safety Plan	01 35 29-1
01 35 43.13	Environmental Procedures for Hazardous Materials	01 35 43.13-1
01 35 44	Spill Prevention Control and Countermeasures Plan	01 35 44-1
01 41 26	Stormwater Pollution Prevention Plan and Permit	01 41 26-1

01 41 27	Earthmoving Permit and Dust Control	01 41 27-1
01 42 00	References.....	01 42 00-1
01 45 29.13	Testing Laboratory Services Furnished by Subcontractor	01 45 29.13-1
01 45 29.23	Testing Laboratory Services Furnished by Department	01 45 29.23-1
01 51 05	Temporary Utilities.....	01 51 05-1
01 52 13	Subcontractor's Field Office and Sheds	01 52 13-1
01 52 16	First Aid Facilities	01 52 16-1
01 52 19	Sanitary Facilities.....	01 52 19-1
01 55 13	Access Roads and Parking Areas.....	01 55 13-1
01 55 26	Maintenance and Protection of Traffic	01 55 26-1
01 57 05	Temporary Controls	01 57 05-1
01 57 33	Security	01 57 33-1
01 58 00	Project Identification and Signs	01 58 00-1
01 65 00	Product Delivery Requirements.....	01 65 00-1
01 66 00	Product Storage and Handling Requirements	01 66 00-1
01 71 23	Field Engineering.....	01 71 23-1
01 71 33	Protection of the Work and Property	01 71 33-1
01 73 24	Connections to Existing Facilities	01 73 24-1
01 73 29	Cutting and Patching	01 73 29-1
01 77 19	Closeout Requirements	01 77 19-1
01 78 39	Project Record Documents	01 78 39-1

DIVISION 02 – EXISTING CONDITIONS

02 41 00	Demolition	02 41 00-1
02 51 41	Off-Site Transportation and Disposal	02 51 41-1

DIVISION 03 – CONCRETE – NOT USED

DIVISION 04 – MASONRY – NOT USED

DIVISION 05 – METALS – NOT USED

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES – NOT USED

DIVISION 07 – THERMAL AND MOISTURE PROTECTION – NOT USED

DIVISION 08 – OPENINGS – NOT USED

DIVISION 09 – FINISHES – NOT USED

DIVISION 10 – SPECIALTIES – NOT USED

DIVISION 11 – EQUIPMENT – NOT USED

DIVISION 12 – FURNISHINGS – NOT USED

DIVISION 13 – SPECIAL CONSTRUCTION – NOT USED

DIVISION 14 – CONVEYING EQUIPMENT – NOT USED

DIVISION 21 – FIRE SUPPRESSION – NOT USED

DIVISION 22 – PLUMBING – NOT USED

DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING – NOT USED

DIVISION 25 – INTEGRATED AUTOMATION - NOT USED

DIVISION 26 – ELECTRICAL – NOT USED

DIVISION 27 – COMMUNICATIONS – NOT USED

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY – NOT USED

DIVISION 31 – EARTHWORKS

31 05 19	Geosynthetics for Earthwork	31 05 19-1
31 11 00	Clearing and Grubbing.....	31 11 00-1
31 23 05	Excavation and Fill	31 23 05-1
31 23 07	Site Restoration	31 23 07-1

DIVISION 32 – EXTERIOR IMPROVEMENTS – NOT USED

32 12 00	Flexible Pavement.....	32 12 00-1
----------	------------------------	------------

DIVISION 33 – UTILITIES – NOT USED

DIVISION 34 – TRANSPORTATION – NOT USED

DIVISION 35 – WATERWAY AND MARINE - NOT USED

DIVISION 40 – PROCESS INTEGRATION – NOT USED

DIVISION 41 – MATERIAL PROCESSING AND HANDLING EQUIPMENT – NOT USED

DIVISION 42 – PROCESS HEATING, COOLING, AND DRYING EQUIPMENT - NOT USED

DIVISION 43 – PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND

STORAGE EQUIPMENT – NOT USED

DIVISION 44 – POLLUTION CONTROL EQUIPMENT – NOT USED

DIVISION 45 – INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT - NOT
USED

DIVISION 46 – WATER AND WASTEWATER EQUIPMENT – NOT USED

DIVISION 48 – ELECTRICAL POWER GENERATION (NOT USED)

+ + END OF TABLE OF CONTENTS + +

PAGE LEFT BLANK INTENTIONALLY

ARCADIS CE, Inc.

REMEDIAL CONSTRUCTION PROJECT

ADDENDUM NO. 1

DECEMBER 2, 2015

Prepared by:
ARCADIS CE, Inc.

Bid Due Date: Wednesday December 9, 2015 at 5:00 PM
(This is a revised date)

Bidders are required to acknowledge receipt of all addenda on page 00 41 13-2 of the Project Manual.

TABLE OF CONTENTS

Section I.	Summary of Pre-Bid Meeting Walk Through
Section II.	Pre-Bid Meeting Attendance Sign-in Sheet
Section III.	Pre-Bid Meeting Agenda
Section IV.	Comments and Responses to Questions During Pre-Bid Site Visits
Section V.	Questions Received Following Pre-Bid Site Meetings: Addendum 1
Section VI.	Attachments

ADDENDUM 1

To The Contract Documents

NY Works Remedial Construction Project

Former Hettling Farm Site – NYSDEC Site No. E411015

Former Scolite Site – NYSDEC Site No. E422037

Proposed Schuyler Heights Fire District Station House Site – NYSDEC Site No. E401050

December 2, 2015

I-Summary of Pre-Bid Meeting Walk Through

The Pre-Bid Meeting walk-through was conducted on November 23, 2015. The potential bidders, along with a representative from the New York State Department of Environmental Conservation (NYSDEC) and three representatives from Arcadis CE, Inc. (Arcadis) began the orientation at 10 am at the Proposed Schuyler Heights Fire District Station House Site. A sign-in sheet was distributed and those present signed in. A copy of the sign-in sheet is attached. David Hiss of Arcadis began the orientation by introducing the representatives from Arcadis and the NYSDEC. Mr. Hiss briefly explained the contract structure and discussed safety during the site reconnaissance. Eric Lanzarotta of Arcadis then proceeded with the Pre-Bid Meeting agenda, which covered a brief description of each location, project health and safety requirements, summary of documents provided to the bidders on the CD, the general description of the work being performed, anticipated schedule and sequencing and other topics. The potential bidders were then allowed to ask questions, which were addressed (pertinent items are included in Section IV below). The bidders were then allowed to enter the site to perform reconnaissance. Once completed, the group traveled to the Former Scolite Site, where a brief summary of the work to be performed was given and the potential bidders were allowed to perform reconnaissance. Once completed, the group traveled to the Former Hettling Site, where a brief summary of the work to be performed was given and the potential bidders were allowed to perform reconnaissance.

II-Pre-Bid Meeting Attendance Sign-in Sheet

The Pre-Bid Meeting sign-in sheet is attached to this addendum.

III-Pre-Bid Meeting Agenda

The Pre-Bid Meeting agenda is attached to this addendum.

IV-Comments and Responses to Questions During Pre-Bid Site Visits

The following summarizes the questions and answers to questions asked at the Pre-Bid Meeting on November 23, 2015. (Please note that some related questions have been bundled together to improve the clarity of the responses):

1. Can the bid submittal date be extended until December 11th?

- a. No, however the **bids will be received until 5pm EST on Wednesday, December 9th.**
2. The requirement for a Bidders Qualification Statement, identified in the Subcontract Documents, is being waived and is no longer required of the Bidders.
3. The correct email for David Hiss is David.Hiss@Arcadis.com. Use this email instead of the email address in Article 1 of the Bid Form (Section 00 41 13 – Instructions to Bidders)
4. Some inconsistencies were noted in bid item language between Article 5 of the Bid Form (Section 00 41 13 – Instructions to Bidders) and Section 01 22 13 - Measurement and Payment Sections.
 - a. Both Sections have been edited to correct the inconsistencies and the revised versions are attached to this addendum.
5. CAD Files for the base map contours, the interim grading contours and final grading contours will be made available on Compact Disk upon request.
6. A respondent asked that the Hettling grading balance (between existing grade and interim grade) be reviewed for an imbalance.
 - a. The cut and fill balance has been reviewed for the Hettling site and has been confirmed to provide an approximate balance.
7. The Bidders were made aware that at the Former Scolite Site, the buildings are contaminated with asbestos and that the City of Troy will be performing demolition and removal. The intent is to have the building removed prior to beginning work on site to prevent ACM from contaminating the new cap during demolition. However, the bid should be prepared based on the configuration shown in the Contract Documents.
8. Bidders asked about the limits of the access road at the Former Hettling Site.
 - a. Revised Drawings C-02,C-03, and C-04 are attached and show the additional length of access road.
9. It was confirmed by Arcadis that soil material to be imported must be sampled and tested in accordance with the requirements of the Contract Documents prior to approval to confirm that it attains the chemical characteristics specified in 6 NYCRR Part 375 -6.7 (d).
10. An engineer's estimate of probable construction cost was requested. Arcadis stated that the expected construction cost was in the \$1.2 million to \$2.2 million range.

V-Questions Received Following Pre-Bid Site Meetings: Addendum 1

The following summarizes the questions received following the Pre-Bid Meeting on November 23, 2015 until December 2, 2015. (Please note that some related questions have been bundled together to improve clarity of the responses):

Q1 - I do not find the bid bond form as stated in Article 10.02.

- The bid bond form is attached to this addendum.

Q2 - Is the intention for the site cuts and fills to balance, no offsite disposal?

- The site cuts and fills between the existing conditions to the interim grading plan are intended to balance for each site. The earthwork between the interim and final grading plans requires imported fill. At the Former Hettling Site, onsite borrow is available as fill to be used at that site.

Q3 - Can all trees and stumps be ground up and left on site?

- Trees and stumps may be ground up and spread on site in a uniform layer not to exceed three inches. Ground trees and stumps should not exceed three inches in any dimension.

Q4 - The specs call for the topsoil to have 15% organic content, that is quite high, can it be lowered?

- The bidders should base their bid on achieving the stated 15% organic content.

Q5 - The interim grading for all 3 sites. Do we assume all the required fill is on-site. Imported fill is not included?

- Refer to the response to Q2, above.

Q6 - Regarding the Type I, II, III, IV cap layers. Do we assume that we import all the select fill, general fill, topsoil, crushed stone from off-site?

- Refer to the response to Q2, above.

Q7 - The Groundwater/Contaminated Stormwater Collection and Treatment: This project is all fill and grading. What is this item for? What water are we treating? Is there a specific treatment standard? Where is the discharge at all 3 sites?

- If groundwater or contaminated stormwater is encountered (e.g., collected water that is in contact with contaminated media or decontamination water) during construction, as part of the SPCC, it must be treated to applicable standards before discharging or properly disposed offsite. Discharge locations should be identified by the Subcontractor as part of the SPCC and may change during construction to accommodate the site grading.

Q8 - We assume the disposal items are if directed by Engineer in case hazardous materials are encountered?

- The Subcontractor is responsible for disposal of hazardous materials encountered during construction, as directed by Arcadis. This is addressed as FHS-UP-19, FSS-UP-17, and SFD-UP-17, but does not include disposal of soil. These items will be used in the event that such materials are encountered during the work.

Q9 - What is the difference between Item UP-9 T&D Contaminated Soil as Hazardous Waste and UP-19 Excavation, T&D of Hazardous Materials for all 3 sites?

- Bid items for "Load, Transport and Dispose of Contaminated Soil as Hazardous Waste" are for the off-site disposal of contaminated soil (as directed by Arcadis) and Bid items for "Excavation, Transport and Disposal of Hazardous Materials" are for non-soil hazardous wastes (as directed by Arcadis).

Q10 - Is the area north of the access road type II cover out to the silt fence?

- At the Former Hettling Site, the area north of the access is completed with Type II Engineered Cover.

Q11 - Regarding the hazardous waste T&D unit price items. What hazardous classification or characteristics should we assume pricing is based on?

- For bidding purposes, it should be assumed that hazardous soil is contaminated with lead, arsenic and chromium up to concentrations (as determined by TCLP analysis) which is 200 percent of the regulatory limit for determining whether soil is a characteristic hazardous waste. For bidding purposes, the non-soil hazardous wastes shall be assumed to be solid debris containing non-friable ACM.

Q12 - Regarding the Furnish and Install Soil Amendment. The measurement and payment refers to supplying topsoil. Is this item the supply and installation of topsoil for the various engineered cap details? What is the amendment referring to?

- These items refer to the Bidder providing supplemental organic materials to achieve the necessary organic content of the specifications.

Q13 - Post excavation limit sampling is referenced in the measurement and payment. Where and when is this testing performed? Is the contractor delayed from backfilling by this test? Is the Engineer performing this testing?

- For bidding purposes, this sampling shall be assumed to be conducted by Arcadis and will have a 72 hour turn-around-time (TAT) between completion of any excavation and approval to backfill. In the event that this is necessary during the work, adjustments to schedule beyond this will be addressed through the project change order process.

Q14 - Is the type I cover on the stockpile in the back of the site?

- Yes. All soil areas receive an engineered cover unless otherwise noted.

Q15 - Does the type 1 cover get seed and mulch? If not, then neither the Scolite or Schuyler heights sites have no soil amendments or seed and mulching.

- Yes, Type I Engineered Covers receive seed and mulch.

Q16 - Each site has 60 days for H&S and SWPPP bid items. Is the entire contract duration 180 work days?

- No. Each site has been provided an estimated 60 days for bidding purposes. The payment is for actual days worked and will be adjusted accordingly during the contract period.

Q17 - Do you complete one site and move on to the next? Which site is started first?

- The contractor may work sequentially or in parallel, but is cautioned about coordinating the work at the Former Scolite Site to prevent contamination of the newly constructed Engineered Cover System by subsequent building demolition. Preference is to begin work at the Former Hettling Site first.

Q18 - When would the project start?

- The anticipated start of field construction work will be December 2015.

Q19 - Is a Health and Safety Officer (HSO) required to be on-site (each site) full-time? The measurement and payment for the health and safety plan refers to no payment for this item when no work occurs in the exclusion zone. Is the whole site considered an exclusion zone? If not, and a full-time HSO is required, how will the contractor be paid for the HSO who is on-site when not working in the exclusion zone?

- The HSO is required when work in the exclusion zone is being performed. The subcontractor shall be responsible for categorization and designation of zones of the work and for all changes to those zones as the work progresses.

Q20 - Is the whole site considered an exclusion zone?

- No, clean areas such as the borrow area, staging and stockpile areas, or cleaned concrete slabs are not considered as being within the exclusion zone. If work is being performed within these areas, an HSO is not required. It is the responsibility of the subcontractor to develop the overall SSHAP, including designation and management of zones in accordance with the Contract Documents.

Q21 - Perimeter air monitoring is mentioned. Are perimeter air monitoring stations required at each site? How many stations per site? Are we perimeter air monitoring for dust only?

- Yes. The bidder is required to submit a Community Air Monitoring Program as part of the SSHASP, which should include the proposed air monitoring station locations. The SSHASP and CAMP must be approved by NYSDEC prior to commencing ground-intrusive activities.

Q22 - Article 10 of the Information for Bidders – Bid Security. 10.01 indicates the bid shall be accompanied by a Bid Security in the amount of 100% of Bidder's maximum bid price. Please confirm this is accurate as bid securities are typically required in an amount of 5% or 10% of the bid price. Article 10.02, bid bond shall be on the form bound in the project manual. A bid bond form cannot be located in the documents, please provide.

- A 100% bid security is required. Please see response to Q1 regarding the bid bond form.

Q23 - Article 15.06 Preparation of Bid, 15.06, B. states Bidder's Qualification Statement to be submitted with the bid. We do not see this in the bid documents, please provide.

- The Bidder's Qualification Statement is not required for this Project and this requirement has been waived.

Q24 - Top of the bid form states the entire project manual shall be returned with the bid. Please confirm you want the complete NY Works Project Manual printed and submitted.

- The entire Project Manual does not need to be printed and submitted. Electronic submittal of the completed bid forms and other required documents is acceptable.

Q25 - Section 9 of the Subcontract Agreement, Insurance, refers to the attached Insurance Rider. We do not see this in the manual. Please provide so we may forward to our agent for review.

- Disregard the reference to the Insurance Rider and use the Insurance requirements contained in Section 9.

Q26 - Does the disposal of Tree stumps/root balls need to be disposed of at an approved landfill?

- Refer to the response to Q3, above.

Q27 - Also, the Bid Form for Item FSS-LS-7 says "Contaminated Soil Excavation". The corresponding measurement and payment description reads Interim Grading. Please revise the Bid Form.

- The bid form has been revised and the revised bid form is attached to this addendum.

Q28 - Is Arcadis the contractor and the bidders for this work the subcontractors?

- Generally, yes. Arcadis is identified as the contractor in the Agreement between Arcadis and NYSDEC. The intent of the subcontract agreement is that the responsibilities generally assigned to the bidders will be referenced as those of the subcontractor. Specific instances of uncertainty should be brought to the Attention of Arcadis for clarification.

Q29 - What is the contract time?

- The contract time is established by the milestone schedule (Section 60.4 of the subcontract agreement) and is 375 days from the notice to proceed.

Q30 - Is there a winter shutdown?

- A winter shutdown is not included in the current schedule. However, depending on the weather, the Subcontractor, Arcadis and NYSDEC will discuss if a winter shutdown is necessary and the schedule will be adjusted accordingly.

Q31 - Are there liquidated, actual, special and/or consequential damages?

- Yes. Liquidated Damages are identified in Section 60.5 of the Subcontract Agreement.

Q32 - Who is responsible for field compaction testing?

- The subcontractor is responsible for all field compaction testing.

Q33 - Who is responsible for the 1/500 cy of NYS ELAP chemical testing for all the imported fill?

- The subcontractor is responsible for all testing to demonstrate that the imported materials attain the specified chemical characteristics.

Q34 - Is topsoil stripped and reused onsite? How thick should the subcontractors assume stripping?

- At the Former Heling Site, topsoil located in the designated borrow area may be reused on site. However, topsoil in contaminated areas shall not be reused. The topsoil in the designated borrow area at the Former Hettling Site has not been quantified. Top soil in other areas that are being regraded does not have to be segregated during grading.

Q35 - Section 31 23 05-16, 3.13 – Disposal of Excavated Materials: refers to the contractor disposing at his cost, excess materials, such as fill topsoil, etc... How can the contractors quantify this? Can you add a unit price bid item per Ton to dispose of excess, clean site soils?

- It is the intent of the Project that excess excavated soils will be spread on site as the preferred method of disposal. Soils Identified by ARCADIS as being required to be disposed of off-site are covered under Items FHS-UP-9, FSS-UP-9, and SFD-UP-9.

Q36 - Does the Engineer require an office trailer at each site?

- An office trailer specific for Arcadis' use is not required. However, at a minimum, a designated desk in the Subcontractor's office trailer shall be provided.

Q37 - Please clarify section 38.1.1 of the subcontract. Is the retainage, held per monthly payment application the subcontractor submits, 10% ?

- Yes, subject to the limitations set forth in that section.

Q38 - How many days after the payment application is approved, is the subcontractor (bidder) paid?

- The subcontract is paid within 30 days after payment is received from the NYSDEC.

Q39 - Is a NY PE required to prepare the SPCC and SWPP plans?

- A New York State Professional Engineer is required to prepare or oversee the preparation of and review the SPCC and SWPP plans.

Q40 - Does a NY PE need to prepare the monthly reports for the SWPPP?

- A New York State Professional Engineer is not required to prepare the monthly reports for the SWPPP, however it is encouraged.

Q41 - Are security guards required at the sites?

- Security guards are not required; however the subcontractor is responsible for providing for security for the work, including their equipment and materials.

Q42 - Is temporary fencing required at the sites?

- Temporary fencing is not required, however the subcontractor is responsible for security and health and safety during the work.

Q43 - Is any demolition required at the sites?

- No demolition is included as part of this Project. Demolition at the Former Scolite Site will be performed by the City of Troy. T

Q44 - The geotextile section refers to (2.1) separation fabric and (2.2) Subgrade fabric. The details on the drawings refer to separation fabric, but the fabric is placed on subgrade based on these same details. Please confirm you want the separation fabric?

- Subgrade fabric shall be used only with Type IV Engineered Covers. Revised Drawing C-14 is attached.

Q45 - Is chain link fencing installed at all 3 sites?

- No, the chain link fencing is only shown as installed at the Former Scolite Site, around the existing steam engine. No additional chain link fencing is shown on the drawings.

Q46 - Regarding the former Hettling Site Borrow Area: How is this area restored?

- The area should be uniformly graded to provide positive drainage towards the existing swale without low areas.

Q47 - Regarding the former Hettling Site Borrow Area: Do we import and place topsoil?

- The subcontractor may strip the topsoil from the borrow area for reuse, import topsoil, or amend the soil sufficiently to allow for vegetation growth.

Q48 - Regarding the former Hettling Site Borrow Area: Is separation fabric required in the borrow area?

- No.

Q49 - Can we use sewer sludge compost to make topsoil?

- Compost may be used provided it attains all regulatory requirements and attains the requirements specified for materials to be imported prior to being mixed with other materials (including soil).

END OF ADDENDUM

PRE-BID MEETING SIGN-IN SHEET

Project: Remedial Construction Project

Meeting Date: November 23, 2015

Facilitator: Eric Lanzarotta, PE (ARCADIS of New York, Inc.)

Meeting Place: Future Schuyler FD

David Hiss, PE, BCEE (ARCADIS of New York, Inc.)

Name	Company / Address	Preferred Phone Contact No.	E-Mail
Ian Scott	DAEE 249 Baller Road Wilton, NY 12531	518-444-9855	IScott@DAcollins.com
Karl Wied	MARCY EXCAVATION 2256 BEARD ST FRANKFORD NY	315-724-4062	KWIED@MARCYEXCAVATION.COM
ERIC HAUE	MARCY EXCAVATION 2256 BEARD ST. FRANKFORD, NY 13340	315-868-8703 - CELL 315-724-4062 - OFFICE	EHAE@MARCYEXCAVATION.COM
Paul Baker	Barbelle const services 24 Tannery Somerville NJ 08876	908 534-1664 908 507 3527	MonteFierante@Barbelleconst.com

Name									
Company / Address									
Preferred Phone Contact No.									
E-Mail									

Agenda
Prebid Meeting
Remedial Construction Project
Monday November 23, 2015, 10:00 AM

I – Introductions

- NYSDEC Personnel
- Arcadis Personnel
- Others

II – Prebid & Site Reconnaissance

- Make sure to Sign attendance sheet and provide all requested contact information
- Health and Safety
- Access Restrictions

III – Project Information

- Project/Contract ID
- Contract Documents

- Project Manual
 - Contract Drawings
 - Arcadis HASP
 - Mention Differing Definitions of Contractor, etc.
 - Mention Reference Documents Provided on CD
 - Mention Grading Available in CAD

- General Description of the Work

- Mobilization
 - H&S/CAMP
 - SWPPP
 - Decon / Staging
 - Temporary and Support Facilities
 - Multiple Cover Systems Being Constructed
 - Possible Owner Supplied Material (Clay at Hettling)
 - Possible Conflict (Building at Scolite)
 - Restoration
 - Demobilization
 - Records and Reporting

- Project Schedule

- Prebid Meeting November 23, 2015
 - Cutoff for Questions December 1, 2015 Noon
 - Bid Date December 3, 2015
 - Substantial Completion & Final Completion in CDs

- Other Considerations

- Contractor to Coordinate Work to avoid interference
 - Occupied Homes/Contractor to Coordinate Work to avoid interference
 - Public Roads/Private Utilities/ Contractor to Coordinate Work to avoid interference
 - Access to/from Site to Avoid Sensitive Areas and Population Centers
 - Obtain Dispensation for Non-Standard Work Hours
 - Potential for unknown utilities

IV – Bidding Information

Bidding Documents

Prebid Meeting Attendance – reminder to sign attendance sheet

Addenda Issued to Plan Holders with Meeting Summary, Attendees, Answers to Written Questions

Written Questions Sent or emailed to Address in Project Manual

Bid Forms in Project Manual

Other Bid Forms & Required Documents to be submitted with Bid ID'd in Project Manual

Bid Bond or Security required to be submitted as described in Project Manual

Prevailing Wage Rate Project – Rates on CD

Single-Prime Contract

Bids Submitted to address in Project Manual in proper format

V – Apparent Low Bidder

To be ID'D ASAP

VI – Subcontract/Supplier Provisions

Represented by Subcontractor (Bidding Firm)

VII – Reminder to sign attendance sheet

VIII – Questions and Answers

IX – Site Reconnaissance

(This Bid Form shall not be detached from the Project Manual. The entire Project Manual shall be returned with the executed Bid.)

BID FORM

FORMER HETTLING FARM SITE, FORMER SCOLITE SITE, PROPOSED SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE

REMEDIAL CONSTRUCTION PROJECT

TABLE OF ARTICLES

1. Bid Recipient
2. Bidder's Acknowledgements
3. Bidder's Representations
4. Bidder's Certifications
5. Basis of Bid
6. Time of Completion
7. Attachments to this Bid
8. Defined Terms
9. Bid Submittal

ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:

ARCADIS CE, Inc.
855 Route 146, Suite 210
Clifton Park, NY 12065
Attn: Dave Hiss, P.E., BCEE
David.Hiss@arcadis.com

- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Arcadis in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the price(s) and within the times indicated in this Bid and in accordance with the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in

writing upon request of Arcadis. Bidder will sign the Agreement and will furnish the required contract security, and other required documents within the time periods set forth in the Bidding Documents.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, if any, and the following Addenda, receipt of all of which is hereby acknowledged.

Addendum No.	Date Received	Addendum No.	Date Received
<u>1</u>	<u>12/2/15</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all:

1. reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities), if any, that have been identified in the “technical data”, and
2. reports and drawings of Hazardous Environmental Conditions identified at the Site that have been identified in the “technical data”.

- E. Bidder has considered the information known to Bidder, information commonly known to contractors doing business in the locality of the Site, information and observations obtained from visits to the Site, the Bidding Documents, and the Site-related reports and drawings identified in the Bidding Documents with respect to the effect of such information, observations, and documents on

1. the cost, progress and performance of the Work
2. the means, methods, techniques, sequences and procedures of construction to be employed by Bidder, including applying any specific means, methods, tech-

niques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder; and

3. Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work (if any) to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Arcadis written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Arcadis is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

- A. this Bid is genuine and is not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid
- C. Bidder; has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract. For the purposes of the Paragraph 4.01.D;
 1. "Corrupt practice" means the offering, giving, or soliciting of anything of value likely to influence the action of a public official in the bidding process
 2. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Arcadis or Owner, (b) to

establish bid prices at artificial non-competitive levels, or (c) to deprive Arcadis or Owner of the benefits of free and open competition.

3. "Collusive practice" means to scheme or arrangement between two or more Bidders, with or without the knowledge of Arcadis or Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
4. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work at the Former Hettling Farm Site in accordance with the Contract Documents for the following prices:

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-1 - Provide Temporary Services:

Lump Sum Bid Price of One Hundred Fifteen Thousand, Six Hundred Dollars
(words)
and No Cents (\$ 115,600.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan:

<u>Description</u>	<u>Unit Price</u>	<u>Estimated Quantity</u>	<u>Bid Price</u>
FHS-UP-2	\$ <u>360.00</u> per day (numerals)	60 days	\$ <u>21,600.00</u> (numerals)

Total Bid Price (for 60 days of Bid Item FHS-UP-2) of
Twenty One Thousand Six Hundred Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-3—Implement the Health and Safety Plan:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-3	\$ 330.00 per day (numerals)	60 days	\$ 19,800.00 (numerals)

Total Bid Price (for 60 days of Bid Item FHS-UP-3) of
Nineteen Thousand Eight Hundred Dollars and
(words)
No Cents

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-4 – Mobilization:

Lump Sum Bid Price of Fifteen Thousand Dollars
(words)
and No Cents (\$ 15,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-5 – Demobilization:

Lump Sum Bid Price of Ten Thousand Dollars
(words)
and No Cents (\$ 10,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-6 – Site Clearing and Grubbing:

Lump Sum Bid Price of Nine Thousand Dollars
(words)
and No Cents (\$ 9000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-7 – Interim Grading:

Lump Sum Bid Price of Twenty One Thousand Five Hundred Dollars
(words)
and No Cents (\$ 21,500.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-8 – Additional Contaminated Soil Excavation:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-8	\$ <u>30.00</u> CY (numerals)	200 CY	\$ <u>6000.00</u> (numerals)

Total Bid Price (for 200 cubic yards of Bid Item FHS-UP-8) of
Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-9	\$ <u>220.00</u> Ton (numerals)	300 Ton	\$ <u>66,000.00</u> (numerals)

Total Bid Price (for 300 tons of Bid Item FHS-UP-9) of
Sixty Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-10	\$ 14.00 CY (numerals)	1,000 CY	\$ 14,000.00 (numerals)

Total Bid Price (for 1,000 cubic yards of Bid Item FHS-UP-10) of

Fourteen Thousand Dollars and
(words)

No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-11 – Furnish and Install Type II – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-11	\$ 10.00 CY (numerals)	27,700 CY	\$ 277,000.00 (numerals)

Total Bid Price (for 27,700 cubic yards of Bid Item FHS-UP-11) of

Two Hundred Seventy Seven Thousand Dollars and
(words)

No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-12 – Furnish and Install Type III – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-12	\$ 40.00 CY (numerals)	500 CY	\$ 20,000.00 (numerals)

Total Bid Price (for 500 cubic yards of Bid Item FHS-UP-12) of

Twenty Thousand Dollars and
(words)

No Cents

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover:

Lump Sum Bid Price of Eighty Thousand Dollars
(words)
and No Cents (\$ 80,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-14 – Construction of Access Road:

Lump Sum Bid Price of Twenty Three Thousand Dollars
(words)
and No Cents (\$ 23,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment:

Lump Sum Bid Price of Five Thousand Dollars
(words)
and No Cents (\$ 5000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells:

Lump Sum Bid Price of Thirty Two Hundred Dollars
(words)
and No Cents (\$ 3200.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-17 – Furnish and Install Soil Amendment:

Lump Sum Bid Price of One Hundred Forty Eight Thousand Dollars
(words)
and No Cents (\$ 148,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FHS-LS-18 – Furnish and Install Seed and Mulch:

Lump Sum Bid Price of Eighty Two Thousand Three Hundred Dollars
(words)
and No Cents (\$ 82,300.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-19 – Excavation, Transport and Disposal of Hazardous Materials:

Description	Unit	Price	Estimated Quantity	Bid Price
FHS-UP-19	TON	\$ 190.00 (numerals)	100 TON	\$ <u>19,000.00</u> (numerals)

Total Bid Price (for 100 Tons of Bid Item FHS-UP-19) of
Nineteen Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FHS-UP-20 – Install Provided Clay:

Description	Unit	Price	Estimated Quantity	Bid Price
FHS-UP-20	CY	\$ 30.00 (numerals)	300 CY	\$ <u>9000.00</u> (numerals)

Total Bid Price (for 300 cubic yards of Bid Item FHS-UP-20) of
Nine Thousand Dollars and
(words)
No Cents

Total of Bid Prices FHS-LS-1 through FHS-UP-20:

\$ 965,000.00
(This total is for convenience only and is not an official part of this bid)

Unit prices have been computed in accordance with the Subcontract Agreement.

Bidder acknowledges that estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work items will be based on actual quantities of Unit Price Work, determined as provided in the Contract Documents.

5.02 Bidder will complete the Work at the Former Scolite Site in accordance with the Contract Documents for the following prices:

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-1 - Provide Temporary Services:

Lump Sum Bid Price of Ninety Eight Thousand Nine Hundred Dollars
(words)
and No Cents (\$ 98,900.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan:

Description	Unit Price	Estimated Quantity	Bid Price
FSS-UP-2	\$ 170.00 per day (numerals)	60 days	\$ 10,200.00 (numerals)

Total Bid Price (for 60 Days of Bid Item FSS-UP-2) of
Ten Thousand Two Hundred Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-3–Implement the Health and Safety Plan:

Description	Unit Price	Estimated Quantity	Bid Price
FSS-UP-3	\$ 330.00 per day (numerals)	60 days	\$ 19,800.00 (numerals)

Total Bid Price (for 60 Days of Bid Item FSS-UP-3) of
Nineteen Thousand Eight Hundred Dollars and
(words)
No Cents

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-4 – Mobilization:

Lump Sum Bid Price of Eight Thousand Dollars
(words)
and No Cents (\$ 8000.00).

(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-5 – Demobilization:

Lump Sum Bid Price of Six Thousand Dollars
(words)
and No Cents (\$ 6000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-6 – Site Clearing and Grubbing:

Lump Sum Bid Price of Eight Thousand Dollars
(words)
and No Cents (\$ 8000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-7 – Interim Grading:

Lump Sum Bid Price of Twenty Thousand Dollars
(words)
and No Cents (\$ 20,000.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-8 – Additional Contaminated Soil Excavation:

Description	Unit Price	Estimated Quantity	Bid Price
FSS-UP-8	\$ <u>30.00</u> CY (numerals)	200 CY	\$ <u>6000.00</u> (numerals)

Total Bid Price (for 200 Cubic Yards of Bid Item FSS-UP-8) of
Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste:

Description	Unit Price	Estimated Quantity	Bid Price
FSS-UP-9	\$ 220.00 Ton (numerals)	300 Ton	\$ 66,000.00 (numerals)

Total Bid Price (for 300 Tons of Bid Item FSS-UP-9) of
Sixty Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-10	\$ 30.00 CY (numerals)	200 CY	\$ 6000.00 (numerals)

Total Bid Price (for 200 Cubic Yards of Bid Item FSS-UP-10) of
Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-11 – Furnish and Install Type III – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
FHS-UP-11	\$ 33.00 CY (numerals)	5,400 CY	\$ 178,200.00 (numerals)

Total Bid Price (for 5,400 Cubic Yards of Bid Item FSS-UP-11) of
One Hundred Seventy Eight Thousand Dollars and
(words)
No Cents Two Hundred

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-12 – Construction of Access Road:

Lump Sum Bid Price of Sixty Seven Hundred Dollars
(words)
and No Cents (\$ 6700.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment:

Lump Sum Bid Price of Five Thousand Dollars
(words)
and No Cents (\$ 5000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells:

Lump Sum Bid Price of Eight Hundred Dollars
(words)
and No Cents (\$ 800.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-15 – Furnish and Install Soil Amendment:

Lump Sum Bid Price of Twenty Five Hundred Dollars
(words)
and No Cents (\$ 2500.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item FSS-LS-16 – Furnish and Install Seed and Mulch:

Lump Sum Bid Price of Nine Hundred Dollars
(words)
and No Cents (\$ 900.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item FSS-UP-17 – Excavation, Transport and Disposal of Hazardous Materials:

	Unit	Estimated	Bid
Description	Price	Quantity	Price
FSS-UP-17	\$ 190.00 TON (numerals)	100 TON	\$ 19,000.00 (numerals)

Total Bid Price (for 100 Tons of Bid Item FSS-UP-17) of
Nineteen Thousand Dollars and
 (words)
No Cents

Total of Bid Prices FSS-UP-1 through FSS-UP-17:

\$ 462,000.00

(This total is for convenience only and is not an official part of this bid)

Unit prices have been computed in accordance with the Subcontract Agreement.

Bidder acknowledges that estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work items will be based on actual quantities of Unit Price Work, determined as provided in the Contract Documents.

5.03 Bidder will complete the Work at the Proposed Schuyler Heights Fire District Station House Site in accordance with the Contract Documents for the following prices:

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-1 - Provide Temporary Services:

Lump Sum Bid Price of Ninety One Thousand Three Hundred Dollars
(words)
and No Cents (\$ 91,300.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-2	\$ <u>170.00</u> per day (numerals)	60 days	\$ <u>10,200.00</u> .00 (numerals)

Total Bid Price (for 60 Days of Bid Item SFD-UP-2) of
Ten Thousand Two Hundred Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-3–Implement the Health and Safety Plan:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-3	\$ <u>330.00</u> per day (numerals)	60 days	\$ <u>19,800.00</u> .00 (numerals)

Total Bid Price (for 60 Days of Bid Item SFD-UP-3) of
Nineteen Thousand Eight Hundred Dollars and
(words)
No Cents

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-4 – Mobilization:

Lump Sum Bid Price of Eight Thousand Dollars
(words)
and No Cents (\$ 8000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-5 – Demobilization:

Lump Sum Bid Price of Six Thousand Dollars
(words)
and No Cents (\$ 6000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-6 – Site Clearing and Grubbing:

Lump Sum Bid Price of Thirty Five Thousand Dollars
(words)
and No Cents (\$ 35,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-7 – Interim Grading:

Lump Sum Bid Price of Forty Thousand Dollars
(words)
and No Cents (\$ 40,000.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-8 – Additional Contaminated Soil Excavation:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-8	\$ <u>30.00</u> CY (numerals)	200 CY	\$ <u>6000.00</u> (numerals)

Total Bid Price (for 200 Cubic Yards of Bid Item SFD-UP-2) of
Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-9	\$ 220.00 Ton (numerals)	300 Ton	\$ 66,000.00 (numerals)

Total Bid Price (for 300 Tons of Bid Item SFD-UP-9) of
Sixty Six Thousand Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-10 – Furnish and Install Type I – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-10	\$ 18.00 CY (numerals)	8,900 CY	\$ 160,200.00 (numerals)

Total Bid Price (for 8,900 Cubic Yards of Bid Item SFD-UP-10) of
One Hundred Sixty Thousand Two Hundred Dollars and
(words)
No Cents

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-11 – Furnish and Install Type III – Engineered Cover:

Description	Unit Price	Estimated Quantity	Bid Price
SFD-UP-11	\$ 34.00 CY (numerals)	1,200 CY	\$ 40,800.00 (numerals)

Total Bid Price (for 1,200 Cubic Yards of Bid Item SFD-UP-11) of
Forty Thousand Eight Hundred Dollars and
(words)
No Cents

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-12 – Construction of Access Road:

Lump Sum Bid Price of Seven Thousand Dollars
(words)
and No Cents (\$ 7000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment:

Lump Sum Bid Price of Five Thousand Dollars
(words)
and No Cents (\$ 5000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-14 – Modification of Existing Groundwater Monitoring Wells:

Lump Sum Bid Price of Thirty Two Hundred Dollars
(words)
and No Cents (\$ 3200.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-15 – Furnish and Install Soil Amendment:

Lump Sum Bid Price of Eighty Five Thousand Dollars
(words)
and No Cents (\$ 85,000.00).
(numerals)

Lump Sum Item (Amount to be shown in both words and numerals.):

Item SFD-LS-16 – Furnish and Install Seed and Mulch:

Lump Sum Bid Price of Seventeen Thousand Five Hundred Dollars
(words)
and No Cents (\$ 17,500.00).
(numerals)

Unit Price Item (Amount to be shown in both words and numerals.):

Item SFD-UP-17 – Excavation, Transport and Disposal of Hazardous Materials:

Description	Unit	Estimated Quantity	Bid Price
SFD-UP-17	TON	100 TON	
	Price		Price
	\$ 190.00		\$ 19,000.00
	(numerals)		(numerals)

Total Bid Price (for 100 Tons of Bid Item SFD-UP-17) of
Nineteen Thousand Dollars and
(words)
No Cents

Total of Bid Prices SFD-UP-1 through SFD-UP-17:

\$ 620,000.00

(This total is for convenience only and is not an official part of this bid)

Total of Bid Prices FHS-UP-1 through FHS-UP-20; FSS-UP-1 through FSS-UP-17; and SFD-UP-1 through SFD-UP-17

\$ 2,047,000.00

(This total is for convenience only and is not an official part of this bid)

Unit prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work items will be based on actual quantities of Unit Price Work, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and completed and ready for final payment in accordance with the Subcontract Agreement on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated and special damages in the event of failure to complete the Work within the Contract Times.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of this Bid:
- A. Required Bid Security.
 - B. Required Bidder Qualifications Statement with supporting data.
 - C. A tabulation of Subcontractors, Suppliers, and other individuals and entities required to be identified in this Bid.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders and the Subcontract Agreement.

ARTICLE 9 – BID SUBMITTAL

- 9.01 This Bid submitted on December 9, 2015 by: **James H. Maloy, Inc.**

If Bidder is:

An Individual

Name (Typed or Printed): _____

By _____
(Individual's Signature)

Doing business as _____

License or Registration Number: _____

Business Address: _____

Phone No.: _____ Fax No: _____

E-mail Address: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of General Partner - Attach evidence of authority to sign)

(Name (Typed or Printed): _____

License or Registration Number: _____

Business Address: _____

Phone No.: _____ Fax No: _____

E-mail Address: _____

A Corporation

Corporation Name: **James H. Maloy, Inc.** _____

New York _____
(State of Incorporation)

By _____
(Signature - Attach evidence of authority to sign)

Name and Title (Typed or Printed): **Peter J. Maloy, Executive Vice President** _____

Attest: _____
(Secretary)

License or Registration Number: _____

(CORPORATE
SEAL)

Business Address: PO Box 11016, 421 Albany Shaker Road

Loudonville, NY 12211

Phone No.: 518-438-7881 Fax No: 518-438-7884

E-mail Address: pmaloy@jhmaoy.com

Limited Liability Company

By: _____

(Firm Name)

(State of Formation)

By: _____

(Signature of Member/Authorized to Sign)

(Printed or Typed Name and Title of Member Authorized to Sign)

(Attach evidence of authority to sign.)

License or Registration Number: _____

Business Address: _____

Phone No.: _____ Fax No: _____

E-mail Address: _____

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____

By: _____

(Signature of First Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed): _____

(Title)

Title: _____

Second Joint Venturer Name: _____

By: _____
(Signature of Second Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed): _____
(Title)

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation or limited liability company that is a party to the joint venture shall be in the manner indicated above).

Business Address: _____

Phone and fax numbers and address for receipt of communications to joint venture:

Joint Venture Address: _____

Phone No.: _____ Fax No: _____

E-mail Address: _____

+ + END OF BID FORM + +

BID BOND

Any singular reference to Bidder, Surety, Arcadis or other party shall be considered plural where applicable.

BIDDER *(Name and Address):*

SURETY *(Name and Address of Principal Place of Business):*

Arcadis *(Name and Address):*

BID

Bid Due Date:

Description *(Project Name and Include Location):*

BOND

Bond Number:

Date *(Not later than Bid due date):*

Penal sum

(Words)

\$

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER**SURETY**

Bidder's Name and Corporate Seal

(Seal)

Surety's Name and Corporate Seal

(Seal)

By:

Signature

Print Name

Title

Attest:

Signature

Title

By:

Signature (Attach Power of Attorney)

Print Name

Title

Attest:

Signature

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Arcadis) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Arcadis accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Arcadis) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Arcadis, or
 - 3.3 Arcadis fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Arcadis, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Arcadis and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

BID BOND

Any singular reference to Bidder, Surety, Arcadis or other party shall be considered plural where applicable.

BIDDER (Name and Address):

James H. Maloy, Inc.

P.O. Box 11016

Albany, New York 12211

SURETY (Name and Address of Principal Place of Business):

Liberty Mutual Insurance Company

175 Berkeley Street

Boston, Massachusetts 02117

Arcadis (Name and Address):

ARCADIS CE, Inc.

855 Route 146

Clifton Park, New York 12065

BID

Bid Due Date: **December 9th, 2015**

Description (Project Name and Include Location):

**Remedial Construction Project, Former Hettling Farm Site,
Site Number E411015, Town of Clermont, Columbia County, NY,
Former Scolite, Site Number E442037, Troy, Rensselaer County, NY
& Proposed Schuyler Heights Fire District Station House Site,
Site Number E401050, Town of Colonie, Albany County, NY,
Contract Number D007618**

BOND

Bond Number: **N/A**

Date (Not later than Bid due date): **December 9th, 2015**

Penal sum One Hundred Percent of Attached Bid

(Words)

\$ (100%)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

James H. Maloy, Inc.

Bidder's Name and Corporate Seal

By:

Signature

Peter J. Maloy

Print Name

Executive Vice President

Title

Attest:

Signature

John E. Maloy, Jr., Secretary

Title

SURETY

Liberty Mutual Insurance Company

Surety's Name and Corporate Seal

By:

Signature (Attach Power of Attorney)

Timothy M. Tyrrell

Print Name

Attorney-in-Fact

Title

Witness:

~~XXXXXX~~

Signature

K. Ritchie

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

PENAL SUM FORM

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Arcadis) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Arcadis accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Arcadis) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Arcadis, or
 - 3.3 Arcadis fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Arcadis, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Arcadis and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**Liberty Mutual Insurance Company
Boston, MA 02117**

**ATTORNEY-IN-FACT JUSTIFICATION
PRINCIPAL'S ACKNOWLEDGMENT - IF A CORPORATION**

State of New York,
County of Albany} ^{ss.}

On this 9th day of December, 2015, before me personally appeared Peter J. Maloy, to me known, who, being by me duly sworn, deposes and says: That he/she resides in Loudonville, New York; that he/she is the Executive Vice President of James H. Maloy, Inc., the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.




Rensselaer County
Comm. Exp. 01/04/2018

SURETY COMPANY'S ACKNOWLEDGMENT

State of New York,
County of Albany} ^{ss.}

On this 9th day of December, 2015, before me personally appeared Timothy M. Tyrrell; to me known, who, being by me duly sworn, did depose and say: That he/she resides in Albany, New York; that he/she is Attorney-in-Fact of Liberty Mutual Insurance Company, the corporation described in and which executed the within instrument; that he/she knows the corporate seal of said Company; that the seal affixed to said instrument is such corporate seal; and that he/she signed said instrument as Attorney-in-Fact by authority of the Board of Directors of said Company; and affiant did further depose and say that the Superintendent of Insurance of the State of New York has, pursuant to Chapter 882 of the Laws of the State of New York for the year 1939, constituting chapter 28 of the Consolidating Laws of the State of New York as the Insurance Law as amended, issued to Liberty Mutual Insurance Company his/her certificate that said Company is qualified to become and be accepted as surety or guarantor on all bonds, undertakings, recognizances, guaranties, and other obligations required or permitted by law; and that such certificate has not been revoked.



Rensselaer County
Comm. Exp. 01/04/2018



LIBERTY MUTUAL INSURANCE COMPANY
FINANCIAL STATEMENT — DECEMBER 31, 2014

Assets		Liabilities	
Cash and Bank Deposits	\$744,221,142	Unearned Premiums	\$6,288,178,795
*Bonds — U.S Government	1,718,117,704	Reserve for Claims and Claims Expense	16,879,324,618
*Other Bonds	11,205,872,087	Funds Held Under Reinsurance Treaties	211,983,009
*Stocks	9,533,437,819	Reserve for Dividends to Policyholders	1,246,547
Real Estate	277,742,849	Additional Statutory Reserve	40,877,587
Agents' Balances or Uncollected Premiums	4,150,041,316	Reserve for Commissions, Taxes and	
Accrued Interest and Rents	129,261,358	Other Liabilities	2,664,248,124
Other Admitted Assets	<u>14,896,464,393</u>	Total	\$26,085,858,680
Total Admitted Assets	<u>\$42,655,158,668</u>	Special Surplus Funds	\$53,954,363
		Capital Stock	10,000,000
		Paid in Surplus	8,829,117,542
		Unassigned Surplus	7,676,228,083
		Surplus to Policyholders	<u>16,569,299,988</u>
		Total Liabilities and Surplus	<u>\$42,655,158,668</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2014, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2015.

TAMikolajewski

Assistant Secretary

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 7010651

American Fire and Casualty Company
The Ohio Casualty Insurance Company

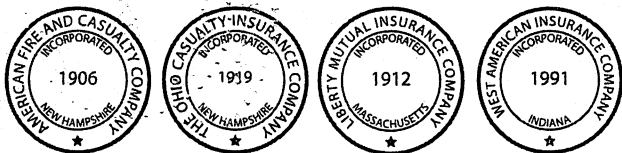
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Charles C. Leach; David Bauer; Eric J. Canterbury; Jaymie P. Columbus; John Zimmermann; Patrick J. Clyne; Robert Crandall; Sherri J. Gray; Timothy M. Tyrrell

all of the city of Albany, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 5th day of June, 2015.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 5th day of June, 2015, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

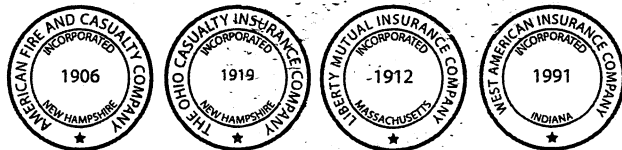
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 9th day of December, 20 15.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

JAMES H. MALOY, INC.

Contractors



P.O. Box 11016
Loudonville, N.Y. 12211-0016
Phone (518) 438-7881
Fax: (518) 438-7884

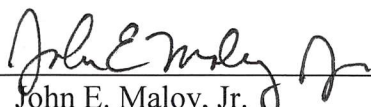
CERTIFIED COPY OF RESOLUTION OF BOARD OF DIRECTORS OF JAMES H. MALOY, INC.

“Resolved that Peter J. Maloy, Executive Vice President of James H. Maloy, Inc. be authorized to sign and submit the Bid of this Corporation for the following project:

SARATOGA COUNTY SUPERSTRUCTURE REPLACEMENT OF COUNTY ROAD 12 (LAKE DESOLATION ROAD) OVER KAYADEROSSERAS CREEK TOWN OF GREENFIELD, NEW YORK

and to include in such bid the certificate as to non-collusion, and for any inaccuracies or misstatements in such certificate this corporate Bidder shall be liable under the penalties of perjury.”

The foregoing is a true and correct copy of the Resolution adopted by James H. Maloy, Inc. at a meeting of its Board of Directors held on the 15th day of December 2015.

By: 
John E. Maloy, Jr.
Title: Secretary



SUBCONTRACT AGREEMENT

(for construction)

THIS IS A CONSTRUCTION SUBCONTRACT ("Subcontract") effective as of February 9, 2016, by and between ARCADIS CE., Inc. ("Consultant", "Design-Builder" and "ARCADIS"), ARCADIS CE, Inc., 855 Route 146, Suite 210, Clifton Park, NY 12065, and James H. Maloy, Inc., P.O. Box 11016, Albany, New York 12211, ("SUBCONTRACTOR").

Prime Contract: ARCADIS has entered into a contract ("Prime Contract") with the State of New York Department of Environmental Conservation (NYSDEC), 625 Broadway, Albany, NY 12233 ("DEPARTMENT" or "Owner"), dated August 2010, for services that include construction of a remedial Construction Project ("Project"), located at the locations shown in the Construction Documents ("Site"). The Prime Contract requires the ARCADIS to perform and furnish construction labor, materials, equipment, and services in connection with the Project described therein. A copy of Prime Contract (excluding compensation and other confidential information) is incorporated in this Subcontract by reference.

ARCADIS retains Subcontractor to perform a portion of the Project construction at the Site, for General and Remediation Construction and as more specifically indicated in the Subcontract's Contract Documents. Consultant and Subcontractor further agree as follows:

LISTING OF ARTICLES IN THIS SUBCONTRACT

Defined Terms

Witnesseth

1. Subcontractor to Comply with Contract Documents
2. Duties of Subcontractor
3. Design Delegation
4. Shop Drawings; Electronic Documents
5. Specifications Varied by Laws
6. Measurements Varied by Job Conditions
7. Decisions as to Quality/Performance/Progress
8. Indemnity
9. Insurance
10. Signs
11. Field Office and Storage
12. Condition of Site and Adjacent Property
13. Access to the Work; Observation; Inspection; Uncovering Concealed Work
14. Materials and Equipment
15. Labor
16. Safety
17. Protection of Work, Materials, and Equipment
18. Unsound, Defective, or Non-Conforming Work
19. Fitting of this Work with Other Work
20. Rubbish Removal
21. Compliance with Law
22. Liens
23. Patents
24. Assignment
25. Assignment of Purchase Contract(s)
26. Cooperation with Other Subcontractors
27. Schedule Disruption
28. Termination for Subcontractor Default
29. Termination for Convenience
30. Performance Bond and Payment Bond; Subguard

31. Bankruptcy
32. Acceleration of Performance
33. No Waiver
34. Subcontractor's General Warranty and Guarantee, and Correction Period
35. Payroll and Sales Taxes
36. Contract Price not Adjusted for Rising Costs
37. Schedule of Values
38. Progress Payments
39. Withholding of Payment; Satisfaction of Claims
40. Substantial Completion; Final Inspection; Final Payment
41. Trust Funds
42. Changes and Extras
43. Cash Allowances
44. Claims
45. No Delay by Subcontractor
46. Scheduling
47. Notices
48. Rights and Remedies; Dispute Resolution
49. No Oral Modifications
50. Saving Clause; Severability
51. Equal Opportunity Clause
52. Affirmative Action
53. Exculpation of Partners
54. Headings
55. Hazardous Environmental Condition
56. Labor and Materials to be Furnished by Subcontractor
57. Availability of Labor and Material
58. Prime Contract
59. Third Party Beneficiaries; Effectiveness of this Subcontract
60. Contract Times
61. Contract Price
62. Contract Documents
63. Subcontractor's Representations
64. Inspection and Audit
65. Emergencies
66. Hazard Communication Program
67. Survival
68. Drafting of Subcontract
69. Miscellaneous
- Execution by the Parties

DEFINED TERMS

As used herein:

- (i) **"ARCADIS"** shall mean ARCADIS CE, Inc.
- (ii) **"Consultant"** shall also mean ARCADIS.
- (iii) **"Construction Contract"** shall also mean Construction Subcontract.
- (iv) **"Contract"** shall also mean Construction Subcontract.
- (v) **"Contract Documents"** shall have the meaning specified in Article 62, below.
- (vi) **"Department"** shall mean the York State Department of Environmental Conservation

(NYSDEC).

(vii) **"Design-Builder"** shall also mean ARCADIS.

(viii) **"Drawings"** shall mean the graphic and pictorial portions of the Contract Documents showing the scope, extent and character of the Work, and generally including plans, elevations, sections, details, schedules and diagrams.

(vii) **"Indemnitees"** shall mean:

ARCADIS, the Owner, and their respective parent companies, corporations, members and partnerships and their owned, controlled, affiliated, associated and subsidiary companies, corporations, members, and partnerships and the respective agents, consultants, contractors and subcontractors, principals, partners, members, servants, officers, stockholders, directors and employees of each, and any other persons or entities that Consultant or Subcontractor are required to indemnify pursuant to the Prime Contract.

(x) **"Others"** shall mean entities entering into subcontracts with the Subcontractor.

(xi) **"Owner"** shall mean the New York State Department of Environmental Conservation (NYSDEC) or the "Department"

(xii) **"Prime Contract"** shall have the meaning specified in Article 58, below.

(xiii) **"Project"** shall mean the total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

(xiv) **"Site"** shall mean lands or areas within the delineated Contract Limits, shown on the Drawings within which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Consultant.

(xv) **"Site Owner"** shall mean the legal entity responsible for the lands or areas which the Work is to be performed, including rights-of-way and easements, and such other lands furnished which are designated for the use of Owner, ARCADIS, and Subcontractor.

(xvi) **"Specifications"** shall mean that portion of the Contract Documents consisting of written descriptions of and requirements for equipment, materials, systems, standards, and workmanship for the Work, and performance of related services.

(xvii) **"State"** shall mean the State of New York.

(xviii) **"Subcontractor"** shall mean the selected, responsible bidder who successfully contracts with ARCADIS and who shall provide for the Project all the labor, supervision and materials hereinafter set forth in accordance with the Contract Documents, including Specifications and as shown on Drawings and other Contract Documents prepared by or for Consultant.

(xix) **"Work"** shall mean the entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents, as well as all any other activities related or applicable thereto, associated therewith or arising therefrom.

Other defined terms are indicated in the Articles of this Subcontract.

WITNESSETH:

WHEREAS, Owner has undertaken the Project on the Site in accordance with the drawings and specifications prepared by the Consultant; and

WHEREAS, Owner has retained Consultant to deliver the Project; and

WHEREAS, Consultant desires to award, and the Subcontractor desires to perform, the Work, as further specified in the Subcontract Contract Documents; and

WHEREAS, Subcontractor desires to perform such certain portion of the Project,

NOW, THEREFORE, Consultant and Subcontractor agree as follows:

1. SUBCONTRACTOR TO COMPLY WITH CONTRACT DOCUMENTS

Subcontractor shall provide for the Project all the labor, supervision and materials hereinafter set forth in accordance with the Contract Documents, including Specifications and as shown on Drawings and other Contract Documents prepared by or for Consultant, which Specifications and Drawings are to be returned to Consultant upon the completion of the Work, including obligations required of Consultant pursuant to the Prime Contract (as defined in Article 58), and the Subcontractor hereby assumes all such obligations. Subcontractor further acknowledges all obligations, terms, and conditions imposed upon or assumed by Consultant under the Prime Contract pursuant to the Work included in the Subcontract, and agrees to conduct itself, satisfy its obligations, and in all other ways perform its Work to enable Consultant to satisfy its obligations and responsibilities to Owner under the Prime Contract. Such additional Drawings and Specifications as may be necessary to explain and detail the Work as may be furnished by Consultant, if any, shall be complied with by Subcontractor, except where inconsistent with original Drawings and Specifications. The Contract Documents are complementary and what is called for in one is the same as if required in all of the Contract Documents. The Drawings and the Specifications are intended to supplement one another, and any Work or materials shown, mentioned or reasonably implied in or inferred from one and not in the others shall be provided by Subcontractor without extra charge to Consultant. Enumeration of particular items in this Subcontract or in the other Contract Documents (as defined in Article 62) shall not be construed to exclude other items. The intention of the Contract Documents is to include all labor, materials, engineering, equipment, transportation, tools, plant, appliances, appurtenances and other facilities, whether specified herein or not, necessary for the proper execution and completion of the Work. Subcontractor must refer any question respecting the Drawings or Specifications, or both, about which it is in doubt, or which seems to admit of a dual interpretation, to Consultant for Consultant's referral of the question to Owner or Consultant (as determined by Consultant) for interpretation or decision, to which Subcontractor shall abide. Decision of Owner or Consultant as to the meaning, intent or contents of the Contract Documents shall be final, binding and conclusive and Subcontractor must proceed with said decision so as not to delay, slow down, or impede progress of the Project in any way. This Subcontract includes, and Subcontractor shall perform, all work commonly performed by the trade(s) included in the Subcontract, whether or not shown on the Drawings or in Specifications in detail. Subcontractor is familiar and experienced with this type of work, has inspected the Contract Documents, and has represented to Consultant that the Contract Documents are complete and contain all of the information necessary for Subcontractor to perform its Work. Subcontractor shall not receive any additional compensation by reason of alleged incompleteness of the Contract Documents, or lack of coordination amongst the Contract Documents, or inconsistencies amongst the Contract Documents. Should there be any conflict or inconsistency in or among the Contract Documents, including the Prime Contract the Consultant shall have the right to resolve such conflict as it may elect, in its exclusive discretion (which determination shall be binding upon Subcontractor, with Consultant having the right to the most-costly or burdensome alternative, without an increase in the Contract Price).

In no event shall Consultant be liable to Subcontractor, either in tort or otherwise, for costs or damages, whether asserted directly against Consultant or by way of indemnification in whole or part, resulting from

any act, direction, supervision, instruction or coordination furnished to Subcontractor by Consultant or failure to furnish same, which directly or indirectly affects the performance of Subcontractor, unless Subcontractor, before complying therewith to its damage, or in the case of failure to act, within five (5) days after such omission has occurred, objects in writing to Consultant to said act or omission and notifies it in writing that same will result in monetary costs or damages to Subcontractor. Failure by Subcontractor to furnish said notice of objection in writing as required herein shall constitute an irrevocable waiver and release of all claims for damages against Consultant, changes in time of performance, or other relief from the terms of the Subcontract arising therefrom, or any combination thereof. Consultant shall not have liability for anything other than payment of the Contract Price.

2. DUTIES OF SUBCONTRACTOR

Subcontractor recognizes the relationship of trust and confidence established between it and Consultant by this Subcontract. Subcontractor covenants and agrees with Consultant to furnish its best skill and judgment and to cooperate with Consultant in furthering the best interests of Consultant as determined by Consultant. Subcontractor agrees to keep all documents, drawings and all forms of communications with Consultant and others involved in the Project confidential, except as necessary for completion of the Work or as required by law. If the Subcontractor concludes that it is required to disclose such confidential information under compulsion of law, it shall give sufficient notice to Consultant such that Consultant is afforded a reasonable opportunity to seek a protective order before Subcontractor discloses such information. Consultant shall have the right to exercise complete supervision and control over the Work to be done by Subcontractor, but such supervision and control shall not in any way limit the obligation of Subcontractor to perform in conformity with the Subcontract and other Contract Documents, nor shall it relieve Subcontractor from responsibility for its acts, errors or omissions in connection with such Work, including Subcontractor's sole liability for means, methods, procedures, sequences, and techniques of construction. The names of any and all lower-tier subcontractors or suppliers shall be submitted in writing to Consultant, and no lower-tier subcontractor or supplier shall be employed by Subcontractor unless acceptable to Consultant. Each lower-tier subcontractor and supplier shall be bound by all Contract Documents to the same extent and with the same effect as if the lower-tier subcontractor or supplier were the Subcontractor. Subcontractor shall cause lower-tier subcontractors and suppliers to comply with all the Contract Documents. Subcontractor shall be responsible for all acts, work, material and equipment of its employees, lower-tier subcontractors and suppliers, all persons either directly or indirectly employed by each of them, and anyone for whose acts any of them may be liable.

3. DESIGN DELEGATION

Whenever the Contract Documents specifically require the Subcontractor to perform, as part of its Work, design, engineering, or other professional services or certifications of any kind, Subcontractor shall cause such services or certifications to be performed by a properly-licensed, registered design professional (who unless otherwise explicitly accepted by Consultant shall be licensed and registered in the jurisdiction(s) where the Project is located), whose signature and seal shall appear on all drawings, calculations, specifications, certifications, shop drawings, and other submittals prepared by such professional. Consultant shall be entitled to rely upon the adequacy, accuracy, and completeness of such services. Subcontractor shall furnish a certificate of insurance from each design professional certifying to professional liability insurance coverage for such design profession in an amount as required by the Contract Documents. Such coverage shall remain and be maintained in full force and effect through the date of Substantial Completion and thereafter for a period of (i) three (3) years after the completion date of this Subcontract or (ii) three (3) months following the expiration of any applicable statute of repose, whichever is longer.

Subcontractor shall defend, indemnify and hold Consultant harmless from all claims, damages, and losses, including reasonable fees of attorneys and design professionals, arising out of or related to errors or omissions in design, or to any claim for infringement or misappropriation of any other entity's intellectual property arising out of such design, in addition to any other claims for which indemnification is required hereunder.

4. SHOP DRAWINGS; ELECTRONIC DOCUMENTS

4.1 Shop Drawings

4.1.1 Within ten (10) days from the effective date of this Subcontract, unless further time is granted by

Consultant. Subcontractor shall, at its own cost and expense, furnish Consultant with a submittal schedule of all shop drawings, product data, samples, schedules, reports, diagrams, layouts, setting plans, cuts, explanations, certifications, qualifications, quality control data, reports of suppliers' representatives visiting the Site, and other submittals regarded by Consultant as necessary, in the form and quantity required by Consultant, for approval, correction, rejection or disapproval. Consultant's approval of such submittals shall not relieve Subcontractor from responsibility for deviations from the Contract Documents, including, without limitation, the Drawings and Specifications, or both, unless it has, in writing, called Consultant's attention to such deviations, at the time of delivery of such submittal to Consultant and received Consultant's written approval, nor shall it relieve Subcontractor from responsibility for errors and omissions. Such written notice of deviation shall be indicated within each submittal and via separate, written communication to Consultant (such as submittal letter of transmittal). Subcontractor shall make corrections required by Consultant, file with Consultant for submittal to Consultant corrected copies and furnish such other copies as required. Subcontractor shall make all submittals directly to Consultant. Subcontractor shall obtain submittals from Consultant's other subcontractors and coordinate its Work to avoid interference with Consultant's other subcontractors' work, and others working at the Site. Subcontractor shall furnish its submittals to Consultant's other subcontractors, and others working at the Site, as required by Consultant if Consultant regards such submittals as necessary for the Project.

4.1.2 Before submitting each submittal, Subcontractor shall have:

1. reviewed and coordinated the submittal with other submittals and with the requirements of the Work and the Contract Documents;
2. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
3. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
4. determined and verified all information relative to Subcontractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

4.1.3 Each submittal shall bear a stamp or specific written certification that Subcontractor has satisfied Subcontractor's obligations under the Contract Documents with respect to Subcontractor's review of that submittal, and that Subcontractor approves the submittal.

4.1.4 Consultant's Review:

1. Consultant will provide timely review of submittals in accordance with the schedule of submittals acceptable to Consultant. Consultant's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Consultant's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Consultant's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Consultant's review and approval of a submittal shall not relieve Subcontractor from responsibility for any variation from the requirements of the Contract Documents unless

Subcontractor has complied with the requirements of Article 4.1 and Consultant has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the submittal. Consultant will document any such approved variation from the requirements of the Contract Documents in a field order.

5. Consultant's review and approval of a submittal shall not relieve Subcontractor from responsibility for complying with the requirements of Article 4.1.2.
6. Consultant's review and approval of a submittal, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Consultant's receipt, review, acceptance, or approval of a submittal shall result in such item becoming a Contract Document.
8. Consultant shall perform the Work in compliance with the requirements and commitments set forth in approved submittals, subject to the provisions of Article 4.1.4.4.

4.1.5 Resubmittal Procedures:

1. Subcontractor shall make corrections required by Consultant and shall return the required number of corrected copies of submittals and submit, as required, new samples for review and approval. Subcontractor shall direct specific attention in writing to revisions other than the corrections called for by Consultant on previous submittals.
2. Subcontractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than two (2) submittals. Consultant will record Consultant's time for reviewing a third or subsequent submittal of a submittal requiring approval, and Subcontractor shall be responsible for Consultant's charges for such time. Consultant may impose a set-off against payments due to Subcontractor to secure reimbursement for such charges.
3. If Subcontractor requests a change of a previously approved submittal item, Subcontractor shall be responsible for Consultant's charges for its review time, and Consultant may impose a set-off against payments due to Subcontractor to secure reimbursement for such charges.

4.2 Use of Electronic Files

As a convenience to Subcontractor, the Consultant may provide electronic files, including drawings, specifications, and other documents, in electronic format to assist Subcontractor in preparing shop drawings and other submittals required for the Work and for preparing as-built or record drawings. If so provided, such electronic files shall be used only as a supplement to previously issued paper Contract Documents. The furnishing of electronic files does not relieve Subcontractor of its obligation to fully comply with the Contract Documents, including and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate the Work with that of other trades. The use of electronic files may also include use of building information modeling (BIM) software and related technologies. Subcontractor shall participate in the use of BIM for the Project as requested and as may be directed by Consultant, and, in addition, to the full extent as may be required under the Contract Documents. Subcontractor shall fully comply with and is bound by all requirements and terms and conditions of the Contract Documents related to BIM. Use of BIM shall in no event and in no way, however, otherwise alter, change, limit, diminish or excuse Subcontractor's duties and obligations under the Contract Documents.

4.2.1 No License

By providing electronic files, if any, Consultant does not convey any license or right, including copyright, in the original documents, or any right to prepare derivative works.

4.2.2 Indemnity

The use or re-use of electronic files by Subcontractor or on Subcontractor's behalf shall be at

Subcontractor's sole risk and without liability to Consultant. Subcontractor shall indemnify, defend and hold Consultant, Owner, consultants, and employees harmless against all damages, liabilities, losses or expenses arising out of or relating to Subcontractor's use of electronic files furnished through Consultant.

4.2.3 Disclaimer

Unless otherwise provided in the Contract Documents, electronic files furnished pursuant to this Article are not Contract Documents. No representation is made by Consultant as to the accuracy, completeness, or condition of the electronic files that may be furnished pursuant to this Article 4, and differences may exist between such files and the paper Contract Documents due to corruption, viruses, or other anomalies. In the event of a discrepancy, printed or paper copies of the Contract Documents shall govern. Subcontractor accepts responsibility for any and all loss or damage arising from copying, loading or use of such electronic data by Subcontractor and agrees to waive any such claims against Consultant.

4.2.4 Use by Others

If during the course of the Project Subcontractor transfers electronic files furnished pursuant to this Article 4 to a third party, Subcontractor agrees to obtain written confirmation that such third party agrees to the terms and conditions set forth in this Article 4 prior to transfer thereof and as a condition of their use.

5. SPECIFICATIONS VARIED BY LAWS

Subcontractor shall furnish, without extra charge, all work and materials not mentioned or shown, but generally included under this class of contract, necessary for the proper execution and completion of the Work, and also work or materials of the kind herein contracted for, or required to conform the Work to applicable laws, rules, regulations, ordinances, permits, and orders of authorities having jurisdiction (collectively, "Laws and Regulations").

6. MEASUREMENTS VARIED BY JOB CONDITIONS

Dimensions on the Drawings are to be followed in preference to measurements scaled from the Drawings, and all measurements must be checked at the Site by Subcontractor before the Work is executed. No change in the contract price or contract times shall be made for changes necessitated by variations in the actual condition of the Site from what is shown on the Drawings. Subcontractor represents that it has examined the Site, noted and ascertained the construction, materials, work, existing conditions at the Site and the nature and location of the Work. All work affected or governed thereby or required for the thorough and satisfactory completion of its Work, whether indicated and specified or not, and regardless of quantity estimated, shall constitute part of this Subcontract and shall be performed by Subcontractor without change in the contract price or contract times. As to conditions that were not constructed at the time of Subcontractor's execution of this Subcontract, Subcontractor shall conduct a diligent review of all such conditions prior to performance of the associated Work that may be affected thereby. Subcontractor shall provide Consultant with written notice of variations in the actual condition of the Site from that to be expected pursuant to the Contract Documents before proceeding with the Work affected thereby and promptly upon conclusion of such diligent review. Subcontractor's failure to provide timely written notice of such variations, or Subcontractor's failure to discover variations that with the exercise of appropriate care it should have discovered, shall be construed as its acceptance of the Site conditions, its agreement that there are no substantive variations between the actual Site conditions and the Site conditions identified in the Contract Documents, and shall preclude Subcontractor from extension of time or adjustment in the Contract Price related thereto.

7. DECISIONS AS TO QUALITY/PERFORMANCE/PROGRESS

Consultant shall decide all questions which may arise as to the performance, quantity, quality, acceptability, fitness and rate of progress of the Work or materials furnished under this Subcontract, which decisions shall be final and binding. Subcontractor agrees and acknowledges that Consultant has the right, in its sole discretion, to make revisions, changes, adjustments, and sequencing alterations to the Project schedule from time to time as necessary and Subcontractor expressly agrees and acknowledges that Subcontractor shall be bound to, and abide by, such revisions, changes, adjustments, and sequencing alterations to the Project schedule, and that Subcontractor will adjust and conform its Work accordingly, at its cost, to meet all times of performance (including contract times for completion and interim milestones, if any) on the Subcontract as set forth in the Contract Documents. Upon notice from Consultant, the Subcontractor agrees to commence, proceed with and complete the Work promptly

and diligently under the direction of Consultant, in compliance with all job schedules of Consultant as the same may be amended from time to time. Under this Subcontract, time is of the essence relative to compliance with the times of performance (including all contract times) indicated in the Contract Documents. No extension of time will be valid without Consultant's written consent. Subcontractor may be held liable for damages, costs, losses and expenses resulting directly or consequentially from its failure to comply with required times of performance.

8. INDEMNITY

To the fullest extent permitted by laws and regulations, Subcontractor shall indemnify, defend, and hold harmless Owner, Consultant, such other Indemnitees as indicated herein, and their respective parent companies, corporations, members, limited liability companies and partnerships and their owned, controlled, associated, affiliated and subsidiary companies, corporations, members, limited liability companies, and partnerships, and the respective agents, consultants, subcontractors, principals, members, partners, servants, officers, stockholders, directors and employees thereof, from and against all claims or causes of action, damages, losses and expenses, including but not limited to fees of attorneys and other professionals including engineers, architects, and accountants, and legal and settlement costs and expenses (collectively, "Claims"), arising out of or resulting from the acts or omissions of Subcontractor or anyone for whose acts Subcontractor may be liable in connection with the Contract Documents, the performance of, or failure to perform, the Work, or Subcontractor's operations, including performance of the obligations set forth in this Article. To the fullest extent permitted by laws and regulations, Subcontractor's duty to indemnify the Indemnitees shall arise whether or not caused in part by the active or passive negligence or other fault of any of the Indemnitees, provided, however, that Subcontractor's duty hereunder shall not arise to the extent that such claim, damages, loss or expense was caused by the sole negligence of the Indemnitees or an Indemnatee. Subcontractor acknowledges that specific consideration has been received by it for this indemnification and that same shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefit payable by or for Subcontractor or any lower-tier subcontractor or delegates under Workers Compensation acts or other employee benefits acts. As used in this Article, "Subcontractor" shall mean Subcontractor and its representatives, employees, servants, agents, lower-tier subcontractors, consultants, delegates, and suppliers. Subcontractor acknowledges that it will participate in and be bound by judicial, administrative or legislative proceedings wherein Subcontractor's participation and presence are demanded or summoned by Consultant, provided that said proceedings involve a common question of law or fact, or indemnification.

9. INSURANCE

Prior to commencement of the Work under this Subcontract, and until all the Work is complete and accepted as final, and at all times thereafter as required by the Contract Documents, Subcontractor and each of Subcontractor's lower-tier subcontractors shall, at its own expense, maintain the insurance coverage and limits of liability stated in the attached Insurance Rider. In the event of a conflict between the Insurance Rider and this Subcontract, the provision that imposes the greater obligation on Subcontractor shall apply. Such insurance shall include:

- (a) Commercial General Liability insurance, including, without limitation, products and completed operations and containing no "X", "C", or "U" exclusions if excavation or demolition is to be performed;
- (b) Statutory Worker's Compensation and Disability Insurance;
- (c) Business Automobile Liability insurance;
- (d) Professional Liability insurance when the Subcontract includes performing of professional services by Subcontractor or a consultant retained by Subcontractor or a lower-tier subcontractor or supplier; and
- (e) Pollution Liability Insurance.

All such coverage shall have limits of no less than Five Million US Dollars (\$5,000,000) per occurrence (which may be satisfied in part by umbrella insurance in following form) shall be provided and maintained by insurance companies complying with the qualifications requirements of the Insurance Rider, and shall be in a form acceptable to Consultant. Subcontractor shall, upon request, provide complete copies of all

such insurance policies, including all endorsements thereto to Consultant.

Subcontractor shall deliver to Consultant certificates of insurance and endorsements satisfactory to Consultant evidencing Subcontractor's procurement of all required insurance within three (3) days of execution of this Subcontract (unless Consultant allows more time in writing), and prior to the commencement of work at the Site.

Subcontractor agrees to name Consultant, Owner and their affiliates, directors, officers, employees, and agents as additional insured as their interests may apply on all policies as required by this Article 9 and the attached Insurance Rider (with the exception of the Workers' Compensation, Employer's Liability, and any Professional Liability Policy). Subcontractor shall provide copies of such endorsements.

In addition, Subcontractor shall provide all other insurance required by Consultant or Owner and specified in the Contract Documents.

Subcontractor hereby, on behalf of itself and its insurance carriers, successors, assignees, lower-tier subcontractors, suppliers and consultants, waives and relinquishes any and all rights of subrogation arising in any way from or related to this Subcontract or the Project, including but not limited to claims against Owner, Consultant, the Consultant's consultants, separate Subcontractors, and any of their lower-tier subcontractors, agents and employees. Subcontractor shall require of Subcontractor's lower-tier subcontractors, agents and employees, by appropriate written agreements, similar waivers in favor of the parties indicated in this paragraph. Policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation provided hereunder shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

Any coverage provided Consultant by Subcontractor's insurance under this Subcontract is primary insurance and shall not be considered contributory insurance with any insurance policies of Consultant, its members, subsidiaries, and affiliated companies.

10. SIGNS

Subcontractor shall not place signs, billboards, or posters on any portion of the Site, any building on the Site (referred to herein as "Building"), the property or fences (temporary or permanent) surrounding the same, except upon prior written permission received from Consultant, and then only of a size, material, color and type and at a location approved by Consultant.

11. FIELD OFFICE AND STORAGE

If so required by Consultant, the Subcontractor shall, at its own cost, provide, erect and maintain, at locations designated by Consultant, field office and storage as specified for supporting site construction activities, site meetings, storage materials and equipment, and as necessary for Subcontractor's employees. Subcontractor shall relocate its field office and storage as requested by Consultant at Subcontractor's own cost. Owner and Consultant will not be responsible for clothing, tools, materials or equipment lost, damaged, stolen or destroyed.

12. CONDITION OF SITE AND ADJACENT PROPERTY

Subcontractor shall examine all premises and buildings adjoining or in close proximity to the Site (including, for the purposes hereof, streets and sidewalks) and ascertain before beginning Work, the depth of cellars, materials and construction of the buildings thereon, and shall be governed thereby for the necessary thorough, safe, and satisfactory execution of the Work, whether or not shown or indicated on the Drawings or in the Specifications or other Contract Documents, and all work and protective measures necessary to keep and leave such premises and buildings in the same condition as they were before commencing Work shall be done without any addition to the Contract Price or the contract times. Wherever any parts of the present adjoining buildings interfere with or are interfered with by the Work, the Subcontractor shall make whatever changes are made necessary thereby or which are necessary to timely and properly complete the Work in an orderly manner, whether or not shown or indicated in the Contract Documents, at no additional cost. Subcontractor, before commencing work on such premises

shall make a written report of the conditions as found at that time, noting particularly any defects in evidence or conditions that will impact the Work, obtaining dated photographic documentation of the exteriors, and, if necessary, dated photographs of interiors, and shall deliver to the Consultant a copy of the written report of the examination and of all photographs. The Subcontractor shall invite the Consultant and the owners of the adjoining properties, buildings, and structures to be present during such examination. If Subcontractor fails to make the examination and report as required, or fails to discover defects (if any) in evidence or conditions that will impact the Work, which with the exercise of appropriate care it should have discovered, it will be deemed that said buildings, structures, and premises are in good condition, and all claims for damages, repairs and replacements must be treated by Subcontractor as though said buildings and properties were in good condition before it began work.

13. ACCESS TO THE WORK; OBSERVATION; INSPECTION; UNCOVERING CONCEALED WORK

Subcontractor shall provide sufficient, proper, and safe facilities at all times for the observation of the Work by Owner, Consultant, Owner's lenders, authorities having jurisdiction, and the authorized representatives of each. Such entities shall not be required to, for benefit of Subcontractor, perform continuous observations or inspections of the Work. Subcontractor shall be responsible for continuously inspecting the Work and providing the quality required by the Contract Documents. If the Work is covered up without the approval of Consultant, it must, if required by Consultant, be uncovered for observation or inspection at Subcontractor's expense. Subcontractor shall repair or replace any non-conforming or otherwise defective work uncovered and re-cover at Subcontractor's expense." Subcontractor shall afford and provide at all times to Consultant, and their representatives satisfactory evidence of the quality of materials used, complete information in writing as to where materials and equipment to be used in the performance of the Work are being manufactured or assembled, and full and free access to shops and manufacturer's facilities for the purpose of informing themselves as to the general condition and progress of the materials and equipment herein contracted to be used or installed. Subcontractor shall instruct such suppliers to give full and accurate information in writing directly to Consultant on questions concerning quality, performance, delivery status, and such other data as may be requested by Consultant. Nothing set forth herein shall limit or excuse Subcontractor's obligation to provide materials, equipment, labor and services in accordance with the Contract Documents.

14. MATERIALS AND EQUIPMENT

Materials and equipment to be incorporated into the Work shall be new and of the best quality of the kind specified unless use of lesser quality material or equipment is expressly required by the Contract Documents, and Subcontractor shall, if required by Consultant, furnish satisfactory evidence of the kind and quality of materials and equipment in addition to shop drawings and other submittals required by the Contract Documents. Subcontractor shall, if required by Consultant, obtain manufacturers' written recommendation identifying the use intended and stating that the material and equipment is designed and appropriate for the use intended. Such materials and equipment shall not be subject to any conditional bill of sale, security agreement, financing statement, chattel mortgage, or other claim, lien or encumbrance. Materials and equipment shall be promptly delivered and distributed where Consultant may require or direct, as needed for the uninterrupted, orderly and speedy progress and completion of the Work, and so as not to encumber the Site unreasonably. Subcontractor shall, if required by Consultant, cause the materials and equipment, (1) to be manufactured in advance; (2) to be warehoused either at the factory or elsewhere, as directed by Consultant, and Consultant shall be provided with a bill of sale in connection with same and the materials and equipment shall be marked by Subcontractor as required by Consultant and segregated from materials and equipment unrelated to the Project; (3) to be delivered to the Site promptly when so instructed by Consultant or as otherwise required if not expressly required by Consultant on a specific date; and (4) to be relocated or removed from the Site at the cost of Subcontractor. Care shall be exercised by Subcontractor against overloading floors, roofs, scaffolding, structures, and other installations. Materials and equipment delivered to the Site which are to form a part of the Work shall not be removed without the written consent of Consultant, but Subcontractor will have the right to and shall remove all its surplus materials and equipment after completion of the Work.

15. LABOR

The Work shall be performed in the best manner and by competent, experienced workers skilled in the type of work to be performed. All labor employed under this Subcontract shall, at the option of Consultant, to the extent permitted by laws and regulations, be union or recognized by and in harmony

with the local Building Trades Employers' Association or equivalent and Subcontractor shall not employ any labor which may cause dissension with other workers on the Site, by whomsoever employed. Subcontractor shall promptly, and without cost to Consultant, resolve all labor disagreements and disputes at the Site relating to its Work, including lockouts. Subcontractor shall be liable to Consultant for all additional costs and expenses incurred by Consultant as a result of lockout attributable to Subcontractor. Subcontractor shall give the Work constant attention and supervision through a responsible representative ("superintendent") at the Site, and necessary assistants. Such superintendent shall be authorized to act for Subcontractor in all matters relating to the Work, and all directions given to the superintendent shall be as binding as if given to Subcontractor. Subcontractor shall also keep a competent foreman at the Site while work is in progress, and enforce discipline among its employees and lower-tier subcontractors, including requiring compliance with Owner's and Consultant's regulations with regard to fires, smoking, safety and other hazards.

Consultant is given the right to require Subcontractor to remove immediately any employee, lower-tier subcontractor or agent of Subcontractor or any of Subcontractor's lower-tier subcontractors employed at the Site whom Consultant deems incompetent or a hindrance to the proper progress of the Work, and such person shall not again be employed in the Work without the prior written consent of Consultant. Removal of any of Subcontractor's employees, lower-tier subcontractors or agents shall not excuse its obligation to timely and properly complete its Work. The Subcontractor warrants, represents and agrees that it will not assign any individual to perform Work under this Subcontract who is an unauthorized alien under the Immigration Reform and Control Act of 1986 or its implementing regulations. In the event an employee of Subcontractor working under this Subcontract is discovered to be an unauthorized alien, Subcontractor will immediately remove such individual from the Project and replace that individual with one who complies with the Contract Documents. Subcontractor shall acquire, assess and maintain I-9 forms for all its employees and those of its lower-tier subcontractors. Consultant's exercise of its rights under this Article 15 shall not, in any way, create an obligation for Consultant to Subcontractor, and shall not create an obligation of Consultant to monitor or check competency and immigration status of Subcontractor's, lower-tier subcontractors', suppliers', or consultants' employees.

16. SAFETY

At any time when Subcontractor, its employees, lower-tier subcontractors, suppliers or anyone for whom Subcontractor is responsible physically is present at the Site, they promptly shall comply with applicable terms and conditions of the Subcontractor's Health and Safety Plan, which may be amended from time to time. Subcontractor shall be responsible for compliance with safety, health, and environmental Laws and Regulations and all other Legal Requirements. Subcontractor acknowledges that all such Laws and Regulations and Legal Requirements are a minimum standard, and that Subcontractor shall take such additional and other actions as are required and as otherwise are necessary and prudent. Subcontractor shall be solely responsible for the health, safety and welfare of its employees, agents and others with regard to the Subcontractor's Work, and further for establishing and enforcing additional requirements that may be necessary to protect affected property or its employees and any other person entering the site for purposes relating to Subcontractor's work. Subcontractor shall strictly comply with applicable laws pertaining work place safety including, without limitation, the Occupational Safety and Health Act of 1970 (84 U.S. Statutes 1590, as amended, and regulations there under to the extent applicable and shall abide all health and safety plans, rules or guidance which may be provided by the Owner and the Consultant. To comply with its requirements, Subcontractor represents that its Health and Safety Plan for its Work shall include the Subcontractor's compliance (including compliance by Subcontractor's employees, officers, agents, representatives, invitees, and sub-subcontractors) with the Owner's and Consultant's Health and Safety Plans (the "HASP"), together with any further amendments to such plan particular to the Subcontractor's Work and the Site deemed necessary and appropriate by the Subcontractor. Subcontractor agrees and understands that Consultant claims no responsibility for the use of the HASP and Consultant does not represent that the HASP is sufficient to address the Work or Site conditions of the Subcontractor. Subcontractor shall not hold Consultant responsible for any claims arising from the Subcontractor's use of the HASP and agrees to indemnify, defend and hold harmless Consultant from any claims for personal injury or property damages arising from or related to the compliance with, utilization or application, or any alleged deficiencies of the HASP. Nothing herein, including the use by Subcontractor of the HASP or acknowledgment of the Subcontractor's Health and Safety and Plan shall create any duty, obligation, liability, or responsibility of Consultant for any act or failure to act in respect to

any safety provision of the HASP and Subcontractor shall remain solely responsible for the health and safety of Subcontractor, its employees or any person entering the Subcontractor's Work Site. Subcontractor shall be responsible for the proper disposal of any hazardous materials or wastes generated by it in the course of the performance of the Work and exacerbation of any pre-existing hazardous materials or wastes.

If hazardous substances, of a type of use of which an employer is required by law to notify its employees, are being used or to be used on the site of the Project by the Subcontractor, the Subcontractor's lower-tier subcontractors or anyone directly or indirectly employed by them, Subcontractor shall, prior to use of such substance by any employees at the Site, give written notice of the chemical composition thereof to Subcontractor in sufficient detail and time to permit compliance with such Laws and Regulations by Subcontractor, lower-tier subcontractors and other employers at the Site. Subcontractor acknowledges that all costs regarding its compliance with this provision are included within the Contract Price. Subcontractor shall designate a responsible member of its organization at the Site whose duties shall include, without limitation, the prevention of accidents, enforcement of Laws and Regulations and Legal Requirements, and compliance with the Subcontractor's Health and Safety Plan.

17. PROTECTION OF WORK, MATERIALS, AND EQUIPMENT

Subcontractor during the construction of its Work and while it is working at the Site, and until completion of the Project, shall protect its Work and its material and equipment, all adjacent property and all tools, plants, equipment and other appliances for Subcontractor's use or incidental thereto for the execution of the Work, whether furnished by Subcontractor or Consultant, from precipitation, water, humidity, heat, cold, wind, dust, and the elements and from all other kinds of damage which may be caused in any manner whatsoever, and Subcontractor shall be entirely responsible for loss or damage done to said Work, materials, equipment, tools, plant, and other appliances, except to the extent covered by applicable property insurance furnished for the Project, less deductible amounts which will be paid by Subcontractor. Subcontractor hereby agrees that it will not hold the Indemnitees responsible for such loss or damage.

18. UNSOUND, DEFECTIVE, OR NON-CONFORMING WORK

Subcontractor, upon receiving notice from Consultant that Subcontractor has furnished (i) inferior, improper, defective, non-conforming, or unsound elements of the Work, materials, or equipment; or (ii) elements of the Work, including materials or equipment, not in strict compliance with the requirements of the Contract Documents, will, within 24 hours (unless longer time is granted by Consultant), proceed to remove such Work, materials, and equipment, and provide Work (including materials and equipment) that complies with the Contract Documents. Removal, replacement and repair, the cost of which shall be paid by Subcontractor, shall be performed during "off hours" or overtime with manpower sufficient, in the judgment of Consultant, so as not to interrupt or delay the Project schedule and so as to avoid disturbance to occupants of completed elements of the Project. If Subcontractor does not communicate its intention in writing to Consultant to remedy such unsound, defective, or non-conforming Work within 24 hours of notice from Consultant (unless Consultant grants additional time for such remedy), and commences the remedy as soon as practicable thereafter (but not later than three (3) days), Consultant may remedy the unsound, defective, or non-conforming Work and may store the material or equipment, all at the expense of Subcontractor which may be a set-off from payments due Subcontractor (with corresponding reduction in the Contract Price) or otherwise affirmatively recovered from Subcontractor. Consultant may, upon ten (10) days written notice to Subcontractor, sell such removed materials or equipment at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs and expenses that should have been paid by Subcontractor and expenses of the sale. Consultant or Owner shall have the authority at all times, until final completion and acceptance of the Work, to inspect and reject elements of the Work, including materials and equipment, which in its or their judgment do not comply with the Contract Documents, and Consultant's decision in regard to compliance, character and value of the Work shall be final and conclusive on all parties. If Owner and Consultant permit unsound, defective, or non-conforming elements of the Work, including materials or equipment, to remain in place, Consultant shall be allowed the difference in value between the unsound, defective, or non-conforming elements of the Work and Consultant shall, at its election, have the right to have such elements of the Work remedied, as well as damage caused thereby, at the expense of Subcontractor, at any time within one year after completion of the entire Project, or within such longer period as may be covered by any Laws or Regulations, surety bond, or other guaranty. Neither payments made to

Subcontractor, nor other acts of Consultant or Owner, shall be construed as evidence of acceptance of unsound, defective, or non-conforming elements of the Work or waiver or estoppel of rights and remedies allowed to Consultant based on such unsound, defective, or non-conforming elements of the Work. Expense incurred by Consultant in connection with the foregoing, shall be paid by Subcontractor, and Consultant may withhold money due Subcontractor or recover money already paid to Subcontractor, to the extent of such expense.

19. FITTING OF THIS WORK WITH OTHER WORK

Subcontractor will provide all labor, implements, tools, scaffolding, rigging, hoisting and other items required to carry on its Work, in the approved and most up-to-date manner, and shall, as directed by the Consultant in writing, arrange for and pay for the necessary incidental cutting of woodwork, brick, stone, masonry, plaster, cement, iron, metal or other material for the installation of its Work. Subcontractor shall perform patching in connection therewith. Subcontractor shall, if required by Consultant, perform necessary cutting, fitting, and patching of its own Work required to make the several parts come together properly, and fit the Work to receive or be received by work of Consultant's other subcontractors or Owner's other contractors upon, or reasonably implied by, the Contract Documents. Subcontractor shall not endanger the work by cutting, digging or otherwise. In laying out its Work, Subcontractor shall examine the work installed by others and the shop drawings and submittals of the work to be installed by others prior to beginning installation of its own Work. If Subcontractor begins its Work, the starting of such Work shall be conclusively deemed to mean that it accepts all preceding work as suitable and proper to receive its Work, unless it has notified Consultant in writing to the contrary before starting and Consultant has agreed to same in writing. In the event of failure of Subcontractor and another of Consultant's subcontractors or Owner's other contractors to agree as to the extent of cooperation to be exhibited or of work to be performed by either, to ensure the carrying out of their respective agreements, such disagreement shall be resolved by Consultant whose decision shall be final and binding upon all involved entities.

20. RUBBISH REMOVAL

Except as may be otherwise provided in the Contract Documents, Subcontractor shall at all times keep the Site free from accumulation of debris, waste materials, and rubbish caused by its employees or its work and, at the completion of the Work, Subcontractor shall remove all its tools, scaffolding and surplus materials and equipment. Subcontractor shall daily, or less frequently when allowed by Consultant, collect its debris, waste, and rubbish at places where directed by Consultant. All such debris, waste, and rubbish shall be removed from the Site and appropriately disposed of by Subcontractor prior to the associated element of the Work being considered ready for operation, use, or occupancy by Owner.

21. COMPLIANCE WITH LAW

Subcontractor shall procure and pay for all permits for its Work, governmental fees, inspections, licenses, approvals, certificates and authorizations necessary to the prosecution and completion of its Work and deliver evidence of the same to Consultant. All Subcontractor Work shall be done in accordance with Laws and Regulations. Where the Contract Documents conflict with Laws or Regulations, the Law or Regulation shall be complied with by Subcontractor. Subcontractor shall promptly notify Consultant and authorities having jurisdiction when its Work is ready for inspection, occupancy, and beneficial use by Owner, and shall, at once, do everything required to remedy violations and obtain approvals of authorities having jurisdiction without additional cost to Consultant. Subcontractor warrants and represents that (i) Subcontractor has not been declared not responsible by any governmental agency, (ii) Subcontractor has not been disbarred, suspended or otherwise disqualified from bidding, proposing, contracting or subcontracting by any governmental entity, (iii) there are no pending proceedings relating to Subcontractor's responsibility or qualification to be awarded any contract, (iv) neither Subcontractor nor any owner or officer of Subcontractor has been convicted of a felony in any federal, state, or local court by plea or verdict of guilty, (v) neither Subcontractor nor any owner or officer of Subcontractor has pending before any federal or state grand jury or court an indictment or information for the commission of a crime that has not been favorably terminated and (vi) neither Subcontractor nor any owner or officer of Subcontractor is the subject of a pending investigation by a grand jury, commission, committee or other agency or authority of federal or any state or local government in connection with the commission or

alleged commission of a crime.

22. LIENS

If at any time, there shall be evidence of any lien or claim of non-payment by Subcontractor pertaining to elements of the Work for which, if established, Consultant or Owner might become liable, or the Site, Project, or Project finances might be encumbered, or which should, in any event, be charged to the Subcontractor, or should a lien, demand, claim for payment, suit or encumbrance be placed or filed by a person or entity employed by or claiming to be employed by or through Subcontractor, at any tier, Subcontractor shall have such lien, demand, claim for payment, suit or encumbrance satisfied, removed, withdrawn, or legally discharged to Consultant's satisfaction within ten (10) days following notification of Subcontractor either by Consultant or claimant (whichever occurs first), failing which Consultant shall have the right to cause such lien, demand, claim of payment, suit, or encumbrance satisfied, removed, withdrawn, or legally discharged and to retain, out of payments due or thereafter to become due Subcontractor, an amount sufficient to indemnify Owner and Consultant against such lien or claim of payment, including bond premiums and legal fees and costs, and to apply the same in such manner as Consultant deems proper to secure protection and satisfy or legally discharge such claims of payment and liens. Should there prove to be any such lien or claim of payment after all payments are made to Subcontractor, then Subcontractor shall repay Consultant, upon demand, all amounts which Consultant may be compelled to pay in discharging such lien or claim for payment, including any and all legal fees, costs and other charges.

23. PATENTS AND INTELLECTUAL PROPERTY

The Subcontractor will not use or install any copyrighted or patented article contrary to the rights of the copyright or patent holder, and agrees to indemnify and save the Indemnitees harmless from any and all claims and against all damages that the Indemnitees may sustain by reason of the use or installation of such copyrighted or patented item or method, and at its own cost and expense to defend any and all actions, whenever instituted, brought against the Indemnitees or their respective successors or assigns, founded upon the claim that such item or procedure, or part thereof, infringes such copyright or patent except to the extent that such copyrighted or patented item or procedure is required by the Contract Documents. In the event of such claim or damage, Consultant may withhold from payments due or thereafter to become due Subcontractor, amounts sufficient in Consultant's judgment to protect and indemnify the Indemnitees for such claim or damage, or Consultant may require Subcontractor to furnish a surety bond satisfactory to Consultant providing for such protection and indemnity, which bond shall be furnished by Subcontractor at its own cost and expense, within five (5) days after written demand has been made therefor. Subcontractor shall pay all royalties, fees and other claims in connection with copyrighted or patented items and procedures which it uses under this Subcontract. In the event of an injunction or legal action serving to stop the Work, Consultant may, at its option, allow Subcontractor to substitute such other materials or equipment of equivalent kind as will make it possible to proceed with and complete the Work, and all cost and expenses occasioned thereby shall be borne by the Subcontractor.

24. ASSIGNMENT

24.1 Successors and Assigns

The interests, rights, powers, duties and liabilities of the parties hereto shall be binding upon, and shall inure to the benefit of, the respective successors and assignees of the parties; but Subcontractor shall not assign or transfer its interest in this Subcontract or assign or transfer any right it may have under the same or the proceeds payable hereunder or any part hereof, or subcontract or delegate to others the Work or any part thereof, unless the written consent thereto of the Consultant is first procured, and assignment or subcontract made in violation of this provision shall be null and void. Such subcontract shall provide that it is subject to the provisions of this Subcontract and shall provide that Consultant has all the rights and remedies against the lower-tier subcontractor that the Consultant has against the Subcontractor under this Subcontract and shall expressly incorporate all such provisions as far as the same are applicable and no such subcontract shall be valid without the consent of the Consultant endorsed thereon. The Subcontractor agrees that it is as fully responsible to the Consultant for the acts and omissions of its lower-tier subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it. Nothing contained in this Subcontract shall create any contractual relationship between any lower-tier subcontractor and the

Consultant or Owner, or create any obligation on the part of the Consultant or Owner to pay or to see to the payment of any sum to any lower-tier subcontractor. The Subcontractor (and its successors and assigns) hereby assigns to Consultant all of its interest in any subcontracts and purchase orders now existing or hereinafter entered into by the Subcontractor for performance of any part of the Work, which assignment shall be effective upon acceptance by Consultant in writing and only as to those subcontracts and purchase orders which Consultant designates in writing. It is agreed and understood that Consultant may accept said assignment at any time during the course of construction prior to final completion. It is further agreed that all of Subcontractor's subcontracts and purchase orders shall provide that such lower-tier subcontracts and purchase orders are assignable by Subcontractor to Consultant and by Consultant and its assignees without the approval or consent of the lower-tier subcontractor or supplier.

24.2 Consultant's Right to Assign

The Subcontractor acknowledges and agrees that the Consultant shall have the right to assign this Subcontract to any party designated by the Consultant ("Contract Assignee"), and upon and after any such assignment Subcontractor shall render full performance hereof to such Contract Assignee and such Contract Assignee shall succeed to all of the Consultant's rights hereunder and shall perform all of the Consultant's obligations hereunder arising from and after such assignment. Such assignment shall be effective upon the delivery of a notice of such election to Subcontractor. Upon such assignment, Subcontractor shall agree to amendments or modifications to this Subcontract which are reasonably requested by Contract Assignee's Lender, provided that such amendments and modifications do not materially reduce Subcontractor's rights, or materially increase the Subcontractor's obligations, under this Subcontract. Further, upon such assignment, no amendments or modifications hereto, nor any waiver of Contractor's rights hereunder or release of Subcontractor's obligations hereunder, by amendment or change order or otherwise, shall bind or be effective against Consultant or any Contract Assignee except if Consultant shall have consented to the same in writing. Upon an assignment of this Subcontract by Consultant, the Consultant shall be deemed released from any and all liability under this Subcontract provided that Contract Assignee thereunder is acceptable to Subcontractor, in the exercise of its reasonable judgment.

25. PURCHASE CONTRACT(S) – Not Used

26. COOPERATION WITH OTHER SUBCONTRACTORS

During the progress of the Work, other contractors may be engaged in performing other work or may be awarded other contracts for additional work on this project. In that event, the Subcontractor shall coordinate the Work done hereunder with the work of such other contractors and the Subcontractor shall fully cooperate with such other contractors and carefully fit its own work to that provided under other contracts as may be directed by the Consultant. The Subcontractor shall not commit or permit any act which will interfere with performance of work by any other contractors.

The Subcontractor must keep itself informed of the conditions at the Site, so as not to delay the delivery of materials or the installation of the Work called for in this Subcontract. It is expressly agreed that the Subcontractor must cooperate with and extend every possible facility to other Subcontractors employed at the Site, and must afford all other Subcontractors reasonable opportunity for the introduction and storage of their materials and execution of their work. The Subcontractor recognizes that efficient construction of the Project requires that all the Work thereon be coordinated and therefore agrees to accept the determination of the Consultant as to the time when Work of the Subcontractor shall begin and the manner in which it shall progress in connection with other work involved in the said construction. It further agrees that the direction of the Consultant with respect thereto shall be complied with fully and promptly.

If the Consultant shall determine that the Subcontractor is failing to coordinate his work with the work of the other contractors as the Consultant directed, then the Consultant shall have the right to withhold any payments otherwise due hereunder until the Subcontractor completely complies with the Consultant's directions.

The Subcontractor shall give prompt written notice to the Consultant and any other affected contractor(s) whenever the Subcontractor anticipates, a conflict in contract time(s) related to or simultaneous with

associated contract time(s) in the work of others. Within five (5) days thereafter, the Subcontractor shall be required to deliver to the Consultant proposed actions to either prevent an adverse effect on the progress schedule of the other contractors arising from the Subcontractor's delays to the work, or overcome an adverse effect on the progress schedule for the work arising from delays from another contract, all at no additional cost to the Consultant. When the Subcontractor notifies the Consultant in writing that another contractor on this project is failing to coordinate his work with the work of this Contract as directed, the Consultant must promptly investigate the charge. If the Consultant finds it to be true, he must promptly issue such directions to the other contractor with respect thereto as the situation may require. The Consultant shall not, however, be liable for any damages suffered by the Subcontractor by reason of the other contractors failure to promptly comply with direction so issued by the Consultant or by reason of another contractors default in performance, it being understood that the Consultant does not guarantee the responsibility or continued efficiency of any contractor.

The Subcontractor shall indemnify, defend and hold the Consultant harmless from any and all claims or judgments for damages and from costs and expenses to which the Consultant may be subjected or which it may suffer or incur by reason of the Subcontractor's failure to comply with the Consultant's directions promptly and the Consultant may, without limiting any other right or remedy to which he may be entitled, deduct and retain any such sums from any money due hereunder.

Should the Subcontractor sustain any damage through any act or omission of any other contractor having a contract with the Consultant for the performance of work upon the Site or of work which may be necessary to be performed for the proper execution of the work to be performed hereunder, or through any act or omission of a subcontractor of such contract, the Subcontractor shall have no claim against the Consultant for such damage, but nothing herein shall preclude the Subcontractor to recover such damage from the other contractor under the provision similar to the following provisions which have been or will be inserted in the contracts with such other contractors.

Should any other contractor having or who shall hereafter have a contract with the Consultant for the performance of work upon the Site sustain any damage through any act or omission of the Subcontractor hereunder or through any act or omission of any subcontractor of the Subcontractor, the Subcontractor agrees to reimburse such other contractor for all such damages and to defend at his own expense any suit based upon such claim and if any judgment or claims against the Consultant shall be allowed, the Subcontractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and shall indemnify, defend and hold the Consultant harmless from all such claims.

The Consultant's right to indemnification hereunder shall in no way be diminished, waived or discharged by its recourse to assess liquidated damages as provided herein or by the exercise of any other remedy provided for by the Contract or by law.

27. SCHEDULE DISRUPTION

27.1 Schedule Disruption

Should the Subcontractor incur delay, hindrance, interference, acceleration, suspension or other schedule disruption of whatever kind or nature (hereinafter collectively referred to as a "Schedule Disruption"), then Subcontractor shall be entitled only to a time extension for such period of time for which Subcontractor is not responsible either in whole or in part. It is a condition precedent to any request for a time extension that Subcontractor submits sufficient information for Consultant to prepare a critical path analysis which demonstrates the net impact of any schedule impact on the critical path resulting from any schedule disruption affecting Subcontractor to the extent a time extension is requested by Subcontractor. Under no circumstances will Subcontractor be entitled to recover any monies of whatever kind or nature, which arise out of or relate to any Schedule Disruption, it being especially acknowledged by Subcontractor that Schedule Disruptions may occur for any of a myriad of reasons and Subcontractor has agreed to assume the risk thereof and that all costs associated therewith are included in the Contract Price.

27.2 Strikes

Should Subcontractor be delayed by general strikes throughout the trade, then time for the completion of the Work shall, to the extent that Consultant is afforded like relief under the Prime Contract, be extended for a period equivalent to the time lost, or the Consultant shall, at its option, have the right to terminate

this Subcontract and to employ other subcontractors to finish the work and provide the materials and equipment therefor, and to pay the Subcontractor pro rata for the Work already performed in accordance with the Contract Documents, or, alternatively, the Contract Price, reduced by the cost to the Consultant of completing the Work for which provision is made herein, whichever is less.

27.3 Notice of Delay

No cause of delay of the Subcontractor's Work shall be deemed a valid excuse for the Subcontractor's failure to start, perform or complete the Work or deliveries at the times specified, unless the cause of such delay is beyond the Subcontractor's control and arose without its fault or negligence, in whole or in part, and the Subcontractor has notified the Consultant in writing of the alleged cause of delay within three (3) days after the commencement thereof. Within ten (10) days after the inception of the cause or causes of the delay, the Subcontractor shall provide Consultant, in writing, with a detailed explanation of the nature and extent of the delay that identifies the following: (i) the nature of the impact; (ii) the duration of the impact, including the first and last day of the impact, if known; (iii) a critical path method schedule analysis of the impact based upon the Subcontractor's last approved schedule, including a fragnet; (iv) an itemized statement of the time impact, or if Subcontractor does not have information necessary to provide a time impact analysis, a reasonable estimate of the time impact; and (v) all actions taken by Subcontractor to mitigate the delay caused by any such impact. In the event there is any change in the delay, Subcontractor shall submit to Consultant an update of its earlier narrative within twenty (20) days of such material change. Subcontractor's timely satisfaction of all of the requirements set forth herein is a condition precedent to its entitlement to any right or remedy regarding the delay of its Work and its failure to satisfy all said requirements constitutes an express waiver of such entitlement.

It is expressly agreed that delays by Subcontractor's lower-tier subcontractors and suppliers are delays deemed to be within Subcontractor's control.

Subcontractor shall make all claims promptly to the Consultant for extensions of time in accordance with the Contract Documents. A claim by the Subcontractor which will affect or become part of a claim which the Consultant is required to make under the Prime Contract within a specified time period or in a specified manner shall be made by the Subcontractor in sufficient time to permit the Consultant to satisfy the requirements of the Prime Contract, but in any event no later than five (5) working days preceding the time by which the Consultant's claim must be made. Failure of the Subcontractor to make such a claim timely shall bind the Subcontractor to the same consequences as those to which the Consultant is bound. The Subcontractor agrees that it shall not be entitled to any payment or reimbursement for costs, compensation, or damages for any change or alleged Schedule Disruptions, or any adjustment to the Contract Price or Contract Time related to or arising from any change or Schedule Disruptions, except and only to the extent that the Consultant has actually recovered corresponding payment from the Owner under the Contract Documents for such change or alleged Schedule Disruptions, and then, and only then, to the extent of the extension of time and amount, if any, which the Consultant on behalf of the Subcontractor, actually receives from the Owner on account of such change or alleged Schedule Disruptions. The Consultant shall have no obligation to include a claim of Subcontractor for Schedule Disruptions unless payment for Schedule Disruptions is permitted under the Contract Documents.

27.4 Additional Labor

Should the Subcontractor fail, refuse or neglect to supply sufficient, skilled workers, or to deliver the materials or equipment with such promptness as to prevent the delay in the progress of the Work, or fail in any respect to diligently commence and prosecute the Work and proceed to the point to which the Subcontractor should have proceeded hereunder, or if the different parts thereof are not commenced, prosecuted, finished, delivered or installed on time as herein specified or if the Subcontractor shall fail in the performance of any of the covenants of this Subcontract, the Consultant shall have the right to direct Subcontractor, upon three (3) days' written notice, at Subcontractor's cost and expense, to furnish such additional labor and to expedite deliveries of materials (or Consultant may furnish such labor and expedite such deliveries at the cost of Subcontractor), which labor or expediting shall, in the Consultant's opinion, be sufficient to speed up and complete the Work as herein provided.

27.5 Overtime

If Subcontractor is delaying the Work and such additional labor shall not be available, the Consultant shall

have the right to direct Subcontractor, at Subcontractor's own cost and expense, to work overtime or re-sequence the Work to such an extent as will be sufficient, in the Consultant's opinion, to speed up and complete the Work as herein provided. No charges or damages for lost productivity or efficiency shall be permitted, and Subcontractor has anticipated the risk of same in the Contract Price.

27.6 Remedies of Owner and Consultant

Subcontractor agrees that if it delays the timely progress of the Work or otherwise fails, refuses or neglects to perform this Subcontract in accordance with its terms, so as to cause loss or damage to the Consultant or Owner or to other subcontractors, then it shall reimburse the Consultant and such other subcontractors for such loss. Subcontractor's liabilities for any breach of its obligations hereunder, whether or not relating to delay, shall include, but not be limited to (a) damages and other delay costs payable by the Consultant to the Owner, including all or a portion of any liquidated damages assessed by the Owner against the Consultant in proportion to the Subcontractor's share of the responsibility for such delay; (b) the Consultant's increased costs of performance, such as extended general conditions and increased performance costs, resulting from Subcontractor-caused delays or improper Work (plus markup of 15%); (c) warranty and re-work costs (plus markup of 15%); (d) liability to third parties; (e) attorneys' fees and fees of other professionals (including engineers and architects) and related costs incurred by Consultant in proceeding against Subcontractor or its sureties to enforce Consultant's rights as provided in the Contract Documents (including, without limitation, the attorneys' fees, fees of other professionals, and related costs arising from trial, arbitration or appeal, confirmation of such arbitration by the appropriate court, and enforcement of the confirmation or judgments); and (f) costs of compliance, expense and damages, including but not limited to fines and penalties assessed against the Consultant incurred as a result of violations of safety or any other laws rules, codes or relations by the Subcontractor. Subcontractor and its surety, if any, shall, in addition to other liability to the Consultant, be liable to Consultant for all damages caused, directly or indirectly, to Consultant by Subcontractor's default, without regard to cap of liability, or waiver of damages by Owner in favor of Consultant under the Prime Contract. In addition to the foregoing, Consultant shall have the right, after three (3) days' written notice to Subcontractor, if Subcontractor has failed to commence to cure, to provide such labor, additional labor, overtime labor, and materials and equipment, and to deduct the cost thereof from moneys then due or thereafter to become due to Subcontractor. Permission by Consultant for delayed finishing shall not be construed as a waiver of Consultant's right to be compensated by Subcontractor for damage resulting from such delay.

28. TERMINATION FOR SUBCONTRACTOR DEFAULT

If Subcontractor fails to comply with the Contract Documents or if Subcontractor or its officers should be indicted or the subject of a governmental investigation (or if a lower-tier subcontractor of Subcontractor or its officers has been indicted or the subject of a governmental investigation and Subcontractor does not terminate its subcontract with lower-tier subcontractor after instructions from Consultant to do so), Consultant shall have the right after three (3) days' written notice to Subcontractor, to terminate in whole or in part Subcontractor's employment under this Subcontract and to take possession of Subcontractor's tools, materials, plant, equipment and appliances used or to be used for the construction, whether on or off the Site, (and for that purpose to enter the premises of Subcontractor) and to cause the entire remaining Work to be finished and materials and equipment therefor to be furnished by another subcontractor as the Consultant deems fit; and the Subcontractor shall not be entitled to further payment unless and until all the Work specified in the Contract Documents is finished and then accepted by Owner, at which time, if the unpaid balance of the amount to be paid under this Subcontract shall exceed the expense incurred by Consultant in finishing the Work, including overhead, attorneys' fees, fees of professionals such as engineers and architects, and damages incurred through the default of Subcontractor, such excess shall be paid to Subcontractor, but if such expense shall exceed such unpaid balance, Subcontractor shall pay the difference to Consultant. In the event of such termination, Subcontractor shall comply with all directives of Consultant with respect to Subcontractor's activities on the Site, if any are permitted, and Subcontractor shall cooperate fully, as requested by the Consultant, to facilitate the efficient completion of Subcontractor's obligations hereunder. Should Subcontractor continue to perform Work following a termination, and should Consultant be willing to permit Subcontractor to do so, Subcontractor shall be deemed a volunteer with respect to the Work that was the subject of a termination, and Consultant's willingness to permit Subcontractor to continue to perform such Work shall not be deemed a revocation of the termination. After the Work has been completed,

Subcontractor may remove such materials, tools, plant, equipment and appliances as remain, but neither Consultant nor Owner shall be liable for anything that has been lost, stolen, destroyed, worn or used. In addition, without terminating this Subcontract, Consultant may, under the circumstances set forth above, terminate Subcontractor's right to proceed with any part of the Work.

29. TERMINATION FOR CONVENIENCE

Consultant may terminate Subcontractor in whole or in part, including orders placed pursuant to this Subcontract, for convenience without cause at any time, upon three (3) days' written notice to Subcontractor. In the event the Subcontractor is terminated for convenience by Consultant, Consultant will pay the lesser of: (a) actual value of Work (based on approved schedule of values) earned up to the date of termination plus reasonable, actual, documented demobilization costs; or (b) actual costs incurred by Subcontractor together with a reasonable markup for profit in accordance with the Contract Documents. Upon such a termination, Consultant will have no further obligation to Subcontractor nor shall Consultant be obligated to pay for (and Subcontractor hereby waives) any lost profits on Work not performed, lost bond capacity or other type of expenses or damages. If Consultant terminates this Subcontract pursuant to the provision entitled "Termination for Subcontractor Default" and it is ultimately decided by a court of law that Subcontractor has not failed to comply with any of the provisions of this Subcontract or should not have had this Subcontract terminated for default, should not have had this Subcontract terminated for default, whether or not as the result of the Subcontractor or any of its officers being indicted or the subject of a governmental investigation or as a result of failure to terminate its lower-tier subcontractor as the result of the lower-tier subcontractor of Subcontractor or any of its officers having been indicted or the subject of a governmental investigation, such termination shall be treated as a Termination for Convenience pursuant to this Article and Subcontractor shall have no further or additional recourse in connection with such termination.

30. PERFORMANCE BOND AND PAYMENT BOND; SUBGUARD

30.1 When Subcontractor delivers the executed counterparts of the Subcontract to Consultant, Subcontractor shall also deliver to Consultant such bonds as Subcontractor may be required to furnish.

The Subcontractor, shall furnish to the Consultant performance and payment bonds issued by a surety company satisfactory to the Consultant and the Owner, and in form satisfactory to the Consultant and the Owner, guaranteeing the due and prompt performance of all of the terms of this Subcontract on the part of the Subcontractor to be performed, the prompt payment of all amounts to be paid by the Subcontractor for labor and materials. The performance and payment bonds shall name the Consultant and the Owner and the Lender as obligees (together with others to be designated by the Consultant), in penal amounts equal to the Contract Price of this Subcontract, including any amendments thereto.

30.2 Subcontractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Subcontractor's obligations under the Subcontract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in this Subcontract, whichever is later, except as provided otherwise by Laws or Regulations or other specific provisions of the Contract. Subcontractor shall also furnish such other bonds as are required by the Contract Documents.

30.3 All bonds shall be in the form prescribed by the Subcontract except as provided otherwise by Laws or Regulations or as acceptable to Consultant, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

30.4 The bonds shall include language expressly acknowledging that the bonds shall remain in force and effect notwithstanding any assignment, conversion or novation of this Subcontract. The bonds shall expressly incorporate the terms of this Subcontract, and the incorporated Contract Documents, and provide that the surety's obligations and liabilities shall be co-extensive with those of Subcontractor, and

that the surety shall expressly agree to join in, and to be bound by, arbitration or legal action involving Owner and Consultant arising from the Project.

30.5 Subcontractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.

30.6 If the surety on a bond furnished by Subcontractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Subcontractor shall promptly notify Consultant and shall, within twenty (20) days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.

30.7 If Subcontractor has failed to obtain a required bond, Consultant may exclude Subcontractor from the Site and exercise Consultant's termination for Subcontractor Default rights under this Subcontract.

30.8 Upon request, Consultant shall provide a copy of the payment bond to any lower-tier subcontractor, supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

30.9 Should the Project be enrolled in a Subcontractor Default Insurance Program ("Subguard"), Subcontractor shall timely provide the requisite documentation for enrollment into said program and promptly cooperate with the requirements of the Subguard provider. In the event that the Subcontractor fails to furnish the bonds as aforesaid and/or fails to qualify for enrollment in the Subguard program, the Consultant shall have the option of declaring the Subcontractor to be in default and of exercising any or all of the rights set forth in this Subcontract.

31. BANKRUPTCY

If Subcontractor is adjudged bankrupt or becomes Insolvent, or if petition under the Bankruptcy Act of the United States is filed by or against the Subcontractor, or if it should make an assignment for the benefit of creditors, or if a receiver of the Subcontractor's property should be appointed, or if any judgment is taken against the Subcontractor and execution is issued thereon, or if the property of the Subcontractor passes into the hands of any legal representative, then and in any of those events, the Consultant may, at their option, terminate this Subcontract and the employment of the Subcontractor, with the same rights and privileges set forth in Article 28 entitled "Termination for Subcontractor Default".

32. ACCELERATION OF PERFORMANCE

If Consultant directs that the Work of the Subcontractor hereunder to be performed with greater speed than is herein contracted for other than for reasons for which Subcontractor is responsible in whole or in part, the Subcontractor shall, without affecting or abridging the rights of the Consultant set forth in any Article hereof, upon receipt of a written order from the Consultant, employ overtime labor as so ordered. Direct cost of the premium time for all labor utilized by the Subcontractor in such overtime Work as shown on the time slips checked and approved each day by the Consultant shall be paid by Consultant to the Subcontractor, but no profit, overhead, supervision costs, commission or other costs shall be paid and in lieu thereof Subcontractor shall be paid a 15 percent (15%) markup on the direct cost to be paid hereunder. No charges or damages for lost productivity or efficiency shall be permitted, and Subcontractor has anticipated the risk of same and included all costs associated therewith in the Contract Price.

33. NO WAIVER

Failure of Consultant to enforce in one or more instances upon compliance with provision of this Subcontract, or to exercise option herein conferred, shall not be construed as a waiver or relinquishment of the right of the Consultant thereafter to require a compliance with such provision of this Subcontract, or

a waiver of the right of the Consultant thereafter to exercise such option, but such provision or option will remain in full force and effect.

34. SUBCONTRACTOR'S GENERAL WARRANTY AND GUARANTEE, AND CORRECTION PERIOD

34.1 Subcontractor's General Warranty and Guarantee

34.1.1 Subcontractor warrants and guarantees to Consultant that all Work will be in accordance with the Contract Documents and will not be defective. Consultant and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Subcontractor's warranty and guarantee. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it: (1) does not comply with the Contract Documents; or (2) does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or (3) has been damaged prior to Consultant's final payment to Subcontractor (unless responsibility for the protection thereof has been assumed by Owner in accordance with the Contract Documents).

34.1.2 Subcontractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Subcontractor, lower-tier subcontractors, suppliers, or any other individual or entity for whom Subcontractor is responsible; or
2. normal wear and tear under normal usage.

34.1.3 Subcontractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Subcontractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Owner, Consultant, or any engineer;
2. payment by Consultant or Owner of any progress or final payment;
3. the issuance of a certificate of substantial completion by Consultant or any engineer or any payment related thereto by Consultant or Owner;
4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a shop drawing, sample, or other submittal furnished by Subcontractor;
6. the issuance of a notice of acceptability by Owner;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by Consultant or Owner.

34.1.4 If the Subcontract requires Subcontractor to accept the assignment of a contract entered into by Consultant or Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Subcontractor's performance obligations to Owner for the Work described in the assigned contract.

34.2 Correction Period:

34.2.1 If within one year after the date of final acceptance of the fully-completed Work by the Owner (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective (even if such defect or imperfection be latent), or if the repair of any damages to the Site, adjacent areas that Subcontractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Subcontractor as permitted by Laws and Regulations, is

found to be defective, then Subcontractor shall promptly, without cost to Consultant or Owner and in accordance with Consultant's or Owner's written instructions:

1. correct the defective repairs to the Site or such other adjacent areas;
2. correct such defective Work;
3. if the defective Work has been rejected by Owner or Consultant, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.

34.2.2 If Subcontractor does not promptly comply with the terms of Owner's or Consultant's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner or Consultant may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Subcontractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

34.2.3 Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

34.2.4 Subcontractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

34.3 Services, Materials, and Equipment

34.3.1 Unless otherwise specified in the Contract Documents, Subcontractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

34.3.2 All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Consultant and Owner. If required by Consultant, Subcontractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

34.3.2 All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

35. PAYROLL AND SALES TAXES

The Subcontractor hereby accepts exclusive liability and shall, defend, indemnify and hold the Consultant harmless for the payment of contributions pursuant to any Unemployment Insurance Law, Retirement Benefits Law and any other or similar Social Security Law or Payroll or Income Tax now or hereafter enacted by any City, State or Federal Government or any subdivision of either, levied or based upon the payroll of the Subcontractor for employees partly or wholly engaged in the Work covered by this Subcontract. The Subcontractor agrees to furnish all necessary information to enable the Consultant and Owner to comply fully with all the requirements of such laws. All sales and use taxes are included in the Contract Price and are to be paid by the Subcontractor. In the event that any law is or has been passed, or any rule or regulation pursuant thereof is enacted, which requires the Consultant to pay, either directly or indirectly, the amount of any such tax, or should any such law, rule or regulation direct the Consultant to collect the same, or make the Consultant liable for the collection thereof, or make the Consultant

responsible therefor, it is covenanted and agreed that the Subcontractor shall fully and completely make all payments therefor, and shall fully and completely defend, indemnify and save the Consultant harmless from any and all such taxes. It is further agreed that the Consultant shall have the right to deduct the amount of any and all such taxes from the Contract Price at any time the Consultant may, in its individual, sole discretion, deem it advisable, to the end that the Consultant may not be under liability therefor whatsoever, it being agreed that the Consultant shall have the right to deduct any and all such moneys from the next payments due under this Subcontract and from the retained percentages. If any Sales Tax provides any exemption from tax for capital improvements, Consultant agrees to provide Subcontractor with the necessary certification and Subcontractor agrees not to charge tax with respect to the furnishing of labor and/or materials as long as said exemption provision is in effect. The Subcontractor shall not employ any individuals as independent Subcontractors on the Project; all lower-tier subcontractors shall be incorporated entities or limited liability companies.

The Subcontractor agrees to maintain and keep, and to contractually require all subcontractors and material men to maintain and keep, records relating to any tax exception of materials, equipment and Supplies for a period of six years commencing from the date of final payment.

36. CONTRACT PRICE NOT ADJUSTED FOR RISING COSTS

The Consultant agrees to pay the sum herein set forth in current funds for such Work and materials, and in the manner and at the times herein set forth. All prices upon which the Contract Price was based shall be firm for the duration of the Work. Said sum is intended to include all increases in cost, foreseen or unforeseen, including, without limiting the generality of the foregoing, taxes, labor and materials, all of which is to be borne solely by the Subcontractor. All loss or damage arising from any of the Work performed under this Subcontract through unforeseen or unusual obstructions, difficulties or delays which may be encountered in the prosecution of same or through the action of the elements shall be borne by the Subcontractor. It is mutually agreed between the parties hereto that no payment made under this Subcontract, shall be conclusive evidence of the performance of this Subcontract, either wholly or in part, nor shall it be construed to be an acceptance of defective Work or improper material, or an approval of any of the items in any requisition made or bill rendered. All bills or requests for payments must be presented in writing.

37. SCHEDULE OF VALUES

37.1 Schedule of Values

Within ten (10) days after the effective date of this Subcontract, and not later than twenty (20) days prior to Subcontractor's first application for payment Subcontractor shall prepare and submit to Consultant, for Consultant's approval, a "Schedule of Values" in a format acceptable to Consultant, furnishing a complete, detailed and itemized breakdown of the various elements of the Work, including values for materials, equipment, labor, and lower-tier subcontracts. Total of this cost breakdown shall be equal to the Contract Price. The Schedule of Values shall allocate the Contract Price to the various elements of the Work. The Schedule of Values shall be used for determining periodic payments under this Subcontract.

37.2 Listing of Lower-tier subcontractors, Suppliers and Vendors

Prior to starting any activities related to or constituting the Work, the Subcontractor shall submit to the Consultant a written schedule of lower-tier subcontractors, suppliers and vendors identifying and listing each and every person, firm, corporation, trustee, union, governmental authority, or other entity the Subcontractor intends to utilize or to whom Subcontractor expects to incur a liability for or in connection with its performance of any part of the Work, including on such schedule their name, business address, telephone number, fax number, email address, name of primary contract person, their scope of work, and identifying which items or categories of Work (including references to the Consultant's schedule of values) the lower-tier subcontractor, supplier or vendor will provide. Receipt of such a schedule shall be an express condition precedent to the Consultant's obligation to make any payment to the Subcontractor. The Subcontractor shall submit to the Consultant an updated schedule of lower-tier subcontractors, suppliers and vendors promptly after making any change or addition to the persons or entities it intends to utilize or to which it expects to incur liability and after approval of the Subcontractor's schedule of values, specifying the item(s) on such schedule of values that each lower-tier subcontractor, supplier and vendor will provide. The Subcontractor shall incorporate by reference all terms of this Subcontract into any sub-

subcontract or purchase.

38. PROGRESS PAYMENTS

38.1 Application for Payment; Retainage

On a date to be determined by the Consultant at the beginning of the project, the Subcontractor shall forward to the Consultant, for its approval, a written statement in draft showing the amount due or to become due and including anticipated Work through the last day of that calendar month. Form of the Application for Payment shall be EJCDC C-620, Contractor's Application for Payment (2013 or later edition) or other form acceptable to Consultant. Applications for payment may be made no more frequently than once per month.

The Subcontractor shall finalize and submit its application for payment (each a "requisition") within the time directed by the Consultant and shall attach to each such requisition an acknowledgment of previous payment, Consultant's form of partial waiver and release of liens and claims, as well as a statement of any back charges and credits to which the Consultant is entitled, a sworn statement of any claim for charges or extras due to the Subcontractor, such claim not to be valid unless made at the time and in the manner aforesaid, a sworn statement setting forth all amounts, if any, owed by Subcontractor to its lower-tier subcontractors and suppliers, and a Schedule of Values showing the percentages of the various elements of Work completed, including values for materials, equipment, labor, and subcontractors.

Each Application for Payment or requisition shall include a listing of all lower-tier subcontractors and suppliers on a form to be provided by Consultant, and waivers of lien rights by each entity indicated thereon. In addition to the requisition, an updated progress schedule and record drawings shall be submitted to the Consultant for review and approval. Failure to provide the updated project schedule and record drawings may result in the requisition being delayed or rejected.

Provided that the Subcontractor complies with its obligations under this Article 38 and elsewhere in the Contract Documents (including timeliness and completeness of Subcontractor's Applications for Payment), the Consultant, shall pay to the Subcontractor within 30 days of receipt of payment from the Owner.

38.1.1 Prior to Substantial Completion (defined as being when all the Work is, in opinion of Consultant, ready for its intended use in accordance with the Contract Documents), progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Consultant may withhold, including but not limited to liquidated damages, in accordance with the Subcontract:

1. Ten percent (10%) of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Consultant, and if the character and progress of the Work have been satisfactory to Owner and Consultant, then as long as the character and progress of the Work remain satisfactory to Owner and Consultant, there will be no additional retainage; and
2. Ten percent (10%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
3. Upon Substantial Completion, Consultant shall pay an amount sufficient to increase total payments to Subcontractor to 100 percent of the Work completed, less such amounts set off by Consultant for defective Work and other set-offs due Consultant under the Subcontract, and less 200 percent of Consultant's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.
4. Upon final completion and acceptance of all the Work in accordance with the Contract Documents, Consultant shall pay the remainder of the Contract Price, subject to modifications thereof to which Consultant is entitled in accordance with the Contract Documents.

38.1.2 In each instance of requisition prior to completion of all the Work, the Subcontractor shall certify to the Consultant that the cost of the Work remaining to be done under this Subcontract does not exceed the balance of the Contract Price unpaid. In no event will the Consultant be required to pay in excess of the percentage indicated in this Subcontract prior to the completion of all the Work.

38.1.3 Subcontractor may invoice Consultant after it has completed the Work, or portions thereof, and any required corrections to the satisfaction of Consultant, and delivered in accordance with the terms of this Subcontract all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required hereunder, certificates of inspection, record documents, required itemizations and other documents required for progress payments and final payment. Consultant prefers to pay via electronic funds transfer (ETF), therefore prior to the first Application for Payment contact Consultant's AP Hotline, 303.471.3699 or e-mail billing inquiries to AccountsPayable.Administration@arcadis-us.com) and provide: Subcontractor's ABA routing number, bank account number, name on the account, full name of Consultant project manager, and the Consultant's 12-digit project number (To be Determined) for payment.

38.1.4 Partial Release or Reduction of Retainage: For each Application for Payment where Subcontractor requests partial release or reduction of retainage in any amount (other than request for final payment), submit with associated progress payment request consent of surety to partial release or reduction of retainage, duly completed by Subcontractor and surety. Acceptable form includes AIA® G707ATM, "Consent of Surety to Reduction in or Partial Release of Retainage", 1994 or later edition, or other form acceptable to Consultant.

38.1.5 Payment of Subcontractor's Application for Payment by Consultant shall not be deemed acceptance of the Work or a waiver or any right, claim or defense that Consultant may have under this Subcontract. Subcontractor warrants that title to and ownership of the Work shall transfer to Consultant free and clear of all liens or rights of liens. No payment shall be made to Subcontractor without a duly executed Subcontract and a valid, current evidence of insurance in compliance with this Subcontract.

38.1.6 Payments made to Subcontractor will include compensation for any and all applicable sales, use, gross receipts or excises taxes. Subcontractor shall bear the risk of loss of the Work until completion of the Work and final acceptance by Owner.

38.1.7 Application for Payment for Stored Items

1. Only the following are eligible for payment when suitably stored, protected, and observed by Consultant: 1) Major items of process equipment; 2) Major items of electrical equipment; 3) Major items of HVAC equipment; 4) Major items of process instrumentation and controls; 5) Process pipe 24-inch diameter and larger.
2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Consultant has received the materials and equipment free and clear of all liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Consultant's interest therein, all of which must be satisfactory to Consultant.
3. Observation of Stored Materials and Equipment Prior to Application for Payment:
 - a) General:
 - i. Prior to materials or equipment suitably stored but not yet incorporated into the Work can be eligible for payment, Consultant will visit the storage location and verify the extent, condition, and storage environment of the stored items.
 - ii. When the same material or equipment item is stored for more than two (2) months, such visits to storage location shall be not less than once every two (2) months.

- b) Cost Responsibility for Observations:
 - i. When storage location is less than 20 miles from the Site or less than 20 miles from Consultant's office, Subcontractor is not responsible for reimbursing Consultant for cost of Consultant's time and expenses for observing stored materials and equipment.
 - ii. When storage location is more than 20 miles from the Site and more than 20 miles from Consultant's office, Subcontractor shall reimburse Consultant, via a set-off under the Contract Documents, for cost of Consultant's time and expenses, including travel time, to visit the storage location and observe the stored materials and equipment.
- 4. When materials or equipment are stored in a bonded warehouse, Subcontractor may submit affidavit of delivery to the warehouse (affidavit signed by warehouse operator and Subcontractor) in lieu of Consultant's first visit to the storage location. Affidavit shall specifically indicate the following relative to the stored items:
 - a) Extent and quantity of stored items.
 - b) Condition of stored items and packaging (if items are stored in wrap or crates).
 - c) Conditions of storage environment.

38.2 Condition Precedent to Subcontractor's Right to Payment

38.2.1 The Subcontractor agrees that, to the greatest extent permitted by laws and regulations, the Consultant shall be under no obligation to pay the Subcontractor for Work done on this Project, until and unless the Consultant has been paid therefor by the Owner, and the provisions hereof, stating the time of payments and the amount thereof are expressly contingent upon and made subject to the condition precedent that Consultant shall receive from the Owner progress or final payments of the amounts being claimed by Subcontractor on account of Work done by Subcontractor on this Project. The time when such payments shall be due Subcontractor shall be postponed until Consultant has received same from the Owner. The Subcontractor further agrees and acknowledges that, for payment for Work performed, it relies on the credit and ability to pay of the Owner and not on that of the Consultant and that, except as otherwise provided by statute not subject to waiver, payment by the Owner to the Consultant for Work performed by the Subcontractor shall be a condition precedent to any payment obligation of the Consultant to the Subcontractor.

38.2.2 Notwithstanding anything in this Subcontract to the contrary, the Subcontractor acknowledges and agrees that in the event payment is not made to the Consultant for any reason, including, but not limited to, default by the Owner, the Subcontractor shall not be entitled to payment from the Consultant until such time as the Consultant shall in good faith have exhausted all legal remedies to enforce such payment from the Owner without in any fashion limiting or impairing Subcontractor's lien right under applicable laws or regulations. The Subcontractor further agrees that the liability of the surety on Consultant's payment bond, if any, for payment to the Subcontractor, is subject to the same conditions precedent as are applicable to Consultant's liability for payment to the Subcontractor after issuance of the Direct Contract Notice. It is the intention of Consultant and the Subcontractor (i) that each shall bear the risk as to payments due for the Work, (ii) that the Owner may unreasonably withhold payment, or (iii) may be unable to make payment as a result of insolvency or otherwise. This clause only controls the right of the Subcontractor to receive payment from Consultant and Consultant's surety (if any) but shall not impair any right of the Subcontractor to enforce and foreclose upon any lien upon the Owner's property or upon any funds due from the Owner to Consultant granted under any lien statute. By agreeing to the terms of this clause, the Subcontractor is not waiving any rights to which it is entitled under construction lien law of the jurisdiction in which the Project is located. To the extent that this clause could operate to limit or restrict the full extent of the Subcontractor's lien rights, this clause is waived in that context only. However, for all other purposes, this clause shall remain in full force and effect.

39. WITHHOLDING OF PAYMENT; SATISFACTION OF CLAIMS

39.1 Consultant may withhold payment due Subcontractor on account of (1) the failure of the Subcontractor to comply fully with requirement(s) of this Subcontract, including, without limitation, the failure of the Subcontractor to make payments to lower-tier subcontractors or suppliers, (2) the failure of

the Subcontractor to prevent the filing of liens or claims or to avoid the reasonable probability of the filing of liens or claims against the Owner, Consultant, the Project or the Subcontractor, (3) the failure of the Subcontractor to make payments for worker fringe benefit funds, and (4) damage to another of Consultant's subcontractors or Owner's other contractors by reason of act or failure to act of the Subcontractor.

39.2 In addition, in its sole discretion, the Consultant may cause the proceeds of any payment payable hereunder to the Subcontractor to be applied to the payment of any indebtedness owed or claimed or asserted by a third party to be owed by the Subcontractor, or by a sub-lower-tier subcontractor or supplier of any tier to the Subcontractor, to any party who has performed Work or supplied materials or equipment used in or in connection with the performance of this Subcontract, either directly to such party or by means of checks payable jointly to the Subcontractor and such party, if, in the reasonable judgment of the Consultant, such Work or such materials or equipment have been furnished on or related to the Project, unless the Subcontractor provides definitive documentary evidence satisfactory to the Consultant that it has previously paid such party therefor. In addition, if the Consultant reasonably believes that the performance by the Subcontractor of the Work to be performed hereunder has been or may be endangered because the Subcontractor will or may fail or has failed to pay for labor, fringes, materials, sub-lower-tier subcontractor taxes, or any other contractual obligations of the Subcontractor, the Consultant shall have the right, at its election, but not the obligation, to make payment on account of the Contract Sum by means of checks payable either directly to the person, firm, corporation, trustee, union, governmental authority, or other entity to whom money is due or who claims money is due from the Subcontractor, or by check payable jointly to the Subcontractor and such person, firm, corporation, trustee, union, governmental authority, or other entity. Any and all payments made under this Article shall be deemed to have been paid for and on behalf of the Subcontractor, and for the purpose of eliminating any bond, lien and/or other claims arising from the Project. The exercise or refraining from exercise of such right by the Consultant on any one occasion shall not obligate the Consultant to exercise such right on any other occasion or waive the right to exercise such right on any other occasion; nor shall such exercise or anything herein constitute or be deemed a guarantee or assumption by the Consultant of any obligation of the Subcontractor.

39.3 Consultant may reduce payments to Subcontractor for one or more of the following reasons:

39.3.1 The Work is defective, requiring correction or replacement;

39.3.2 The Contract Price has been reduced by Change Orders;

39.3.3 Consultant or Owner have been required to correct defective Work, or has accepted defective Work resulting in a reduction in the Contract Price;

39.3.4 Owner or Consultant has been required to remove or remediate a hazardous environmental condition for which Subcontractor is responsible;

39.3.5 Consultant has actual knowledge of the occurrence of any of the events that would constitute a default by Subcontractor and therefore justify termination for cause under the Contract Documents.

39.3.6 Claims have been made against Consultant or Owner on account of Subcontractor's conduct in the performance or furnishing of the Work, or Consultant or Owner has incurred costs, losses, or damages on account of Subcontractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

39.3.7 Subcontractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

39.3.8 Subcontractor has failed to provide and maintain required bonds or insurance;

39.3.9 Consultant or Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

39.3.10 Liquidated damages or other damages indicated in the Contract Documents have accrued as a result of Subcontractor's failure to achieve Contract Times including milestones (if any), Substantial Completion, or final completion of the Work;

39.3.11 There are other items entitling Consultant to a set off against the amount recommended.

40. SUBSTANTIAL COMPLETION; FINAL INSPECTION; FINAL PAYMENT

40.1 Subcontractor's Warranty of Title

40.1.1 Subcontractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Subcontract will pass to Consultant and Owner free and clear of (1) all liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven (7) days after the time of payment to Subcontractor by Consultant.

40.2 Substantial Completion

40.2.1 When Subcontractor considers the entire Work ready for its intended use Subcontractor shall notify Consultant in writing that the entire Work is substantially complete and request that Consultant issue a certificate of Substantial Completion. Subcontractor shall at the same time submit to Consultant an initial draft of punch list items to be completed or corrected before final payment.

40.2.2 Promptly after Subcontractor's notification, Owner and Consultant shall make an inspection of the Work to determine the status of completion. If Consultant does not consider the Work substantially complete, Consultant will notify Contractor in writing giving the reasons therefor.

40.2.3 If Consultant considers the Work substantially complete, Consultant will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Consultant shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have five (5) days after receipt of the preliminary certificate during which to make written objection to Consultant as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Consultant concludes that the Work is not substantially complete, Consultant will, within fourteen (14) days after submission of the preliminary certificate to Owner, notify Subcontractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Consultant concludes that the Work is substantially complete, then Consultant will, within said fourteen (14) days, execute and deliver to Owner and Subcontractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Consultant believes justified after consideration of any objections from Owner.

40.2.4 At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Consultant will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Consultant agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

40.2.5 After Substantial Completion the Subcontractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Subcontractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

40.2.6 Consultant shall have the right to exclude Subcontractor from the Site after the date of Substantial Completion subject to allowing Subcontractor reasonable access to remove its property and complete or correct items on the punch list.

40.2.7 Partial Use or Occupancy

1. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Consultant, and Subcontractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Consultant's and Subcontractor's performance of the remainder of the Work, subject to the following conditions
 - a) At any time Owner may request in writing that Consultant (and Subcontractor) permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Consultant and Subcontractor agree that such part of the Work is substantially complete, Subcontractor, Consultant, and Owner will follow the procedures of Articles 40.2.1 through 40.2.6 for that part of the Work.
 - b) Within a reasonable time after such request, Owner, Consultant, and Subcontractor shall make an inspection of that part of the Work to determine its status of completion. If Consultant does not consider that part of the Work to be substantially complete, Consultant will notify Owner and Subcontractor in writing giving the reasons therefor. If Consultant considers that part of the Work to be substantially complete, the provisions of Articles 40.2.1 through 40.2.6 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

40.2.8 Prior to requesting Substantial Completion, perform the following for the substantially completed Work:

1. Materials and equipment for which Substantial Completion is requested shall be fully ready for their intended use, including full operating and monitoring capability in automatic and manual modes.
2. Complete field quality control Work, including testing at the Site, indicated in Specifications Sections for individual materials and equipment items. Submit results of, and obtain Consultant's acceptance of, field quality control tests required by the Contract Documents.
3. Startup and checkout shall be completed in accordance with the Contract Documents and manufacturers' recommendations for the various materials and equipment in the substantially completed Work.
4. Cleaning for Substantial Completion shall be completed, including removal of all debris, dirt, and marring.
5. Spare parts, extra stock materials, and tools shall be delivered and accepted in accordance with the Contract Documents and Owner's requirements.
6. Training of operations and maintenance personnel shall be completed in accordance with the Contract Documents.
7. Submit and obtain Consultant's acceptance of final operations and maintenance manuals.
8. Obtain and submit to Consultant all required permits, inspections, and approvals of authorities having jurisdiction for the substantially completed Work to be occupied and used by Owner.
9. Complete other tasks that the Contract require be completed prior to Substantial Completion.

40.3 Final Inspection

40.3.1 Prior to requesting final inspection, Subcontractor shall verify that all of the Work is fully complete and ready for final payment. Partial checklist for this purpose is available from Consultant.

40.3.2 Upon written notice from Subcontractor that the entire Work or an agreed portion thereof is complete, Consultant will promptly make a final inspection (within 30 days of the written notice) with Owner and Subcontractor and will notify Subcontractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Subcontractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

40.4 Final Payment

40.4.1 After Subcontractor has, in the opinion of Consultant, satisfactorily completed all Work, including all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all required documents including schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (drawings, specifications, and other documents marked by Subcontractor to indicate as-built conditions), Subcontractor may make application for final payment.

40.4.2 The final Application for Payment shall be accompanied (except as previously delivered) by:

1. all documentation called for in the Contract Documents;
2. general release from Subcontractor, on Consultant's standard form, in favor of Owner, Consultant and Project sureties;
3. consent of the surety, if any, to final payment; acceptable form is AIA® G707™, "Consent of Surety to Final Payment" (1994 or later edition), or other form acceptable to Consultant;
4. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Consultant and Owner free and clear of any liens or other title defects, or will so pass upon final payment.
5. a list of all disputes that Subcontractor believes are unsettled;
6. complete list of all of Subcontractor's lower-tier subcontractors and suppliers, on form furnished by Consultant;
7. complete and legally effective releases or waivers (satisfactory to Consultant) of all lien rights arising out of the Work, and of liens filed in connection with the Work, using forms furnished by Consultant; said completed forms to be furnished by Subcontractor for Subcontractor, each lower-tier subcontractor, suppliers, and workers' fringe benefit funds; and
8. proof satisfactory to Consultant that all claims, including taxes, regarding the Work performed hereunder and any liens growing out of the same which shall have been filed or recorded, have been released.

40.4.3 When the above conditions are completed to satisfaction of Consultant, the balance of the Contract Price owed to the Subcontractor under the terms of this Subcontract shall be due and payable within sixty (60) days after submittal by Subcontractor to Consultant of all required documents including final Application for Payment,.

40.4.4 Issuance of final payment to Subcontractor constitutes Owner's final acceptance of the Work.

40.4.5 The Subcontractor's acceptance of Final Payment, in whole or part, shall constitute a waiver of any and all claims by the Subcontractor regarding this Subcontract. Payment of the Contract Price or any other sums for the Work or any portion thereof or any other amounts due or claimed to be due or claimed to be due to the Subcontractor shall be made only from a special fund and a specific source, namely from payments made by the Owner from time to time to the Consultant with respect to the work performed by the Subcontractor and it shall be a condition precedent to payment that said fund be funded with monies due and owing to the Subcontractor.

41. TRUST FUNDS

Any and all funds payable to the Subcontractor hereunder are hereby declared to constitute trust funds in the hands of the Subcontractor, to be applied first to the payment of claims for or of: employment taxes, unemployment insurance and social security related to the Project, laborer's claims for daily and weekly wages, benefits and wage supplements, lower-tier subcontractors, suppliers, professionals retained by Subcontractor or others for whom Subcontractor is responsible (including architects, engineers, surveyors, attorneys, accountants, and others) arising out of the described Work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety bonds and other bonds filed and premiums on insurance accruing during the construction of the Work, before application to any other purpose, in accordance with the provisions of Laws and Regulations. Whenever required by the Consultant, it shall be the duty of the Subcontractor to file with Consultant a verified statement, in form satisfactory to the Consultant, certifying the amounts then due and owing from the Subcontractor for labor, materials, and equipment furnished under this Subcontract, setting forth therein the names of the entities or persons whose charges or claims for labor, materials, or equipment are unpaid, and the amount due each.

42. CHANGES AND EXTRAS

Consultant, without invalidating this Subcontract, may order extra Work or make changes by altering, adding to or deducting from the Work, the Contract Price, Contract Times, or both to be adjusted accordingly to the extent applicable. The amount set forth in any Change Order will be the full compensation to Subcontractor for all extra Work required regarding the Change Order, including for all acceleration, delay, loss of efficiency, inconvenience, increased supervision or other costs or expenses. The Subcontractor shall not make any alterations or omit anything, or perform additional or extra Work, except upon written order signed by the Consultant. The Consultant shall at any time have the right to order extra Work to be performed on (a) lump sum mutually acceptable to the parties, (b) unit prices, or (c) time and materials basis. No request for payment for extra Work will be honored unless performed in accordance with a Change Order executed by the parties. All such Work shall be executed under the provisions of this Subcontract. Consultant's choice of the manner in which the extra Work is to proceed is described as follows:

42.1 Lump Sum Mutually Acceptable to the Parties

42.1.1 Prior to performing any work considered to be extra Work, the Subcontractor shall within ten (10) days after receipt of Consultant's request for a change proposal submit its lump sum proposal to Consultant. Proposal shall be itemized and segregated by labor, material, equipment, and lower-tier subcontractors for the various components of the Work in the same manner as the Schedule of Values. Aggregate total only is unacceptable.

42.1.2 The Subcontractor shall furnish with its proposal supporting data consisting of lower-tier subcontractors' and suppliers' signed proposals.

42.1.3 The Subcontractor will be allowed a maximum mark-up of 15 percent for overhead and profit on labor, materials, and equipment for the entity performing the actual Work performed by its own forces and material purchases.

42.1.4 A maximum markup of five percent (5%) may be applied by higher-tier subcontractors and Subcontractor, up to a total aggregate markup on the labor, materials, and equipment of 20 percent regardless of the number of tiers.

42.1.5 A maximum markup of five percent (5%) is allowed on equipment rented by the Subcontractor or

any lower-tier subcontractor.

42.1.6 When a change results in a lump sum reduction (credit) in the Contract Price, the cost of the change will have a five percent (5%) markup applied.

42.1.7 A wholly owned subsidiary, sister, joint venture, related companies or a company in which the Subcontractor has a majority interest will not be considered as lower-tier subcontractor when calculating overhead and profit markups.

42.1.8 The Subcontractor may include in its labor proposal only those workers and foremen directly involved in the Work. All other supervision is included in the 15% overhead and profit markup allowed.

42.1.9 Subcontractor will be entitled to payment for labor, worker fringe benefits, insurance, premiums for surety bonds (if any), unemployment insurance, social security and taxes paid on labor. No markup for overhead or profit will be allowed on social security, unemployment insurance or other insurances or on premium time. Subcontractor's material and equipment costs will include invoiced costs, transportation, applicable sales or use taxes, actual rental costs or discounted local published rental rates as indicated in the Blue Book by EquipmentWatch. Use of small tools is included in the Subcontractor's markup for overhead and profit.

42.1.10 Markup for overhead and profit as described above includes all other costs whatsoever beyond those enumerated. If the extra Work included in the lump sum proposal is covered by Subcontract unit prices, the Owner or Consultant may elect to use these unit prices in conjunction within the lump sum proposal. Markup for overhead and profit shall not be applied to unit prices. The entire amount of the change in Contract Price will be the net difference of the Work to which will be applied the markup percentages for overhead and profit.

42.2 Unit Prices

42.2.1 Prior to performing any work considered as extra Work, the Subcontractor will submit within ten (10) days after receipt of the Consultant's request for a change proposal its written proposal itemizing the quantities of each item of unit price Work for which there is an applicable unit price in the Subcontract.

42.2.2 Proposals for changes to be paid using unit prices shall include the estimated quantities indicated for each item for each Drawing in the Contract Documents.

42.2.3 Unit prices will be applied to net differences of quantities of the same item.

42.3 Time and Materials Basis

42.3.1 Should Consultant elect to have any extra Work performed on a time-and-material basis, Consultant will issue a written change directive to Subcontractor authorizing Subcontractor to proceed with performing such Work at actual cost. Upon receipt of such written change directive from Consultant, Subcontractor shall proceed immediately with performing the extra Work ordered therein.

42.3.2 Costs for administration, clerical, supervision and superintendence of any nature whatever including foremen, and the cost, use or rental of tools or plant are not eligible for compensation under time-and-materials basis compensation.

42.3.3 Subcontractor's maximum markup on time-and-materials costs is 25 percent for overhead and profit.

42.3.4 Under time-and-materials compensation, Subcontractor may also add Unemployment Insurance and Social Security taxes paid on labor required for the extra Work, without overhead and profit markup applied thereto.

42.3.5 When Subcontractor procures the performance of such extra Work by others rather than its own employees, the Subcontractor shall not be entitled to greater payment than that to which it would have been entitled if it had itself furnished the labor and materials required in connection with the Work to be

performed under time-and-materials basis of compensation.

42.3.6 Subcontractor shall submit to Consultant daily time and material tickets for each day that Work is performed on a time-and-materials compensation basis. Time and materials tickets shall not be valid and Subcontractor shall not be entitled to payment for any such tickets unless they are signed by an authorized representative of the Consultant and eligible for payment after execution of an associated Change Order by the parties memorializing the change in Contract Price, Contact Times, or both, associated with such extra Work. Time and materials tickets shall include the identification number assigned to the associated extra Work, the location and description of the Work, the classification of labor employed including workers' names and social security numbers, the material and equipment incorporated into the Work, the equipment rented (not tools) and other information ordered by the Consultant.

42.3.7 To substantiate Subcontractor's costs for the extra Work authorized by the change directive, Subcontractor shall submit to Consultant evidence substantiating the total effect of the extra Work authorized by each change directive on the Contract Price. Such evidence shall include the time and material tickets, invoices from suppliers for materials and equipment, and invoices for other eligible costs. When the documentation of the costs proposed for inclusion in the Change Order are mutually agreeable to the parties, the Contract Price will be modified via a Change Order, after which Subcontractor may submit an Application for Payment for compensation for the extra Work authorized by the associated change directive.

42.4 All markups for overhead and profit under lump sum and time-and-materials basis of compensation shall be inclusive of any and all costs and expenses including, but not limited to, all overhead of whatever kind or nature, and all supervision, management, administration, estimating or other costs. Separate markup for overhead and profit shall not be applied to unit price work, which are deemed to include therein all necessary costs, overhead, and profit for Subcontractor associated with performing the Work under such unit price item.

42.5 Procedure

42.5.1 In the event that the Prime Contract imposes more limited compensation for extra Work than that permitted herein, the more-restrictive terms of the Prime Contract shall govern Subcontractor's rights in lieu of those set forth herein.

42.5.2 Where such additional Work is ordered as provided in this Subcontract, the Subcontractor shall, for such purposes, permit the Consultant to audit its books. The Subcontractor shall produce any and all data which the Consultant may request for the purpose of determining the correctness of the changes. The Subcontractor shall keep such full and detailed accounts as may be necessary to reflect its operations with respect to such changes and extras, and the system adopted shall be such as is satisfactory to the Consultant. The Owner, Consultant, their agents and employees, shall be afforded access at all reasonable times to the Subcontractor's, lower-tier subcontractors' and vendors' books, correspondence, instructions, receipts, vouchers, memoranda and records of all kinds, relating to all Work under this Subcontract as well as to such changes and extras, and the Subcontractor shall preserve the same for a period of six (6) years after final payment hereunder. In regard to the foregoing and generally, the Subcontractor hereby authorizes the Consultant to check directly with its suppliers of labor and materials the charges for such labor, materials and other items appearing in the Subcontractor's Applications for Payment submitted to Consultant, to confirm balances due and obtain sworn statements and waivers of lien and agrees to provide Consultant with documentation and consent forms necessary to obtain this information.

42.5.3 Unless and until Consultant shall elect either the lump sum, the unit price method or time-and-materials basis of compensation, the Subcontractor shall maintain and submit daily records of labor, material and equipment used in the Work which have been acknowledged thereon daily by Consultant. In any event, Consultant shall have the right to order such changes in the Work to proceed promptly prior to the submission of any proposal or Consultant's election on compensation method.

42.5.4 Consultant reserves the right to estimate value of change on Subcontractor's behalf and submit

to the Owner for approval should Subcontractor fail to provide pricing to Consultant within fourteen (14) days from date of Subcontractor's receipt of Consultant's request for a change proposal and Subcontractor agrees that such estimate by Consultant shall be final and binding upon Subcontractor.

42.5.5 Any Work included in this Subcontract shall be performed by the Subcontractor at no extra cost to the Contractor despite any order from the Contractor to the Subcontractor which might contemplate such Work as an extra.

42.5.6 Should there be a dispute or disagreement as to whether Subcontractor is entitled to an adjustment in the Contract Price, Contract Times, or both, Subcontractor shall proceed as directed by Consultant and shall not defer or delay compliance with such directive pending resolution of the dispute or disagreement.

42.5.7 Notwithstanding other provision in this Subcontract to the contrary, Change Orders may be signed on behalf of each party by an officer or person duly authorized by such party to execute binding contracts on that party's behalf. Subcontractor shall furnish to Consultant upon Consultant's request written documentation that Subcontractor's person executing Change Orders is duly authorized by Subcontractor.

43. CASH ALLOWANCES

When a cash allowance is explicitly included in the Subcontract, unless otherwise provided in the Contract Documents and provided that the materials and equipment selected is reasonably similar to that anticipated by the cash allowance (as determined by Consultant):

43.1 Cash allowances shall cover the cost to the Subcontractor of materials and equipment delivered at the Site and all required taxes, less applicable trade discounts;

43.2 Subcontractor's cost for unloading and handling such materials and equipment covered by a cash allowance, labor, installation costs, overhead, profit and other expenses contemplated for stated cash allowance amounts shall be included in the Contract Price but not in the cash allowance;

43.3 Whenever costs are more than or less than the cash allowance amount (if any) included in the Subcontract, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the cash allowances under Article 1 above, and (2) changes in Subcontractor's costs under Article 2, above.

44. CLAIMS

Subcontractor shall give Consultant notice within three (3) days after the occurrence of an event which the Subcontractor believes may give rise to a claim by the Subcontractor or its lower-tier subcontractors or suppliers for a change in the Contract Price, Contract Times, or both. Within ten (10) days after the occurrence of such event, the Subcontractor shall submit to Consultant a written statement supporting the claim, which statement shall include the Subcontractor's detailed estimate of any change in Contract Price, Contract Times, or both, occasioned thereby.

When requested by Consultant in writing, the Subcontractor shall substantiate its claim with documentation acceptable to Consultant such as (but not limited to) payrolls, paid invoices, receipts, records of performance and other documents and subject to Consultant verification.

Consultant shall not be liable for, and the Subcontractor waives, any claim or potential claim of the Subcontractor of which the Subcontractor knew and which was not reported by the Subcontractor in accordance with the provisions of this Article 44.

Subcontractor shall continue performance of the Work during the time of claims hereunder is pending. Consultant shall not be bound to adjustments in Contract Price or Contract Times for the Subcontractor's claim unless expressly agreed to by Consultant and memorialized in a Change Order.

Consultant may file a claim against Subcontractor for adjustments of the Contract Price, Contract Times, or both, by written notice.

Parties shall negotiate claims among senior staff with at least one formal negotiation or mediation session within ninety (90) days from receipt of a notice of dispute (unless the claim is resolved in less time or longer time is allowed by mutual agreement of the parties) before invoking dispute resolution provisions of this Subcontract.

45. NO DELAY BY SUBCONTRACTOR

To the greatest extent permitted by laws and regulations, notwithstanding the fact that a dispute, controversy or disagreement shall have arisen in the interpretation of a provision of this Subcontract, the performance of Work, the delivery of materials and equipment, the payment of moneys to the Subcontractor, or otherwise, the Subcontractor agrees that it will not directly or indirectly stop or delay the Work or delay the delivery of materials or equipment to be furnished hereunder, pending the resolution of such dispute, controversy, or disagreement.

46. SCHEDULING

The scheduling of construction operations for the Project will be monitored by a method to be chosen by Consultant. The Subcontractor, and its lower-tier subcontractors and suppliers, if required by Consultant or Subcontractor, shall furnish all scheduling information requested by the Consultant at such time and in such form and detail as requested for its particular trade. All float in the Project Schedule and durations shall belong to Consultant.

Such information shall be furnished within fourteen (14) days of Subcontractor's receipt of Consultant's request and shall further be revised from time to time when requested prior to and at any time during performance of the Work.

Information submitted by the Subcontractor or others, acceptance or approval by the Consultant, and the scheduling that may be developed and implemented by the Consultant shall not constitute the basis of any claim by Subcontractor or its lower-tier subcontractors for damage or delay nor excuse the Subcontractor's performance as required herein.

47. NOTICES

Notices which one of the parties desires to serve upon the other shall be deemed sufficiently given and rendered if personally delivered or sent by registered or certified mail, postage prepaid, return receipt requested, or sent by a nationally recognized overnight courier service addressed to the other party at the address set forth in this Subcontract or to other such addresses as may be designated by written notice of either party to the other. The time of the issuance of notice shall be deemed to be the time when the

same was personally delivered or sent and each day's notice shall be construed to mean a period of 24 hours (from midnight to midnight) from the time the notice was delivered. In the event that the time frames indicated in this Subcontract fall on a weekend or legal holiday, the time frame will extend to the next business day.

48. RIGHTS AND REMEDIES; DISPUTE RESOLUTION

48.1 Rights and Remedies

48.1.1 All rights and remedies of Consultant under this Subcontract shall be cumulative and shall be in addition to all other rights and remedies of Consultant provided by laws or regulations. To the extent that the Consultant determines that to obtain a full and complete resolution of any matter in dispute it is necessary that Subcontractor or its surety be included in a dispute resolution proceeding, then the Subcontractor shall make no objection to its inclusion, and inclusion of its surety, whether by joinder, consolidation or otherwise. This Subcontract shall be interpreted in accordance with and subject to the laws of the jurisdiction where the Project is located. **THE PARTIES EXPRESSLY WAIVE A TRIAL BY JURY IN ANY LAWSUIT, ACTION, CLAIM PROCEEDING OR COUNTERCLAIM.**

48.2 Dispute Avoidance and Resolution

48.2.1 Notwithstanding the foregoing, and in consideration of One Hundred US Dollars (\$100) paid to the Subcontractor, the receipt whereof is acknowledged as part of the Contract Price, Subcontractor and Consultant shall resolve any dispute or claim, or part thereof, arising out of or in any way relating to this Subcontract in the manner described in Articles 48.2 and 48.3 of this Subcontract. If any such claim involves or implicates a bond funded by Subcontractor, then the Surety on said bond agrees to resolve the claim in the same manner.

48.2.2 Consultant and Subcontractor are fully committed to working with each other throughout the Project and agree to communicate regularly with each other at all times so as to avoid or minimize disputes or disagreements. If disputes or disagreements do arise, Consultant and Subcontractor each agree to resolve such disputes or disagreements in an amicable, professional and expeditious manner so as to avoid unnecessary losses, delays and disruptions to the Work.

48.2.3 Consultant and Subcontractor shall first attempt to resolve disputes or disagreements at the Project level through discussions between Consultant's personnel and Subcontractor's personnel.

48.2.4 If a dispute or disagreement cannot be resolved through Consultant's personnel and Subcontractor's personnel, upon the request of either party, then the matter shall be referred to the senior management of each party for resolution. Consultant's senior manager and Subcontractors senior manager shall meet as soon as conveniently possible, but in no case later than thirty (30) days after such a request is made, to attempt to resolve such dispute or disagreement. Prior to any meetings between the senior management, the parties will exchange relevant information that will assist the parties in resolving their dispute or disagreement.

48.2.5 If, after meeting, the senior managers determine that the dispute or disagreement cannot be resolved on terms satisfactory to both parties, then the parties shall submit the dispute or disagreement to non-binding mediation. The mediation shall be conducted by a mutually agreeable impartial mediator. The mediation will be governed by and conducted pursuant to a mediation agreement negotiated by the parties or, if the parties cannot so agree, by procedures established by the mediator.

48.3 Arbitration

48.3.1 If any claims, disputes or controversies between the parties arising out of or relating to this Subcontract cannot be resolved in accordance with the procedures set forth in Article 48.2, the Owner and Consultant, at its sole and exclusive option, shall have the right to have such dispute or claim, or part thereof, submitted to arbitration.

48.3.2 Any submission by Owner and or Consultant shall be in the jurisdiction where the Project is located, in accordance with the rules of the forum chosen to conduct the arbitration. The parties expressly agree that the arbitrator shall not have authority to award multiple or punitive damages or attorney's fees, and that all costs and expenses of arbitration shall be borne equally. In the event that the

Owner or the Consultant elects to submit a dispute to arbitration, Subcontractor shall dismiss lawsuit or other proceeding involving in any way the matter submitted to arbitration. This provision shall be specifically enforceable by the Owner or Consultant. The Subcontractor shall include the requirements of this Article 48 in all of its subcontracts, purchase orders and other agreements regarding this Work.

48.3.3 The party filing demand for arbitration must assert in the demand of all claims then known to that party on which arbitration is permitted to be demanded.

48.3.4 The award rendered by the arbitrator shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

48.3.5 Consultant shall not be liable for any indirect, consequential, multiple, exemplary, statutory or punitive damages either at law, in equity or by statute.

49. NO ORAL MODIFICATIONS

No provision of the Contract Documents shall be changed or modified, nor shall this Subcontract be discharged, in whole or in part, except by an agreement in writing signed by the party against whom the change, modification or discharge is claimed or sought to be enforced, nor shall any waiver of any of the conditions or provisions of this Subcontract or of any of the rights of either of the parties hereunder be effective or binding unless such waiver shall be in writing and signed by the party claimed to have given, consented to or suffered the waiver.

In the event written change or modification is made as aforesaid, the Consultant's rights and remedies under this Subcontract and under any bond given to the Owner or Consultant, in accordance with the requirements of this Subcontract, shall in no way be prejudiced or impaired, and the bond shall apply and be in full force and effect with respect to this Subcontract as so changed and modified. Notwithstanding anything in this provision to the contrary, no such waiver, written change or modification of this Subcontract shall be binding against Consultant unless signed by an officer of Consultant or a designee of the officer if Subcontractor has received an officer's written authorization or a corporate resolution authorizing any such designee to act on an officer's behalf.

50. SAVING CLAUSE; SEVERABILITY

If any of the provisions hereof shall contravene or be invalid under the laws of the jurisdiction where the Work is to be performed, such contravention or invalidity shall not invalidate the whole Subcontract or any other provision thereof, but this Subcontract shall be construed as if not containing the provisions held to be invalid, and the rights and obligations of the parties shall be enforced accordingly.

51. EQUAL OPPORTUNITY CLAUSE

In connection with the execution of this Subcontract, the Subcontractor shall not discriminate against employees or applicants for employment because of race, color, religion, sex, or national origin. Subcontractor shall use best efforts to hire both minority and female employees whenever qualified individuals apply for employment. The Subcontractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In conjunction with this provision, the Subcontractor shall conduct its business in accordance with all federal, state and local Laws and Regulations pertaining to programs concerning affirmative action and equal opportunity.

Subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a). These regulations, respectively, prohibit discrimination against qualified protected veterans and individuals on the basis of disability and require affirmative action by covered prime Subcontractors and lower-tier subcontractors to employ and advance, in employment, qualified protected veterans and qualified individuals with disabilities.

52. AFFIRMATIVE ACTION

The Owner and Consultant have a long standing practice of encouraging the participation of minority and women owned firms in their business opportunities. Accordingly, the Subcontractor shall make good faith efforts to subcontract with minority and women owned firms in the performance under this Subcontract. Additionally, the Owner and Consultant are Equal Employment Opportunity Employers and will expect Subcontractor and its lower-tier subcontractors to secure minorities and women in the workforce to the extent possible. This policy shall be supplemented by such specific goals and obligations imposed by governmental authorities and as otherwise specified in the Contract Documents.

53. EXCULPATION OF PARTNERS

No general or limited partner or shareholder of Consultant or Owner or other holder of any equity interest in Consultant or Owner shall be personally liable under this Subcontract nor shall other holder of equity interest in such party be personally liable for the performance of such party's obligations under this Subcontract. The liability of Owner for Owner's obligations under this Subcontract shall be limited to Owner's interest in the property, and the Subcontractor shall not look to Owner's other assets seeking either to enforce Owner's obligations under this Subcontract or to satisfy a judgment for Owner's or Consultant's failure to perform such obligations. The Subcontractor will not enter into any agreements with third parties without the inclusion of any exculpatory clause similar to that set forth herein, limiting Owner's and Consultant's liability as provided herein.

54. HEADINGS

Headings used in this Subcontract are inserted only as a matter of convenience and for reference, and they in no way define, limit or describe the scope or intent of this Subcontract, nor do they in any way affect this Subcontract.

55. HAZARDOUS ENVIRONMENTAL CONDITION

55.1 Definitions

55.1.1 Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

55.1.2 Hazardous Environmental Condition—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Subcontract, does not establish a Hazardous Environmental Condition.

55.2 Reports and Drawings: Reports and drawings of a Hazardous Environmental Condition at the Site, if any, are available upon Subcontractor's written request to Consultant. Subcontractor is responsible for obtaining, reviewing, and heeding the information presented in such reports and drawings. Information in such reports and drawings upon which Subcontractor may rely is limited to factual data such as locations of sampling, laboratory and analytical methods and results, and similar factual data. Results between sampling locations or that are opinion instead of fact are items upon which Subcontractor may not rely.

55.3 Subcontractor shall be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be outside the scope of the Work.

55.4 Subcontractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Subcontractor, lower-tier subcontractors, suppliers, or anyone else for whom Subcontractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

55.5 Subcontractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Subcontractor or anyone for whom Subcontractor is responsible creates a Hazardous Environmental Condition, then Subcontractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by this Subcontract); and (3) notify Owner and Consultant (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Consultant concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Consultant, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Subcontractor the written notice required below. If Subcontractor or anyone for whom Subcontractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and Consultant will impose a set-off against payments to account for the associated costs.

55.6 Subcontractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Consultant who will deliver such notice to Subcontractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

55.7 If Consultant and Subcontractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Subcontractor, then within fourteen (14) days of Consultant's transmittal of Owner's written notice regarding the resumption of Work, Subcontractor may submit a change proposal, or Consultant may impose a set-off.

55.8 If after receipt of such written notice Subcontractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Consultant may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in the Contract Documents. Consultant or Owner may have such deleted portion of the Work performed by others.

55.9 To the fullest extent permitted by Laws and Regulations, Subcontractor shall indemnify, defend and hold harmless Owner and Consultant, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Subcontractor or by anyone for whom Subcontractor is responsible, or to a Hazardous Environmental Condition created by Subcontractor or by anyone for whom Subcontractor is responsible.

55.10 Subcontractor shall prepare, implement and maintain a site specific Health and Safety Plan (HASP) in accordance with the contract requirements. The HASP shall address the known Hazardous Environmental Conditions. Subcontractor shall also provide all Personnel Protective Equipment (PPE) as required by the HASP for the Subcontractor personnel as well as the Consultant and Owner personnel.

56. LABOR AND MATERIALS TO BE FURNISHED BY SUBCONTRACTOR

Subcontractor shall perform and furnish, as applicable, all labor, materials, equipment, tools, appliances,

services, delivery, hoisting, scaffolding, permits, testing, engineering, layout, supervision, applicable taxes and insurance, coordination and all other operations required for the complete performance of all specified and related Work, in accordance with the Contract Documents. Subcontractor's failure to perform the Work in accordance with the Contract Documents shall render any such Work defective and constitute a material breach of this Subcontract. Subcontractor shall be liable for all costs to remedy such defect, including latent defects. The obligations set forth herein shall survive any expiration or earlier termination of this Subcontract.

57. AVAILABILITY OF LABOR AND MATERIAL

The Subcontractor represents that it has sufficient manpower, equipment and materials available to expedite all of its Work. Work in any area shall commence upon 48 hours notice from Consultant. Work shall proceed in sequence and direction as required by Consultant.

58. PRIME CONTRACT

Consultant has entered into, or will enter into, a contract (as may be amended from time to time, referred to herein as "Prime Contract") with the Owner for the performance of all or a part of the Project in accordance with the Drawings and Specifications prepared by Consultant. Subcontractor shall be bound to Consultant by each and all of the terms and provisions of the Prime Contract and the other Contract Documents, and assume toward Consultant all of the duties, obligations and responsibilities that Consultant by the Prime Contract and each of the other Contract Documents assumes toward the Owner, and the Subcontractor agrees further that Consultant shall have the same rights and remedies as against the Subcontractor as the Owner under the terms and provisions of the Prime Contract and the other Contract Documents has against Consultant with the same force and effect as though every such duty, obligation, responsibility, right or remedy were set forth herein in full. The Prime Contract is available for review by the Subcontractor upon request, including prior to the execution of this Subcontract.

The Prime Contract shall continue to be a Contract Document and, as such, is incorporated herein by reference, and Subcontractor shall continue to be bound by the Prime Contract, notwithstanding any termination, expiration or cancellation of the Prime Contract, or the assignment or reassignment of the Prime Contract by Consultant or the Owner. Subcontractor's rights to an adjustment in the Contract Price, Contract Times, or both, for any cause, are liquidated to the extent Consultant is entitled to and has received from Owner a like adjustment to Consultant's lump sum or guaranteed maximum price of the Prime Contract, or an extension of time under the Prime Contract for the same cause, with it being understood that in the event that Consultant has not received or is not entitled to receive such adjustment or extension, Subcontractor is likewise not entitled to such adjustment or extension. Subcontractor expressly acknowledges and agrees that Subcontractor shall bring no claim against Consultant seeking payment of monies subject to Article 36 of this Subcontract or adjustment or extension contemplated by this Article until such time as Consultant has exhausted all related remedies as against Owner. Subcontractor further agrees to dismiss within five (5) days of written notice from Consultant action that Subcontractor may bring against Consultant or Owner seeking such payments, adjustments or extensions until such time as Consultant's efforts in pursuit of its remedies as against Owner have been fully exhausted, with it being understood that the purpose of this provision is to avoid unnecessary legal expense and litigation during the Consultant's pursuit of such remedies. Consultant shall have the right to deduct from payments to Subcontractor reasonable legal fees and related disbursements and costs incurred by Consultant in pursuit of remedies as against Owner that, if successful, would inure to Subcontractor's benefit hereunder or in defense of claims or suits against Consultant alleging that Consultant is liable for defects or deficiencies in the Work performed by Subcontractor or for any failure of Subcontractor to comply with the Contract Documents. Should the unpaid balance of the Contract Price be less than the costs to be deducted as provided in this Article, such shortfall shall be paid by Subcontractor to Consultant upon demand.

59. THIRD PARTY BENEFICIARIES; EFFECTIVENESS OF THIS SUBCONTRACT

Third Party Beneficiaries: The Owner will be a third party beneficiary under this Subcontract with respect to those provisions set forth herein expressly stated to benefit the Owner, provided, however, in no event shall such provision in this Subcontract be construed to create any privity between the Subcontractor and the Owner or be deemed to create or give rise to any obligations or liabilities on the part of the Owner.

Effectiveness of Subcontract: The Subcontractor agrees that this Subcontract will not be binding upon the Consultant until it is signed by an officer of Consultant or a designee of an officer if Subcontractor has received an officer's written authorization or a Corporate Resolution authorizing any such designee to act on an officer's behalf, and redelivered to the Subcontractor. This Subcontract, however, is binding on this Subcontractor from the moment it is signed by the Subcontractor and it constitutes an irrevocable offer by the Subcontractor which cannot be withdrawn or changed without the prior written consent of the Consultant. Subcontractor further represents that this Subcontract has been duly authorized by Subcontractor's Board of Directors, or applicable governing body, and that the individual signing this Subcontract has likewise been duly authorized to do so.

60. CONTRACT TIMES

60.1 Definitions

60.1.1 Contract Times—The number of days or the dates by which Subcontractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

60.1.2 Milestone—A principal event in the performance of the Work that the Subcontract requires Subcontractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work. Work identified for completion by a Milestone shall be substantially completed on or before the associated Milestone.

60.1.3 Project Schedule—A schedule, prepared and maintained by Consultant, indicating the sequence and duration of the activities comprising Consultant's and Subcontractor's plan to accomplish the Work within the Contract Times. Consultant is free to modify the Project Schedule from time to time at its own discretion.

60.1.4 Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Consultant, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

60.1.5 The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

60.2 All time limits for Milestones, if any, Substantial Completion, and completion readiness for final payment as stated in the Contract Documents, and Subcontractor's compliance with the Project Schedule (including but not limited to commencement, prosecution, and completion of the Work, including furnishing and installing materials and equipment, and other activities necessary to perform in accordance with the Contract Documents,) are of the essence of the Contract.

60.3 Substantial Completion and Completed and Ready for Final Payment: The Work shall be substantially completed on or before the Milestones listed in Section 60.4, in accordance with Article 40.2. and completed and ready for final payment in accordance with Articles 40.3 and 40.4 of this Subcontract on or before Milestone 3, listed in Section 60.4.

60.4 Milestones

Parts of the Work shall be substantially completed on or before the Milestone(s) indicated below. The milestones may be extended to account for approved shutdowns.

60.4.1 Milestone 1: Substantial completion within 165 days from the notice to proceed.

60.4.2 Milestone 2: Substantial completion within 270 days from the notice to proceed.

60.4.3 Milestone 3: Substantial completion within 375 days from the notice to proceed.

60.5 Liquidated Damages

60.5.1 Subcontractor and Consultant recognize that time is of the essence as stated in Article 60.2 above and that Consultant will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Articles 60.3 and 60.4 above, plus any

extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Consultant if the Work is not completed on time. Accordingly, instead of requiring any such proof, Consultant and Subcontractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion*: Subcontractor shall pay Consultant \$1,200 for each day that expires after the time (as duly adjusted pursuant to the Subcontract) specified in Article 60.3 above for Substantial Completion until the Work is substantially complete.
2. *Completion of Remaining Work*: After Substantial Completion, if Subcontractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Subcontract) for completion and readiness for final payment, Subcontractor shall pay Consultant \$1,200 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
4. *Milestone Dates*: Subcontractor shall pay Consultant \$1,200 for each day that expires after the time (as duly adjusted pursuant to the Subcontract) specified above for achievement of each Milestone, until Milestone completion is achieved.

60.6 Contract Times Commence Running: The Contract Times will commence to run on the fifth day after the Effective Date of the Subcontract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within five (5) days after the Effective Date of the Subcontract.

60.7 Compliance with Project Schedule; Consultant's Right to Alter Project Schedule

60.7.1 Subcontractor shall be responsible for scheduling Subcontractor's Work in conformance with the Project Schedule. When the dates for the commencement or completion of specific elements of the Work are not specified as Milestones or indicated in the Project Schedule, such elements of the Work, shall be commenced on three (3) days' notice from Consultant and shall be prosecuted and completed with all possible diligence and speed or as otherwise directed by Consultant. Where Consultant's Project Schedule does not address certain activities and where Consultant does not direct Subcontractor on scheduling of such activities, Subcontractor shall schedule and perform such activities in coordination with the Project Schedule.

60.7.2 With respect to Work being performed in an existing building, Subcontractor recognizes that the Work is part of a program of construction, including the work of others, to renovate and develop the Project situated in an existing building with dated installations and concealed conditions that may affect the Work. Given the complexity of the Project, the nature of the Site, and high-quality of the work required of all entities, among other factors, Subcontractor agrees, without claim of any description, to afford Consultant the discretion to modify the Project Schedule, without increase to the Contract Price, consistent with the prompt and cost-efficient completion of the entire Project as determined by Owner or Consultant, consistent with the Contract Documents, but subject, however, to all of the aforementioned conditions and considerations that may or will affect the progress of the Work. Subcontractor agrees to take all necessary steps to perform the Work in a manner, which will enable such dates to be achieved.

60.7.3 Promptly upon Consultant's request, Subcontractor shall furnish written information to Consultant for Consultant's use and reference in preparing and maintaining the Project Schedule.

60.7.4 Provisions regarding schedule disruption are indicated in Article 27 of this Subcontract.

61. CONTRACT PRICE

Consultant shall pay Subcontractor for completion of the Work in accordance with the Contract

Documents the amounts listed in the Bid Form, subject to adjustment under the Subcontract. All amounts are in current, United States funds.

61.1 Total of all Extended Prices for Lump Sum and Unit Price Work (subject to final adjustment based on actual quantities) The extended prices for unit price Work set forth as of the Effective Date of the Subcontract are based on estimated quantities. Estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Consultant.

61.2 Total of lump sum amount and unit price Work (subject to final adjustment of unit price items) \$2,047,000.00.

62. CONTRACT DOCUMENTS

62.1 The Contract Documents consist of the following:

1. This Subcontract
2. Performance Bond
3. Payment Bond
4. Insurance Rider dated December 9, 2015; and
5. The Prime Contract identified in Article 58, above, including all exhibits, addenda, amendments and changes thereto.
6. The following which may be issued after the Effective Date of this Subcontract: (a) Change Orders, (b) change directives issued by Consultant, (c) field orders issued by Consultant to order minor changes in the Work that affect neither the Contract Price nor the Contract Times.

62.2 There are no Contract Documents other than those indicated above.

62.3 In the event of discrepancy between the printed or "hard" copies of the Contract Documents and electronic files or electronic or digital copies thereof, the printed or "hard" copies will govern.

62.4 All previous bids, orders, proposals, letters, oral or written promises and understandings relating to the subject matter to this Subcontract are hereby declared to be null and void. This Subcontract is complete and shall not be interpreted by any reference to any previous bid, letter, proposal, document or understanding, written or oral, or other document or agreement except as specifically provided in this Subcontract.

62.5 The Contract Documents constitute the entire agreement between the parties. Subcontractor affirms and agrees and represents and warrants that only the statements, representations and promises expressly contained in Contract Documents have been relied upon by Subcontractor and have induced it to enter into this Subcontract.

63. SUBCONTRACTOR'S REPRESENTATIONS

The Subcontractor warrants and represents that:

63.1 Subcontractor shall perform the Work in the best and most workmanlike manner, expeditiously and in conformity with the requirements of the Contract Documents. The Subcontractor agrees that all guarantees and warranties made by the Subcontractor's lower-tier subcontractors and suppliers shall be for the benefit of Consultant and Owner, that Consultant or Owner may enforce such guarantees and warranties on its own behalf and in its own name, and that, upon request, the Subcontractor will enforce, or assist the Consultant or Owner in enforcing such guarantees and warranties.

63.2 Subcontractor shall furnish its best skill and judgment, employing first-class professional standards, and shall cooperate with the other entities involved in the Project in furthering the interests of Consultant.

63.3 Subcontractor has not provided, and shall not provide, directly or indirectly, funds or other consideration to person or entity (including the Owner and Consultant and their employees and agents) to

improperly procure special or unusual treatment with respect to the Contract Documents, the Work, or for the purpose of otherwise improperly influencing the Subcontractor's relationship with the Owner or the Consultant. The Subcontractor shall cause all of its officers, directors, employees, members, partners, agents, lower-tier subcontractors and suppliers to comply with the restrictions contained in this Article.

63.4 Subcontractor's financial condition is and shall remain sound and that the Subcontractor is capable of performing the Work under this Subcontract. The Subcontractor shall be deemed to be in default of its obligations hereunder should a material adverse change in its financial condition affect the performance of its Work or obligations hereunder.

63.5 Subcontractor has visited the Site, has examined reports and drawings of existing conditions at the Site, and is familiar with the Site and location conditions, Laws and Regulations, and requirements of the Owner relative to Working at the Site. Subcontractor has factored all such knowledge into its proposed compensation.

63.6 Subcontractor has reviewed the Contract Documents and agrees that they are generally sufficient to convey the scope, nature, extent, and required quality of the Work and that further clarification and interpretation at the time of the execution of this Subcontract is not required.

64. INSPECTION AND AUDIT

64.1 The Subcontractor's records shall be subject to audit and such records shall include but not be limited to accounting records, written policies and procedures, subcontract files (including but not limited to proposals, bid recaps, etc), original estimates, estimating work sheets, correspondence, change order files (including documentation covering negotiated settlement), back-charge logs and supporting documentation, general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends, and any other Subcontractor records which may have a bearing on matters of interest to the Owner and/or the Consultant in connection with the Work for the Owner and Consultant. All of the foregoing herein referred to as "records" shall be open to inspection and subject to audit and reproduction by the Owner's and/or the Consultant's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of the Subcontractor's compliance with (a) the requirements of the Contract Documents, (b) the Owner's and/or the Consultant's business ethics policies, and (c) provisions for pricing change orders, invoices or claims submitted by the Subcontractor or any of its payees.

64.2 The Subcontractor shall require all payees including but not limited to lower-tier subcontractors and suppliers to comply with the "Inspection and Audit" provisions of this Subcontract. The Owner and Consultant's agent or authorized representatives shall have access to the Subcontractor's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Subcontract, shall have access to all necessary records and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the "Inspection and Audit" provisions. If an audit inspection or examination discloses overpricing or overcharges (of any nature) by the Subcontractor to the Owner and or the Consultant, all such amounts shall be repaid and refunded by the Subcontractor to the Owner and or the Consultant respectively unless otherwise agreed in writing. In the event such overpricing and/or overcharges are in excess of 1.0 percent of the total Contract Price, the reasonable cost of the Owner and or the Consultant's audit shall also be reimbursed to the Owner and or the Consultant respectively. Any adjustments and/or payments required as a result of any such audit or inspection of the Subcontractor's invoices and/or records shall be made within a reasonable amount of time (not to exceed ninety (90) days) from presentation of the Owner's and or the Consultant's findings to the Subcontractor.

64.3 Where the Contract Price is based on one or more lump-sums, the Owner's or the Consultant's right to audit shall be limited to invoicing and cash allowances (if any), upset limits, or contingencies, and Change Orders, unless otherwise specified.

65. EMERGENCIES

In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Subcontractor is obligated to act to prevent threatened damage, injury, or loss.

Subcontractor shall give Consultant prompt written notice if Subcontractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Consultant determines that a change in the Contract Documents is required because of the action taken by Subcontractor in response to such an emergency, a change directive or Change Order will be issued.

66. HAZARD COMMUNICATION PROGRAM

Subcontractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

67. SURVIVAL

The obligations of Subcontractor hereunder regarding insurance, indemnity, warranties, guarantees, discharge of liens, confidentiality, record keeping and retention, and cooperation with and defense of Consultant shall survive any expiration or earlier termination of this Subcontract.

68. DRAFTING OF SUBCONTRACT

The Subcontractor and the Consultant acknowledge that they have participated in the drafting of the Contract Documents and the parties hereto expressly waive the defense of *contra proferentem* and agree that the Contract Documents, in whole or part, shall not be construed against any party as the drafter thereof.

69. MISCELLANEOUS

The Subcontractor and the Consultant acknowledge the following items are also contained within the Prime Contract and therefore these requirements are transferred via reference to this Agreement. The following miscellaneous requirements are noted and the prime Contract should be referred to for detailed requirements:

69.1 The Owner may opt to utilize any part of the Work which it believes is substantially complete in accordance with requirements of the Prime Contract.

69.2 The Subcontractor shall be required to participate in and attend weekly progress meetings in accordance with requirements of the Prime Contract.

69.3 The Subcontractor shall be required to assist the Consultant in preparation of the required engineering reports in accordance with requirements of the Prime Contract.

69.4 The Subcontractor shall be required assist the Consultant in the preparation of monthly project reports, cost control reports and project schedule updates in accordance with requirements of the Prime Contract.

69.5 The Subcontractor shall be required assist the Consultant in the preparation of quarterly MBE/WBE utilization reports in accordance with requirements of the Prime Contract.

69.6 The Subcontractor shall note the following articles of the Prime Contract that define additional requirements that flow-down to the Subcontractor via this Agreement:

- Article 13, Removal of Personnel
- Article 18, Department Approval and Inspection
- Article 25, Employment of Personnel
- Article 26, Gratuities
- Article 27, Covenant Against Contingent Fees
- Article 28 Worker's Compensation and Liability Insurance
- Article 29, Confidentiality
- Article 32, Diesel Emissions Reduction Act 2006

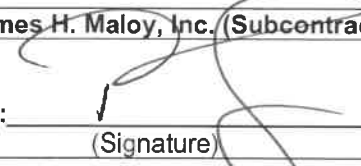
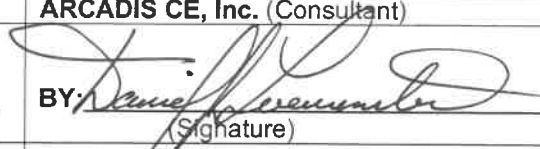
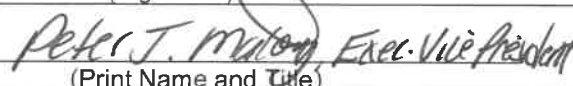

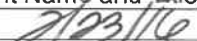
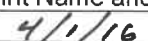
69.7 The Subcontractor shall enroll themselves and any subcontractors in the New York State VendRep system at <https://portal.osc.state.ny.us>. This system requires the completion of a vendor

responsibility questionnaire and the assignment of a vendor identification number.

67.8 The Subcontractor shall note the requirements of the Standard Clauses for NYS Contracts appended to the Prime Contract.

IN WITNESS WHEREOF, the parties hereto have caused this Subcontract to be duly executed as of the day and year first above written.

ACCEPTED:

James H. Maloy, Inc. (Subcontractor)	ARCADIS CE, Inc. (Consultant)
BY:  (Signature)	BY:  (Signature)
 (Print Name and Title)	 (Print Name and Title)
Date:  2/23/16	Date:  4/1/16

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 11 13

SUMMARY OF WORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Table of Articles for this Section is:

<u>Article</u>	<u>Title</u>
1.1	Section Includes
1.2	Location and Description of Work
1.3	Other Construction Contracts
1.4	Work By Others
1.5	Work By OWNER
1.6	OWNER-furnished Equipment and Materials
1.7	Assigned Procurement Contracts
1.8	Sequence and Progress of Work
1.9	Subcontractor's Use of Site
1.10	Easements and Rights-of-Way
1.11	Notices to OWNERS and Authorities of Properties Adjacent to the Work
1.12	Salvage of Equipment and Materials
1.13	Partial Utilization by OWNER

1.2 LOCATION AND DESCRIPTION OF WORK

- A. The Work is located at the locations identified in the Drawings.
- B. The Work to be performed under this Contract includes, but is not limited to, constructing the Work described below and all related appurtenances. The Work shall be as follows:
1. Establish Site Specific Health and Safety Plan and Community Air Monitoring Program.
 2. Install Erosion and Sediment Controls shown on the Drawings.
 3. Clear and Grub the Site.
 4. Intermediate Site Grading identified in the Drawings.
 5. Final Site Grading identified in the Drawings.
 6. Other portions of the Work identified on the Drawings.
- C. Contracting Method: Work shall be constructed under one prime contract.

- D. Hazardous Environmental Conditions: Work related to Hazardous Environmental Conditions, described in reports referenced in the Agreement, is included in the Work.

1.3 OTHER CONSTRUCTION CONTRACTS

- A. None.

1.4 WORK BY OTHERS

- A. None.

1.5 WORK BY OWNER

- A. OWNER will perform the following in connection with the Work:
 - 1. None.

1.6 OWNER-FURNISHED EQUIPMENT AND MATERIALS

- A. None.

1.7 SEQUENCE AND PROGRESS OF WORK

- A. Sequencing:
 - 1. Incorporate sequencing of the Work into the Progress Schedule.

1.8 SUBCONTRACTOR'S USE OF SITE

- A. Subcontractor's use of the Site shall be confined to the areas shown.
- B. Not Used.

1.9 EASEMENTS AND RIGHTS-OF-WAY

- A. Easements and rights-of-way will be provided by OWNER in accordance with the Contract Drawings. Confine construction operations within OWNER's property, public rights-of-way, easements obtained by OWNER, and the limits shown. Use care in placing construction tools, equipment, excavated materials, and materials and equipment to be incorporated into the Work to avoid damaging property and interfering with traffic. Do not enter private property outside the construction limits without permission from the owner of the property.
- B. Within Highway and Railroad Rights-of-Way: Permits will be obtained by SUBCONTRACTOR. All Work performed and all operations of SUBCONTRACTOR within the limits of railroad and highway rights-of-way shall conform to requirements of railroad or highway owner and applicable work permits,

or authority having jurisdiction over right-of-way. Comply with Section 01 14 33, Work in Highway Rights-of-Way.

1.10 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

- A. Notify owners of adjacent property and utilities when prosecution of the Work may affect their property, facilities, or use of property.
- B. When it is necessary to temporarily obstruct access to property, or when utility service connection will be interrupted, provide notices sufficiently in advance to enable affected persons to provide for their needs. Conform notices to Laws and Regulations and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
- C. Notify utility owners and other concerned entities at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near Underground Facilities or exposed utilities.

1.11 SALVAGE OF EQUIPMENT AND MATERIALS

- A. Existing equipment and materials removed and not shown or specified to be reused in the Work will become SUBCONTRACTOR'S property, except the following items that shall remain OWNER's property:
 - 1. None.
- B. Existing equipment and materials removed by SUBCONTRACTOR shall not be reused in the Work, except where so specified or indicated.
- C. Carefully remove in manner to prevent damage all equipment and materials specified or indicated to be salvaged and reused or to remain property of OWNER. Store and protect salvaged items specified or indicated to be used in the Work. Replace in kind or with new items equipment, materials, and components damaged in removal, storage, or handling through carelessness or improper procedures.
- D. SUBCONTRACTOR may furnish and install new items, with ARCADIS' approval, instead of those specified or indicated to be salvaged and reused, in which case such removed items will become SUBCONTRACTOR'S property.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 14 33

WORK IN HIGHWAY RIGHTS-OF-WAY

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall obtain necessary permits, arrange inspections required by the highway owner, and pay all charges for the Work in the associated highway right-of-way. Comply with applicable rules and regulations of highway owner.
- B. Highway owners having jurisdiction over the Work include:
 - 1. None.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION AND PROTECTION

- A. SUBCONTRACTOR shall implement means necessary to prevent accidents caused or influenced by the Work. Provide flagmen, temporary barricades, lights, signs, and other precautions to provide safe conditions during the Work.

3.2 INSTALLATION

- A. Work shall be located as shown on the Drawings. Install materials, equipment, piping, and appurtenances required for crossings of existing Underground Facilities and above-ground utilities and structures. Furnish and maintain at the Site a supply of pipe fittings, adapters, and short lengths of pipe to expedite utility crossings required.
- B. Pavement: When fill is stabilized in accordance with requirements of highway owner and the Contract Documents, replace highway subbase material and pavement with pavement of similar type and equal thickness to the pavement in place prior to start of the Work. Pavement shall comply with requirements of highway owner and the Contract Documents.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 22 13

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This section covers the methods and procedures that ARCADIS will use to measure the SUBCONTRACTOR's Work and provide payment. This description of the measurement and payment features will not, in any way, limit the responsibility of the SUBCONTRACTOR for making a thorough investigation of the Contract Documents and Site conditions to determine the scope of the work included in each bid item.
- B. Items listed starting in Article 1.7 of this Section refer to and are the same pay items listed in the Bid Form and constitute all pay items for completing the Work. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant services, SUBCONTRACTOR's or ARCADIS's field offices, layout surveys, Project signs, sanitary requirements, testing, safety provisions and safety devices, submittals and record drawings, water supplies, power and fuel, traffic maintenance, removal of waste, security, coordination with DEPARTMENT's operations, information technology (including hardware, software, and services) required during construction, bonds, insurance, or other requirements of the Subcontract Agreement. Payment will constitute complete compensation for all Work required by the Contract Documents, including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Compensation for providing, as required, all supervision, labor, equipment, overhead, profit, material, tests, required services, applicable taxes, and for performing all other related Work items, shall be included in prices stipulated for lump sum and unit price pay items listed in this Section and included in the Contract.
- C. Each lump sum and unit bid price shall include an amount considered by SUBCONTRACTOR to be adequate to cover SUBCONTRACTOR's overhead and profit for each separately identified item.
- D. No payment will be made for work performed by the SUBCONTRACTOR to replace defective work, work which is not required by the Contract Documents, work outside the limits of the Contract and additional work necessary due to actions of the SUBCONTRACTOR.

1.2 ARCADIS' ESTIMATE OF QUANTITIES

- A. ARCADIS' estimated quantities for items of Unit Price Work, as included in the Contract, are approximate only and are included solely for purpose of comparing Bids and pricing. DEPARTMENT does not expressly or by implication agree that nature of materials encountered below the ground surface or actual quantities of material encountered or required will correspond with the quantities included in the Contract at the time of award and reserves right to increase or decrease quantities or to eliminate quantities as DEPARTMENT may deem necessary. Unless indicated otherwise in the Agreement, SUBCONTRACTOR or DEPARTMENT will not be entitled to adjustment in price of Unit Price Work items as a result of change in estimated quantity and agree to accept the unit prices accepted in the Bid as complete and total compensation for additions caused by changes or alterations in the Unit Price Work directed by DEPARTMENT.

1.3 ADJUSTMENT OF UNIT PRICES FOR INCREASE OR DECREASE OF ESTIMATED QUANTITIES

- A. Increases or decreases in the quantity of an item of Unit Price Work will be determined by comparing total payable quantity of Unit Price Work with ARCADIS' estimated quantity indicated in the Contract Documents.
- B. Provisions, if any, regarding adjustment of unit prices due to variations in actual quantities from the estimated quantities awarded with the Contract, are in the Agreement.
 - 1. ARCADIS' review for possible unit price cost adjustment, when provision for such adjustment is indicated in the Agreement, will be at a time ARCADIS deems reasonable and proper.
 - 2. Payment for Unit Price Work item that has an as-awarded computed total value of less than the percent (indicated in the Supplementary Conditions) of the sum of the as-awarded total Contract Price will be made at the unit price in the Contract, regardless of an increase or decrease in quantity.

1.4 RELATED PROVISIONS

- A. Payments to SUBCONTRACTOR: Refer to Subcontract Agreement.
- B. Changes in Contract Price: Refer to Subcontract Agreement.
- C. Schedule of Values: Refer to Subcontract Agreement, and Section 01 29 73, Schedule of Values.

1.5 QUANTITIES

- A. The Estimated quantities indicated in the Bid Schedule are the quantities for the evaluation of bids. The actual quantities of items to be paid for on a unit price basis may vary significantly from the quantities indicated in the Bid Schedule.

1.6 SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Subcontract Agreement and Section 01 29 73, Schedule of Values.

1.7 MEASUREMENT

- A. Under this Subcontract, the SUBCONTRACTOR shall provide all labor, equipment, and materials and shall complete all Work as shown and described in the Contract Documents and as directed by ARCADIS and the DEPARTMENT, in accordance with the expressed intent of the Subcontract to secure a complete construction of a functionally complete Project. The bid items described in this Section shall together include all work set forth in the Contract Documents or required to properly complete the Work. Any necessary Work that is not explicitly described shall be considered included in the item to which it properly belongs. Where used in the Contract Documents, the word “including” (“includes”, “include”) shall mean “including (includes, include) but not limited to”. Each item includes:

1. All tools, labor, material, equipment, plant services, bonds and insurance, tests, adjustments, warranties, overhead, supervision and other expenses required to perform the Work.
2. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.
3. All accessories, manuals, and services pertinent to the proper start-up, operation, and maintenance of materials and equipment.

- B. Lump Sum Items: Measurement of all Lump Sum Items will be on a total job basis.

1. The quantities of Work performed under lump sum items will not be measured except for the purpose of determining reasonable interim payments. Interim payments will be made in accordance with the estimated value of Work performed and found acceptable as determined by the ARCADIS or the DEPARTMENT, or as specified in this Section.
2. For each lump sum bid item, the SUBCONTRACTOR shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the lump sum in sufficient detail to document the specific costs of all items included in the lump sum bid item. The schedule of values shall be provided prior to initiation of the Work.
3. Measurement for Progress Payments of all lump sum items will be on a percent complete basis as established in the Contract Documents.

C. Unit Price Items: For each unit price bid item, the SUBCONTRACTOR shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the unit price in sufficient detail to document the specific costs of all items included in the unit price bid item. The schedule of values shall be provided prior to initiation of the Work. Where items are specified to be measured on a unit basis, measurement will be of each particular unit as specified.

1. Volumetric Basis - Where solid or semi-solid items (e.g. sludge and sediment) are specified to be measured on a volumetric basis, the volume will be determined on an in-place basis (prior to excavation for excavation or after placement and compaction for imported fill) between the existing and final ground surfaces as measured by land surveys. If no tolerance is specified, the tolerance shall be interpreted to be 0.00 foot. Where liquid items are specified to be measured on a volumetric basis, the volume will be determined by direct readings obtained from a graduated container containing the liquid or from a calibrated meter designed to measure the quantity of liquid passing an established point or boundary (e.g. flow meter).
2. Areal Basis - Where items are specified to be measured on an areal basis, the area will be measured as the actual surface area within the specified limits. If a specified width of an item is indicated, the area will be determined by the actual length along the centerline multiplied by the specified width. No adjustments will be made for the overlap of materials.
3. Length Basis - Where items are specified to be measured on a length basis, the length will be measured as the actual length along the centerline within specified limits. No adjustments will be made for the overlap of materials.
4. Weight Basis - Where items are specified to be measured on a weight basis, the weight will be measured based on certified weigh scale tickets obtained from a weigh scale certified by the County Office of Weights and Measures and approved by the ARCADIS and the DEPARTMENT. The weights shall be taken in the presence of a ARCADIS representative. When the weight is per ton, trucks shall be weighed prior to loading and after loading. The measured tonnage will be the difference between the prior- and post-loading measured truck weights.

D. Measurement and payment will be made only for Work that has been accepted, is within the limits shown on the Contract Documents and is in conformance with the Contract Documents.

1.8 DESCRIPTION OF BID ITEMS

Former Hettling Farm Site

- A. Bid Item FHS-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item FHS-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:
 - a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule
 - s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
 2. Measurement for payment: The bid price for Bid Item FHS-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item FHS-LS-1, and ending at substantial completion.
- B. Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan
1. Payment: The bid unit price for Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:

- a. All of the controls associated with storm water pollution prevention are in place, and
- b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.

This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.

C. Bid Item FHS-UP-3—Implement the Health and Safety Plan

1. Payment: The bid unit price for Bid Item FHS-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.
2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item FHS-UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:
 - a. All of the elements of the SUBCONTRACTOR's Health and Safety Plan are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item FHS-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the Contractor fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item FHS-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-4 - Mobilization shall be the amount paid to the Contractor to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item FHS-LS-4 – Mobilization will be made upon the completion of:
 - a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads

- 4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 - 5. Stockpile and staging areas,
 - 6. Pre-construction soil sampling,
 - 7. Field offices and support areas
 - 8. Other environmental control measures
 - 9. Sanitary facilities
 - 10. On-site and off-site traffic controls
 - b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule, Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.
 - c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
 - d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.
- E. Bid Item FHS-LS-5 – Demobilization
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-5 - Demobilization shall be the amount paid to the Contractor to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-5- Demobilization will be made upon completion of demobilization activities.
- F. Bid Item FHS-LS-6 – Site Clearing and Grubbing
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.
- G. Bid Item FHS-LS-7 – Interim Grading
 - 1. Measurement and Payment: The bid lump sum price for FHS-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of contaminated soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-7 – Interim Grading will be made upon the completion of excavation activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to

the Contract requirements. In addition, post excavation limit sampling locations will be located on the grading survey.

H. Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation

1. Payment: The bid unit price for Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

I. Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste

1. Payment: The bid unit price for Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

K. Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover

1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys

before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

L. Bid Item FHS-UP-11 – Furnish and Install Type II– Engineered Cover

1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-11 – Furnish and Install Type II – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type II – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-LS-11 – Furnish and Install Type II – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type II – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

M. Bid Item FHS-UP-12 – Furnish and Install Type III– Engineered Cover

1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-12 – Furnish and Install Type III – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-LS-12 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

N. Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover

1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover shall be the amount paid to the SUBCONTRACTOR to furnish and install Type IV – Engineered Cover in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover will be made upon the completion of

installation of the Type IV – Engineered Cover.

- O. Bid Item FHS-LS-14 – Construction of Access Road
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-14 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-14 – Construction of Access Road will be made upon the completion of access road construction.
- P. Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- Q. Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- R. Bid Item FHS-LS-17 – Furnish and Install Soil Amendment
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-17 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-17 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- S. Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- T. Bid Item FHS-UP-19 – Excavation, Transport and Disposal of Hazardous Materials
 - 1. Payment: The bid unit price for Bid Item FHS-UP-19 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for

each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.

2. Measurement for payment: The bid unit price for Bid Item FHS-LS-19 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.
- U. Bid Item FHS-UP-20 – Install Provided Clay
1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-20 – Install Provided Clay shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Install Provided Clay, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-UP -20 – Install Provided Clay will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Install Provided Clay, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

Former Scolite Site

- A. Bid Item FSS-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item FSS-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:

- a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule
 - s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
2. Measurement for payment: The bid price for Bid Item FSS-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item FSS-LS-1, and ending at substantial completion.
- B. Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan
1. Payment: The bid unit price for Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:
- a. All of the controls associated with storm water pollution prevention are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.
- This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.
- C. Bid Item FSS-UP-3–Implement the Health and Safety Plan
1. Payment: The bid unit price for Bid Item FSS-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the

SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.

2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item FSS-UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:

- a. All of the elements of the SUBCONTRACTOR's Health and Safety Plan are in place, and
- b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item FSS-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the Contractor fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item FSS-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-4 - Mobilization shall be the amount paid to the Contractor to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item FSS-LS-4 – Mobilization will be made upon the completion of:

- a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads
 4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 5. Stockpile and staging areas,
 6. Pre-construction soil sampling,
 7. Field offices and support areas
 8. Other environmental control measures
 9. Sanitary facilities
 10. On-site and off-site traffic controls
- b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule,

Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.

- c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
- d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.

E. Bid Item FSS-LS-5 – Demobilization

- 1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-5 - Demobilization shall be the amount paid to the SUBCONTRACTOR to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-5- Demobilization will be made upon completion of demobilization activities

F. Bid Item FSS-LS-6 – Site Clearing and Grubbing

- 1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.

G. Bid Item FSS-LS-7 – Interim grading

- 1. Measurement and Payment: The bid lump sum price for FSS-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-7 – Interim Grading will be made upon the completion of grading activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to the Contract requirements. In addition, post grading limit sampling locations will be located on the grading survey.

H. Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation

- 1. Payment: The bid unit price for Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
- 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the

SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

- I. Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste
 - 1. Payment: The bid unit price for Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.
- J. Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover
 - 1. Measurement and Payment: The bid unit price for Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- K. Bid Item FSS-UP-11 – Furnish and Install Type III– Engineered Cover
 - 1. Measurement and Payment: The bid unit price for Bid Item FSS-UP-11 – Furnish and Install Type III – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.

2. Measurement for payment: The bid unit price for Bid Item FSS-LS-11 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- L. Bid Item FSS-LS-12 – Construction of Access Road
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-12 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-12 – Construction of Access Road will be made upon the completion of access road construction.
- M. Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- N. Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- O. Bid Item FSS-LS-15 – Furnish and Install Soil Amendment
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-15 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-15 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- P. Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch

1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- Q. Bid Item FSS-UP-17 – Excavation, Transport and Disposal of Hazardous Materials
1. Payment: The bid unit price for Bid Item FSS-UP-17 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FSS-LS-17 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

Proposed Schuyler Heights Fire District Station House Site

- A. Bid Item SFD-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item SFD-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:
 - a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule

- s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
 - 2. Measurement for payment: The bid price for Bid Item SFD-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item SFD-LS-1, and ending at substantial completion.
- B. Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan
- 1. Payment: The bid unit price for Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:
 - a. All of the controls associated with storm water pollution prevention are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.
- This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.
- C. Bid Item SFD-UP-3–Implement the Health and Safety Plan
- 1. Payment: The bid unit price for Bid Item SFD-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item FSS-UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:
 - a. All of the elements of the SUBCONTRACTOR’s Health and Safety Plan are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.
- The period of potential payment for Bid Item SFD-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the SUBCONTRACTOR fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No

payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item SFD-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-4 - Mobilization shall be the amount paid to the SUBCONTRACTOR to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item SFD-LS-4 – Mobilization will be made upon the completion of:

- a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads
 4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 5. Stockpile and staging areas,
 6. Pre-construction soil sampling,
 7. Field offices and support areas
 8. Other environmental control measures
 9. Sanitary facilities
 10. On-site and off-site traffic controls
- b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule, Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.
- c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
- d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.

E. Bid Item SFD-LS-5 – Demobilization

1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-5 - Demobilization shall be the amount paid to the SUBCONTRACTOR to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-5- Demobilization will be made upon completion of demobilization activities.

- F. Bid Item SFD-LS-6 – Site Clearing and Grubbing
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.
- G. Bid Item SFD-LS-7 – Interim Grading
1. Measurement and Payment: The bid lump sum price for SFD-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-7 – Interim Grading will be made upon the completion of excavation activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to the Contract requirements. In addition, post grading limit sampling locations will be located on the grading survey.
- H. Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation
1. Payment: The bid unit price for Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- I. Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste
1. Payment: The bid unit price for Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the

requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

- J. Bid Item SFD-UP-10 – Furnish and Install Type I – Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item SFD-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-LS-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- K. Bid Item SFD-UP-11 – Furnish and Install Type III– Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item SFD -UP-12 – Furnish and Install Type III– Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III– Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD -LS-12 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- M. Bid Item SFD-LS-13 – Construction of Access Road
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-13 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-13 – Construction of Access Road will be made upon the completion of access road construction.

- N. Bid Item SFD-LS-14 – Groundwater/Contaminated Stormwater Collection and Treatment
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-14 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-14 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- O. Bid Item SFD-LS-15 – Modification of Existing Groundwater Monitoring Wells
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-15 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-15 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- P. Bid Item SFD-LS-16 – Furnish and Install Soil Amendment
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-16 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-16 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- Q. Bid Item SFD-LS-17 – Furnish and Install Seed and Mulch
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-17 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-17 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- R. Bid Item SFD-UP-18 – Excavation, Transport and Disposal of Hazardous Materials
1. Payment: The bid unit price for Bid Item SFD-UP-18 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-LS-18 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the

transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++



PAGE LEFT BLANK INTENTIONALLY

SECTION 01 22 13

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This section covers the methods and procedures that ARCADIS will use to measure the SUBCONTRACTOR's Work and provide payment. This description of the measurement and payment features will not, in any way, limit the responsibility of the SUBCONTRACTOR for making a thorough investigation of the Contract Documents and Site conditions to determine the scope of the work included in each bid item.
- B. Items listed starting in Article 1.7 of this Section refer to and are the same pay items listed in the Bid Form and constitute all pay items for completing the Work. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant services, SUBCONTRACTOR's or ARCADIS's field offices, layout surveys, Project signs, sanitary requirements, testing, safety provisions and safety devices, submittals and record drawings, water supplies, power and fuel, traffic maintenance, removal of waste, security, coordination with DEPARTMENT's operations, information technology (including hardware, software, and services) required during construction, bonds, insurance, or other requirements of the Subcontract Agreement. Payment will constitute complete compensation for all Work required by the Contract Documents, including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Compensation for providing, as required, all supervision, labor, equipment, overhead, profit, material, tests, required services, applicable taxes, and for performing all other related Work items, shall be included in prices stipulated for lump sum and unit price pay items listed in this Section and included in the Contract.
- C. Each lump sum and unit bid price shall include an amount considered by SUBCONTRACTOR to be adequate to cover SUBCONTRACTOR's overhead and profit for each separately identified item.
- D. No payment will be made for work performed by the SUBCONTRACTOR to replace defective work, work which is not required by the Contract Documents, work outside the limits of the Contract and additional work necessary due to actions of the SUBCONTRACTOR.

1.2 ARCADIS' ESTIMATE OF QUANTITIES

- A. ARCADIS' estimated quantities for items of Unit Price Work, as included in the Contract, are approximate only and are included solely for purpose of comparing Bids and pricing. DEPARTMENT does not expressly or by implication agree that nature of materials encountered below the ground surface or actual quantities of material encountered or required will correspond with the quantities included in the Contract at the time of award and reserves right to increase or decrease quantities or to eliminate quantities as DEPARTMENT may deem necessary. Unless indicated otherwise in the Agreement, SUBCONTRACTOR or DEPARTMENT will not be entitled to adjustment in price of Unit Price Work items as a result of change in estimated quantity and agree to accept the unit prices accepted in the Bid as complete and total compensation for additions caused by changes or alterations in the Unit Price Work directed by DEPARTMENT.

1.3 ADJUSTMENT OF UNIT PRICES FOR INCREASE OR DECREASE OF ESTIMATED QUANTITIES

- A. Increases or decreases in the quantity of an item of Unit Price Work will be determined by comparing total payable quantity of Unit Price Work with ARCADIS' estimated quantity indicated in the Contract Documents.
- B. Provisions, if any, regarding adjustment of unit prices due to variations in actual quantities from the estimated quantities awarded with the Contract, are in the Agreement.
 - 1. ARCADIS' review for possible unit price cost adjustment, when provision for such adjustment is indicated in the Agreement, will be at a time ARCADIS deems reasonable and proper.
 - 2. Payment for Unit Price Work item that has an as-awarded computed total value of less than the percent (indicated in the Supplementary Conditions) of the sum of the as-awarded total Contract Price will be made at the unit price in the Contract, regardless of an increase or decrease in quantity.

1.4 RELATED PROVISIONS

- A. Payments to SUBCONTRACTOR: Refer to Subcontract Agreement.
- B. Changes in Contract Price: Refer to Subcontract Agreement.
- C. Schedule of Values: Refer to Subcontract Agreement, and Section 01 29 73, Schedule of Values.

1.5 QUANTITIES

- A. The Estimated quantities indicated in the Bid Schedule are the quantities for the evaluation of bids. The actual quantities of items to be paid for on a unit price basis may vary significantly from the quantities indicated in the Bid Schedule.

1.6 SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Subcontract Agreement and Section 01 29 73, Schedule of Values.

1.7 MEASUREMENT

- A. Under this Subcontract, the SUBCONTRACTOR shall provide all labor, equipment, and materials and shall complete all Work as shown and described in the Contract Documents and as directed by ARCADIS and the DEPARTMENT, in accordance with the expressed intent of the Subcontract to secure a complete construction of a functionally complete Project. The bid items described in this Section shall together include all work set forth in the Contract Documents or required to properly complete the Work. Any necessary Work that is not explicitly described shall be considered included in the item to which it properly belongs. Where used in the Contract Documents, the word “including” (“includes”, “include”) shall mean “including (includes, include) but not limited to”. Each item includes:

1. All tools, labor, material, equipment, plant services, bonds and insurance, tests, adjustments, warranties, overhead, supervision and other expenses required to perform the Work.
2. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.
3. All accessories, manuals, and services pertinent to the proper start-up, operation, and maintenance of materials and equipment.

- B. Lump Sum Items: Measurement of all Lump Sum Items will be on a total job basis.

1. The quantities of Work performed under lump sum items will not be measured except for the purpose of determining reasonable interim payments. Interim payments will be made in accordance with the estimated value of Work performed and found acceptable as determined by the ARCADIS or the DEPARTMENT, or as specified in this Section.
2. For each lump sum bid item, the SUBCONTRACTOR shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the lump sum in sufficient detail to document the specific costs of all items included in the lump sum bid item. The schedule of values shall be provided prior to initiation of the Work.
3. Measurement for Progress Payments of all lump sum items will be on a percent complete basis as established in the Contract Documents.

- C. Unit Price Items: For each unit price bid item, the SUBCONTRACTOR shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the unit price in sufficient detail to document the specific costs of all items included in the unit price bid item. The schedule of values shall be provided prior to initiation of the Work. Where items are specified to be measured on a unit basis, measurement will be of each particular unit as specified.
1. Volumetric Basis - Where solid or semi-solid items (e.g. sludge and sediment) are specified to be measured on a volumetric basis, the volume will be determined on an in-place basis (prior to excavation for excavation or after placement and compaction for imported fill) between the existing and final ground surfaces as measured by land surveys. If no tolerance is specified, the tolerance shall be interpreted to be 0.00 foot. Where liquid items are specified to be measured on a volumetric basis, the volume will be determined by direct readings obtained from a graduated container containing the liquid or from a calibrated meter designed to measure the quantity of liquid passing an established point or boundary (e.g. flow meter).
 2. Areal Basis - Where items are specified to be measured on an areal basis, the area will be measured as the actual surface area within the specified limits. If a specified width of an item is indicated, the area will be determined by the actual length along the centerline multiplied by the specified width. No adjustments will be made for the overlap of materials.
 3. Length Basis - Where items are specified to be measured on a length basis, the length will be measured as the actual length along the centerline within specified limits. No adjustments will be made for the overlap of materials.
 4. Weight Basis - Where items are specified to be measured on a weight basis, the weight will be measured based on certified weigh scale tickets obtained from a weigh scale certified by the County Office of Weights and Measures and approved by the ARCADIS and the DEPARTMENT. The weights shall be taken in the presence of a ARCADIS representative. When the weight is per ton, trucks shall be weighed prior to loading and after loading. The measured tonnage will be the difference between the prior- and post-loading measured truck weights.
- D. Measurement and payment will be made only for Work that has been accepted, is within the limits shown on the Contract Documents and is in conformance with the Contract Documents.

1.8 DESCRIPTION OF BID ITEMS

Former Hettling Farm Site

- A. Bid Item FHS-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item FHS-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:
 - a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule
 - s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
 2. Measurement for payment: The bid price for Bid Item FHS-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item FHS-LS-1, and ending at substantial completion.
- B. Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan
1. Payment: The bid unit price for Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:

- a. All of the controls associated with storm water pollution prevention are in place, and
- b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.

This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.

C. Bid Item FHS-UP-3–Implement the Health and Safety Plan

1. Payment: The bid unit price for Bid Item FHS-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.
2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item FHS-UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:
 - a. All of the elements of the SUBCONTRACTOR’s Health and Safety Plan are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item FHS-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the Contractor fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item FHS-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-4 - Mobilization shall be the amount paid to the Contractor to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item FHS-LS-4 – Mobilization will be made upon the completion of:
 - a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads

4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 5. Stockpile and staging areas,
 6. Pre-construction soil sampling,
 7. Field offices and support areas
 8. Other environmental control measures
 9. Sanitary facilities
 10. On-site and off-site traffic controls
 - b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule, Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.
 - c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
 - d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.
- E. Bid Item FHS-LS-5 – Demobilization
1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-5 - Demobilization shall be the amount paid to the Contractor to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-5- Demobilization will be made upon completion of demobilization activities.
- F. Bid Item FHS-LS-6 – Site Clearing and Grubbing
1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.
- G. Bid Item FHS-LS-7 – Interim Grading
1. Measurement and Payment: The bid lump sum price for FHS-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of contaminated soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-7 – Interim Grading will be made upon the completion of excavation activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to

the Contract requirements. In addition, post excavation limit sampling locations will be located on the grading survey.

H. Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation

1. Payment: The bid unit price for Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

I. Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste

1. Payment: The bid unit price for Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

K. Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover

1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item FHS-UP-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys

before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

- L. Bid Item FHS-UP-11 – Furnish and Install Type II– Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-11 – Furnish and Install Type II – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type II – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-LS-11 – Furnish and Install Type II – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type II – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- M. Bid Item FHS-UP-12 – Furnish and Install Type III– Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-12 – Furnish and Install Type III – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-LS-12 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- N. Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover
1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover shall be the amount paid to the SUBCONTRACTOR to furnish and install Type IV – Engineered Cover in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-13 – Furnish and Install Type IV – Engineered Cover will be made upon the completion of

installation of the Type IV – Engineered Cover.

- O. Bid Item FHS-LS-14 – Construction of Access Road
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-14 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-14 – Construction of Access Road will be made upon the completion of access road construction.
- P. Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-15 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- Q. Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-16 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- R. Bid Item FHS-LS-17 – Furnish and Install Soil Amendment
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-17 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-17 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- S. Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch
 - 1. Measurement and Payment: The bid lump sum price for Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-18 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- T. Bid Item FHS-UP-19 – Excavation, Transport and Disposal of Hazardous Materials
 - 1. Payment: The bid unit price for Bid Item FHS-UP-19 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for

each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.

2. Measurement for payment: The bid unit price for Bid Item FHS-LS-19 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.
- U. Bid Item FHS-UP-20 – Install Provided Clay
1. Measurement and Payment: The bid unit price for Bid Item FHS-UP-20 – Install Provided Clay shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Install Provided Clay, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FHS-UP -20 – Install Provided Clay will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Install Provided Clay, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

Former Scolite Site

- A. Bid Item FSS-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item FSS-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:

- a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule
 - s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
2. Measurement for payment: The bid price for Bid Item FSS-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item FSS-LS-1, and ending at substantial completion.
- B. Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan
- 1. Payment: The bid unit price for Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:
 - a. All of the controls associated with storm water pollution prevention are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.

This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.
- C. Bid Item FSS-UP-3–Implement the Health and Safety Plan
- 1. Payment: The bid unit price for Bid Item FSS-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the

SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.

2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item FSS-UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:

- a. All of the elements of the SUBCONTRACTOR's Health and Safety Plan are in place, and
- b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item FSS-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the Contractor fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item FSS-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-4 - Mobilization shall be the amount paid to the Contractor to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item FSS-LS-4 – Mobilization will be made upon the completion of:

- a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads
 4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 5. Stockpile and staging areas,
 6. Pre-construction soil sampling,
 7. Field offices and support areas
 8. Other environmental control measures
 9. Sanitary facilities
 10. On-site and off-site traffic controls
- b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule,

Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.

- c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
- d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.

E. Bid Item FSS-LS-5 – Demobilization

- 1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-5 - Demobilization shall be the amount paid to the SUBCONTRACTOR to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FHS-LS-5- Demobilization will be made upon completion of demobilization activities

F. Bid Item FSS-LS-6 – Site Clearing and Grubbing

- 1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.

G. Bid Item FSS-LS-7 – Interim grading

- 1. Measurement and Payment: The bid lump sum price for FSS-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-7 – Interim Grading will be made upon the completion of grading activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to the Contract requirements. In addition, post grading limit sampling locations will be located on the grading survey.

H. Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation

- 1. Payment: The bid unit price for Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
- 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the

SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.

- I. Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste
 - 1. Payment: The bid unit price for Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.
- J. Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover
 - 1. Measurement and Payment: The bid unit price for Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item FSS-UP-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- K. Bid Item FSS-UP-11 – Furnish and Install Type III– Engineered Cover
 - 1. Measurement and Payment: The bid unit price for Bid Item FSS-UP-11 – Furnish and Install Type III – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.

2. Measurement for payment: The bid unit price for Bid Item FSS-LS-11 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- L. Bid Item FSS-LS-12 – Construction of Access Road
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-12 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-12 – Construction of Access Road will be made upon the completion of access road construction.
- M. Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- N. Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-14 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- O. Bid Item FSS-LS-15 – Furnish and Install Soil Amendment
1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-15 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-15 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- P. Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch

1. Measurement and Payment: The bid lump sum price for Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item FSS-LS-16 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- Q. Bid Item FSS-UP-17 – Excavation, Transport and Disposal of Hazardous Materials
1. Payment: The bid unit price for Bid Item FSS-UP-17 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item FSS-LS-17 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

Proposed Schuyler Heights Fire District Station House Site

- A. Bid Item SFD-LS-1 - Provide Temporary Services
1. Payment: The bid price for Bid lump sum Item SFD-LS-1 – Provide Temporary Services shall be the amount paid to the SUBCONTRACTOR to Provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:
 - a. Site security
 - b. Maintaining construction entrances
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access roads maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Maintaining compliance with permit-equivalency requirements
 - k. Conducting project meetings
 - l. Maintaining project records
 - m. Site superintendence
 - n. Staging and stockpile area maintenance
 - o. Temporary utilities
 - p. Sanitary facilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule

- s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
 - 2. Measurement for payment: The bid price for Bid Item SFD-LS-1 – Provide Temporary Services will be paid in full for all temporary services are provided by the SUBCONTRACTOR beginning after the completion of mobilization, as defined in Bid Item SFD-LS-1, and ending at substantial completion.
- B. Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan
- 1. Payment: The bid unit price for Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:
 - a. All of the controls associated with storm water pollution prevention are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.

This period of potential payment will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion.
- C. Bid Item SFD-UP-3–Implement the Health and Safety Plan
- 1. Payment: The bid unit price for Bid Item SFD-UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the SUBCONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.
 - 2. Measurement for payment: Measurement for payment: The bid unit price for Bid Item SFD -UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:
 - a. All of the elements of the SUBCONTRACTOR’s Health and Safety Plan are in place, and
 - b. The SUBCONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item SFD-UP-3 - Implement the Health and Safety Plan shall begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site. A 100 % reduction in the payment for this item will occur for each day the SUBCONTRACTOR fails to adhere (in the opinion of the DEPARTMENT or the ARCADIS) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No

payment will be made for Saturdays, Sundays and holidays if no Work occurs in the exclusion zone.

D. Bid Item SFD-LS-4 – Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-4 - Mobilization shall be the amount paid to the SUBCONTRACTOR to mobilize to the Site in accordance with the requirements of the Contract Documents. Four payments of 25% of the amount of Bid Item and limited to 2% of the contract price in accordance with Section 01 29 73, Schedule of Values. Item SFD-LS-4 – Mobilization will be made upon the completion of:
 - a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ARCADIS, all project support facilities, including:
 1. Temporary utilities
 2. Construction entrances
 3. Decontamination pads
 4. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 5. Stockpile and staging areas,
 6. Pre-construction soil sampling,
 7. Field offices and support areas
 8. Other environmental control measures
 9. Sanitary facilities
 10. On-site and off-site traffic controls
 - b. Completion, including approval by the ARCADIS and the DEPARTMENT of the SUBCONTRACTOR's required plans for the project, including, the Project Plan, construction schedule, Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control and Countermeasures Plan and Storm water Pollution Prevention Plan.
 - c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
 - d. Other work not specifically included in other identified items including, compliance with applicable regulatory requirements, initial site surveying, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.

E. Bid Item SFD-LS-5 – Demobilization

1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-5 - Demobilization shall be the amount paid to the SUBCONTRACTOR to demobilize from the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-5- Demobilization will be made upon completion of demobilization activities.

- F. Bid Item SFD-LS-6 – Site Clearing and Grubbing
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-6 – Site Clearing and Grubbing shall be the amount paid to the SUBCONTRACTOR to complete clearing and grubbing of the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-6 – Site Clearing and Grubbing will be made upon the completion of clearing and grubbing activities.
- G. Bid Item SFD-LS-7 – Interim Grading
1. Measurement and Payment: The bid lump sum price for SFD-LS-7 – Interim Grading shall be the amount paid to the SUBCONTRACTOR to complete the interim grading of soils to the lines and grades shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-7 – Interim Grading will be made upon the completion of excavation activities. Topographic surveys of the before grading and post grading conditions will be prepared and submitted to the ARCADIS as documentation of the completion of Work to the Contract requirements. In addition, post grading limit sampling locations will be located on the grading survey.
- H. Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation
1. Payment: The bid unit price for Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation shall be the amount paid for each cubic yard of material which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-8 – Additional Contaminated Soil Excavation will be paid in full for each cubic yard of material as directed by the ARCADIS, which is excavated by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before excavation and post-excavation and calculating the resulting volume. The measurements, limits of excavation and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- I. Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste
1. Payment: The bid unit price for Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste shall be the amount paid for each ton of hazardous soil, which is loaded into transport vehicles, transported from the Site, and disposed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-UP-9 – Load, Transport and Dispose of Contaminated Soil as Hazardous Waste will be paid in full for each ton of soil up to 300 tons excavated, loaded, transported and disposed by the SUBCONTRACTOR in accordance with the

requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous soil in the transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

- J. Bid Item SFD-UP-10 – Furnish and Install Type I – Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item SFD-UP-10 – Furnish and Install Type I – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-LS-10 – Furnish and Install Type I – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type I – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- K. Bid Item SFD-UP-11 – Furnish and Install Type III– Engineered Cover
1. Measurement and Payment: The bid unit price for Bid Item SFD -UP-11 – Furnish and Install Type III – Engineered Cover shall be the amount paid for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD - UP-11 – Furnish and Install Type III – Engineered Cover will be paid in full for each cubic yard of material, as well as a geotextile separation fabric between subgrade and Type III – Engineered Cover, as directed by the ARCADIS, which is furnished and placed by the SUBCONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for shall be determined by measuring topographic surveys before placement and post- placement and calculating the resulting volume. The measurements and volume calculation shall be reviewed and approved by the ARCADIS or the DEPARTMENT.
- M. Bid Item SFD-LS-12 – Construction of Access Road
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-12 – Construction of Access Road shall be the amount paid to the SUBCONTRACTOR to complete the construction of the access road to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-13 – Construction of Access Road will be made upon the completion of access road construction.

- N. Bid Item SFD-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment shall be the amount paid to the SUBCONTRACTOR to complete this activity in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-13 – Groundwater/Contaminated Stormwater Collection and Treatment will be made upon the completion of this effort.
- O. Bid Item SFD-LS-14 – Modification of Existing Groundwater Monitoring Wells
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-14 – Modification of Existing Groundwater Monitoring Wells shall be the amount paid to the SUBCONTRACTOR to modify the elevations of the wells in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-14 – Modification of Existing Groundwater Monitoring Wells will be made upon the completion of this effort.
- P. Bid Item SFD-LS-15 – Furnish and Install Soil Amendment
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-15 – Furnish and Install Soil Amendment shall be the amount paid to the SUBCONTRACTOR to furnish and install topsoil in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-15 – Furnish and Install Soil Amendment will be made upon the completion of installation of topsoil at the Site.
- Q. Bid Item SFD-LS-16 – Furnish and Install Seed and Mulch
1. Measurement and Payment: The bid lump sum price for Bid Item SFD-LS-16 – Furnish and Install Seed and Mulch shall be the amount paid to the SUBCONTRACTOR to furnish and install seed and mulch in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item SFD-LS-16 – Furnish and Install Seed and Mulch will be made upon the completion seeding and mulching at the Site.
- R. Bid Item SFD-UP-17 – Excavation, Transport and Disposal of Hazardous Materials
1. Payment: The bid unit price for Bid Item SFD-UP-17 – Excavation, Transport and Disposal of Hazardous Materials shall be the amount paid for each ton of hazardous material, not including soil, which is loaded into transport vehicles, transported from the Site, and disposed by the Contractor in accordance with the requirements of the Contract Documents.
 2. Measurement for payment: The bid unit price for Bid Item SFD-LS-17 – Excavation, Transport and Disposal of Hazardous Materials will be paid in full for each ton of hazardous material, not including soil, up to 100 tons excavated, loaded, transported and disposed by the Contractor in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous material in the

transport vehicles obtained in accordance with Paragraph 1.7. C. 4 of this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope.
 - 1. This Section expands upon provisions of the General Conditions and Supplementary Conditions, and includes:
 - a. Requests for interpretation.
 - b. Clarification notices.
 - c. Minor changes in the Work and Field Orders.
 - d. Work Change Directives.
 - e. Proposal requests.
 - f. Change Order proposals.
 - g. Change Orders.
- B. Submit Contract modification documents to ARCADIS's contact person and address in Section 01 33 00, Submittal Procedures.
- C. Retain at SUBCONTRACTOR's office and at the Site complete copy of each Contract modification document and related documents, and ARCADIS's response.

1.2 REQUESTS FOR INTERPRETATION

- A. General.
 - 1. Submit written requests for interpretation to ARCADIS. SUBCONTRACTOR may submit requests for interpretation.
 - 2. Submit request for interpretation to obtain clarification or interpretation of the Contract Documents. Report conflicts, errors, ambiguities, and discrepancies in the Contract Documents using requests for interpretation.
 - 3. Do not submit request for interpretation when other form of communication is appropriate, such as submittals, requests for substitutions or "or equals", notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate requests for interpretation will be returned without response or action.
- B. Procedure.
 - 1. Submit one original of each request for interpretation. Submit each request for interpretation with separate letter of transmittal.
 - 2. ARCADIS will provide timely review of requests for interpretation. Allow sufficient time for review and response.
 - 3. ARCADIS will maintain log of requests for interpretation. Copy of log will be provided upon request.

4. ARCADIS will provide written response to each request for interpretation. One copy of ARCADIS's response will be distributed to:
 - a. SUBCONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative (RPR).
 - d. ARCADIS.
 5. If ARCADIS requests additional information to make an interpretation, provide information requested within ten days, unless ARCADIS allows additional time, via correspondence referring to request for interpretation number.
 6. If CONTRACTOR or OWNER believes that a change in the Contract Price or Contract Times or other change to the Contract is required, notify ARCADIS in writing before proceeding with the Work associated with the request for interpretation.
- C. Submit each request for interpretation on the request for interpretation form included with this Section, or other form acceptable to ARCADIS.
1. Number each request for interpretation as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First request for interpretation on the general contract for project titled, "Contract MP15" would be, "RFI No. MP15-GC-001".
 2. In space provided on form, describe the interpretation requested. Provide additional sheets as necessary. Include text and sketches as required in sufficient detail for ARCADIS's response.
 3. When applicable, request for interpretation shall include CONTRACTOR's recommended resolution.

1.3 CLARIFICATION NOTICES

- A. General:
1. Clarification notices, when required, will be initiated and issued by ARCADIS.
 2. Clarification notices do not change the Contract Price or Contract Times, and do not alter the Contract Documents.
 3. Clarification notices will be issued as correspondence or using clarification notice form, with additional information as required.
- B. Procedure.
1. One copy of each written clarification notice will be distributed to:
 - a. SUBCONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative.
 - d. ARCADIS.
 2. If SUBCONTRACTOR believes that a change in the Contract Price or the Contract Times or other change to the Contract is required, notify ARCADIS in writing before proceeding with the Work associated with clarification notice.
 3. If clarification notice is unclear, submit request for interpretation.

1.4 MINOR CHANGES IN THE WORK AND FIELD ORDERS

- A. General:
 - 1. Field Orders, when required, will be initiated and issued by ARCADIS.
 - 2. Field Orders authorize minor variations in the Work but do not change the Contract Price or Contract Times.
 - 3. Field Orders will be in the form of ARCADIS Joint Contract Documents Committee (EJCDC) document C-942, "Field Order".
 - 4. ARCADIS will maintain a log of Field Orders issued.
- B. Procedure.
 - 1. One copy of each Field Order will be distributed to:
 - a. SUBCONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative.
 - d. ARCADIS.
 - 2. If SUBCONTRACTOR believes that a change in the Contract Price or the Contract Times or other change to the Contract is required, immediately notify ARCADIS in writing before proceeding with the Work associated with the Field Order.
 - 3. If the Field Order is unclear, submit request for interpretation.

1.5 WORK CHANGE DIRECTIVES

- A. General:
 - 1. Work Change Directives, when required, order additions, deletions, or revisions to the Work.
 - 2. Work Change Directives do not change the Contract Price or Contract Times but are evidence that the parties to the Contract expect that the change ordered or documented by the Work Change Directive will be incorporated in subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times..
 - 3. Work Change Directives will be in the form of EJCDC document C-940, "Work Change Directive".
- B. Procedure.
 - 1. Three originals of Work Change Directive signed by OWNER and ARCADIS will be furnished to SUBCONTRACTOR, who shall promptly sign each original Work Change Directive and, within five days of receipt, return all originals to ARCADIS.
 - 2. Original, signed Work Change Directives will be distributed as follows:
 - a. SUBCONTRACTOR: One original.
 - b. OWNER: One original.
 - c. ARCADIS: One original.
 - 3. One copy of each Work Change Directive will be distributed to:
 - a. Resident Project Representative.
 - 4. When required by ARCADIS, document for the Work performed under each separate Work Change Directive, for each day, the number and type of workers employed and hours worked; equipment used including manufacturer, model, and year of equipment, and number of hours; materials used, receipts for and descriptions of materials and equipment incorporated into the Work, invoices

and labor and equipment breakdowns for Subcontractors and Suppliers, and other information required by ARCADIS, in a format acceptable to ARCADIS. Submit this documentation to ARCADIS as a Change Order proposal.

1.6 PROPOSAL REQUESTS

- A. General:
 - 1. Proposal requests may be initiated by ARCADIS.
 - 2. Proposal requests are for requesting the effect on the Contract Price and the Contract Times and other information relative to contemplated changes in the Work. Proposal requests do not authorize changes or variations in the Work, and do not change the Contract Price or Contract Times or terms of the Contract.
 - 3. Proposal requests will be furnished using the proposal request form included with this Section.
- B. Procedure.
 - 1. One copy of each signed proposal request will be furnished to SUBCONTRACTOR with one copy each to:
 - a. OWNER.
 - b. Resident Project Representative.
 - c. ARCADIS.
 - 2. Submit request for interpretation to clarify conflicts, errors, ambiguities, and discrepancies in proposal request.
 - 3. Upon receipt of proposal request, SUBCONTRACTOR shall prepare and submit a Change Order proposal, in accordance with this Section, for the proposed Work described in the proposal request.

1.7 CHANGE ORDER PROPOSALS

- A. General.
 - 1. Submit written Change Order proposal to ARCADIS in response to each proposal request, and when SUBCONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required.
- B. Procedure.
 - 1. Submit to ARCADIS one original of each Change Order proposal with accompanying documentation. Submit each Change Order proposal with separate letter of transmittal.
 - 2. ARCADIS will review Change Order proposal and either request additional information from SUBCONTRACTOR.
 - 3. When, ARCADIS requests additional information to render a decision, submit required information within five days of receipt of ARCADIS's request, unless ARCADIS allows more time. Submit the required information via correspondence that refers to Change Order proposal number.
 - 4. Upon completing review, one copy of ARCADIS's written response, if any, will be distributed to:
 - a. SUBCONTRACTOR.

- b. OWNER.
 - c. Resident Project Representative.
 - d. ARCADIS.
- 5. If Change Order proposal is approved by ARCADIS, a Change Order will be issued.
 - 6. If parties do not agree on terms for the change, SUBCONTRACTOR may file a Claim, in accordance with the Subcontract Agreement..
- C. Each Change Order proposal shall be submitted on the Change Order proposal form included with this Section, or other form acceptable to ARCADIS.
- 1. Number each Change Order proposal as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First Change Order proposal for the general contract for project named "Contract MP15" would be, "Proposal No. MP15-GC-001".
 - 2. In space provided on form:
 - a. Describe scope of each proposed change. Include text and sketches on additional sheets as required to provide detail sufficient for ARCADIS's review and response. If a change item is submitted in response to proposal request, write in as scope, "In accordance with Proposal Request No." followed by the proposal request number. Provide written clarifications, if any, to scope of change.
 - b. Provide justification for each proposed change. If change is in response to proposal request, write in as justification, "In accordance with Proposal Request No." followed by the proposal request number.
 - c. List the total change in the Contract Price and Contract Times for each proposed change.
 - 3. Unless otherwise directed by ARCADIS, attach to the Change Order proposal detailed breakdowns of pricing (Cost of the Work and SUBCONTRACTOR's fee) including:
 - a. List of Work tasks to accomplish the change.
 - b. For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.
 - b. Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.
 - c. Detailed breakdown of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
 - d. Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and materials and equipment incorporated into the Work, other costs, and Subcontractor fees.
 - e. Breakdown of other costs eligible, in accordance with the Subcontract Agreement.
 - f. Other information required by ARCADIS.
 - g. SUBCONTRACTOR's fees applied to eligible SUBCONTRACTOR costs and eligible SUBCONTRACTOR costs.

1.8 CHANGE ORDERS

- A. General:
 - 1. Change Orders will be Signed by ARCADIS and SUBCONTRACTOR, to authorize additions, deletions, or revisions to the Work, or changes to the Contract Price or Contract Times.
 - 2. Change Orders will be in the form of EJCDC document C-941, "Change Order".
- B. Procedure.
 - 1. Two originals of each Change Order will be furnished to SUBCONTRACTOR, who shall sign each original Change Order and return all originals to ARCADIS within five days of receipt.
 - 2. ARCADIS will sign each original Change Order.
 - 3. After approval and signature by ARCADIS, original Change Orders will be distributed as follows:
 - a. SUBCONTRACTOR: One original.
 - b. ARCADIS: One original.
 - 4. One copy of each Change Order will be distributed to:
 - a. Resident Project Representative.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The forms listed below, following the "End of Section" designation, are part of this Specification Section:
 - 1. Request for Interpretation form (one page).
 - 2. Proposal Request form (one page).
 - 3. Change Order Proposal form (one page).

+ + END OF SECTION + +

[OWNER]
[PROJECT NAME/NUMBER]

REQUEST FOR INTERPRETATION

Subcontractor: _____ RFI No. _____
Date Transmitted: _____ Date Received: _____
Date Response Requested: _____ Date Response Transmitted: _____

Subject: _____
Specification Section and Paragraph: _____

Drawing References: _____

INTERPRETATION REQUESTED:

Signature: _____ Date: _____

ARCADIS'S RESPONSE:

Signature: _____ Date: _____

[OWNER]
[PROJECT NAME/NUMBER]

PROPOSAL REQUEST

Proposal Request No.: _____ Date: _____

Contract Name and No.: _____

Subcontractor: _____

Other Contracts Involved in Proposed Change: _____

TO SUBCONTRACTOR: Please submit a complete Change Order proposal for the proposed modifications described below. If the associated Change Order proposal is approved, a Change Order will be issued to authorize adjustment so the scope of the Work. This Proposal Request is not a Change Order, Work Change Directive, or an authorization to proceed with the proposed Work described below.

SCOPE OF PROPOSED WORK:

1. *Item:*
2. *Item:*
3. *Item:*

Proposal Requested By: _____

Signature

of

Requestor:

[OWNER]
[PROJECT NAME/NUMBER]

CHANGE ORDER PROPOSAL

Change Order Proposal No.: _____ Date: _____

Submitted in Response to Proposal Request No.: _____

Contract Name and No.: _____

Subcontractor: _____

Subject: _____

The following changes to the Contract are proposed:

SCOPE OF WORK: *(attach and list supporting information as required)*

1. *Item:*
2. *Item:*

JUSTIFICATION:

1. *Item:*
2. *Item:*

CHANGES IN CONTRACT PRICE AND CONTRACT TIMES:

We propose that the Subcontract Price and Subcontract Times be changed as follows:

For Contract Price, when requested by ARCADIS, attach detailed cost breakdowns for Subcontractor and Subcontractors, Supplier quotations, and other information required.

For the Contract Times, state increase, decrease, or no change to Contract Times for Substantial Completion, readiness for final payment, and Milestones, if any. If increase or decrease, state specific number of days for changes to the Contract Times.

Description	Amount	Contract Times (days)	
		Substantial	Final
1. Item	\$0.00	0	0
2. Item	\$0.00	0	0
Total This Change Order Proposal	\$0.00	0	0

Changes _____ to _____ Milestones, _____ if _____ any:

The adjustment proposed is the entire adjustment to the Contract to which the proposer believes it is entitled as a result of the proposed change.

Change Order Proposal By: _____

Signature _____ of _____ Proposer: _____

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Submit to ARCADIS for acceptance a Schedule of Values that allocates cost to each item of the Work. Schedule of Value list of line items shall correspond to each aspect of the Work, establishing in detail the portion of the Contract Price allocated to each major component of the Work.
- B. Upon request of ARCADIS, support values with data that substantiate their correctness.
- C. Submit preliminary Schedule of Values to ARCADIS for initial review. SUBCONTRACTOR shall incorporate ARCADIS' comments into the Schedule of Values and resubmit to ARCADIS. ARCADIS may require corrections and re-submittals until Schedule of Values is acceptable.
- D. Schedule of Values and the Progress Schedule updates specified in Section 01 32 16, Progress Schedule, shall be basis for preparing each Application for Payment. Schedule of Values may be used as a basis for negotiating price of changes, if any, in the Work.
- E. Include in Schedule of Values unit price payment items with their associated quantity. Provide in the Schedule of Values detailed breakdown of unit prices when required by ARCADIS.
- F. Requirements for preliminary Schedule of Values and Schedule of Values are:
 - 1. Schedule of Values shall show division of Work between SUBCONTRACTOR and Others. Line items for Work to be done by Others shall include the word, "(SUBCONTRACTED)".
 - 2. Schedule of Values shall include breakdown of costs for materials and equipment, installation, and other costs used in preparing the Bid by SUBCONTRACTOR and Others. List purchase and delivery costs for materials and equipment for which SUBCONTRACTOR may apply for payment as stored materials.
 - 3. Include separate amounts for each Specification Section in the Contract Documents by structure, building, and work area.
 - 4. Identify each line item with number corresponding to the associated Specification Section number. List sub-items of major products or systems, as appropriate or when requested by ARCADIS.

5. Sum of individual values shown on the Schedule of Values shall equal the total of associated payment item. Sum of payment item totals in the Schedule of Values shall equal the Contract Price.
6. Include in each line item a directly proportional amount of SUBCONTRACTOR's overhead and profit. Do not include overhead and profit as separate item(s).
7. Include separate line item for each allowance, and for each unit price item
8. Include line item for bonds and insurance in payment item for Bid Items FHS-LS-1, FSS-LS-1, and SFD-LS-1 in amount not exceeding 2.0 percent of the Contract Price. This may be applied for in the first Application for Payment.
9. Include items for the Agreement, permits (when applicable), construction Progress Schedule, and other items required by ARCADIS. Include such items in Applications for Payment on schedule accepted by ARCADIS
10. Line items for Site maintenance such as dust control, snow removal, compliance with storm water pollution prevention plans and permits, spill prevention control and countermeasures plans, and for construction photographic documentation; temporary utilities and temporary facilities, field offices, temporary controls, field engineering, and similar Work shall be included in the Schedule of Values and proportioned in Applications for Payment throughout duration of the Work.
12. Include separate line items under each appropriate payment item for mobilization and demobilization. Document for ARCADIS the activities included in mobilization and demobilization line items.
 - a. Mobilization will be limited to two percent of the Contract Price, and will be paid in four payments, each of 25 percent of total amount for mobilization.
 - b. Demobilization shall be at least one percent of the Contract Price and shall be included with the Application for Payment following Substantial Completion, or other schedule accepted by ARCADIS.
13. Costs for submittals, operations and maintenance manuals, field testing, and training of operations and maintenance personnel shall be as follows, unless otherwise accepted by ARCADIS:
 - a. Up to eight percent of cost (including overhead and profit) of each equipment item, exclusive of transportation and installation costs associated with that item, may be allocated to preparation of submittals and may be included in the Application for Payment following ARCADIS' approval of Shop Drawings (and acceptance of other submittals, as applicable) required for fabricating or purchasing for that item for the Work.
 - b. Up to three percent of total cost of each item (including overhead and profit), including materials and equipment, and installation, may be apportioned to testing and included in the Application for Payment following ARCADIS' acceptance of the associated written Site testing report(s).
 - c. Up to a total of four percent of equipment cost (including overhead and profit), exclusive of transportation and installation costs, may be apportioned to operations and maintenance manuals and training of

operations and maintenance personnel, which may be included in the Application for Payment following completion of training for that item.

14. Not used.
15. Submit Schedule of Values on 8.5-inch by 11-inch white paper, using the continuation sheets of the Application for Payment form specified in Section 01 29 76, Progress Payment Procedures.
16. Coordinate Schedule of Values with resource loading and cost loading of the Progress Schedule, in accordance with Section 01 32 16, Progress Schedule.

1.2 SUBMITTALS

- A. Informational Submittals: Submit the following:
 1. Submit to ARCADIS one copy of Schedule of Values.
 2. Content of Schedule of Values submittals shall conform to Article 1.1 of this Section.
 3. Time Frames for Submittals:
 - a. Submit preliminary Schedule of Values within ten days of date that the Contract Times commence running in accordance with the Notice to Proceed.
 - b. When required by ARCADIS, promptly submit updated Schedule of Values to include cost breakdowns for changes in the Contract Price.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 29 76

PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 PROGRESS PAYMENTS

- A. General.
 - 1. SUBCONTRACTOR's requests for payment shall be in accordance with the Agreement and the Specifications.
 - 2. Applications for Payment shall be in the form of Engineers Joint Contract Documents Committee (EJCDC) document C-620, "Subcontractor's Application for Payment".
- B. Procedure:
 - 1. Review with Resident Project Representative (RPR) quantities and the Work proposed for inclusion in each progress payment. Application for Payment shall cover only the Work and quantities recommended by the RPR.
 - 2. Submit to ARCADIS two originals of each complete Application for Payment and other documents to accompany the Application for Payment.
 - 3. ARCADIS will act on request for payment in accordance with the Agreement..
- C. Each request for progress payment shall include:
 - 1. Completed Application for Payment form, including summary/signature page, progress estimate sheets, and stored materials summary. Progress estimate sheets shall have the same level of detail as the Schedule of Values.
 - 2. Legibly indicate on invoice or bill of sale the specific materials or equipment included in the payment request and corresponding bid/payment item number for each.
 - 3. For payment requests that include payment for Work under an allowance, submit documentation acceptable to ARCADIS and DEPARTMENT of the authorization of allowance Work.
 - 4. For payment requests (other than request for final payment) that include reduction or payment of retainage in an amount greater than that required in the Contract Documents, submit on form acceptable to ARCADIS and DEPARTMENT consent of surety to partial release or reduction of retainage.
- D. Requirements for request for final payment are in the Agreement and Section 01 77 19, Closeout Requirements.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 31 13

PROJECT COORDINATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall coordinate the Work, including testing agencies whether hired by SUBCONTRACTOR, DEPARTMENT, or others; Suppliers, and others with whom coordination is necessary, in accordance with this Section, to complete the Work within the Contract Times and in accordance with the Contract Documents.
- B. In accordance with the Agreement, SUBCONTRACTOR shall cooperate with and coordinate the Work with Others, utility service companies, DEPARTMENT's employees working at the Site, and other entities working at the Site, in accordance with Section 01 11 13, Summary of Work.
- C. SUBCONTRACTOR will not be responsible or liable for damage unless damage is through negligence of SUBCONTRACTOR, or Others, Supplier, or other entity employed by SUBCONTRACTOR.
- D. Attend and participate in all project coordination and progress meetings, and report on the progress of the Work and compliance with the Progress Schedule.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 31 19.13

PRE-CONSTRUCTION CONFERENCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. A pre-construction conference will be held for the Project.
 - 2. SUBCONTRACTOR shall attend the conference prepared to discuss all items on the agenda.
 - 3. ARCADIS will distribute an agenda, preside at conference, and prepare and distribute minutes to all conference participants and others as requested.
- B. Purpose of conference is to designate responsible personnel, establish working relationships, discuss preliminary schedules submitted by SUBCONTRACTOR, and review administrative and procedural requirements for the Project. Matters requiring coordination will be discussed and procedures for handling such matters will be established.
- C. Date, Time and Location: Conference will be held after execution of the Contract and before Work starts at the Site. ARCADIS will establish the date, time, and location of conference and notify the interested and involved parties.
- D. Prior to the conference, submit the following preliminary schedules in accordance with the General Conditions:
 - 1. Progress Schedule.
 - 2. Schedule of Submittals.
 - 3. Schedule of Values.
- E. SUBCONTRACTOR shall provide information required and contribute appropriate items for discussion. SUBCONTRACTOR shall bring to the conference the following, with sufficient number of copies for each attendee:
 - 1. Preliminary Progress Schedule, as submitted to ARCADIS.
 - 2. Preliminary Schedule of Submittals, as submitted to ARCADIS.
 - 3. Preliminary Schedule of Values, as submitted to ARCADIS.
 - 4. List of emergency contact information, in accordance with Article 1.4 of this Section.
 - 5. SUBCONTRACTOR's Site-specific health and safety plan, as submitted to ARCADIS.

1.2 REQUIRED ATTENDANCE

- A. Representative of each entity attending the conference shall be authorized to act on that entity's behalf.
- B. SUBCONTRACTOR Attendance: Conference shall be attended by SUBCONTRACTOR's project manager, Site superintendent, project managers for major SUBCONTRACTOR's, and major equipment Suppliers as SUBCONTRACTOR deems appropriate.
- C. Other attendees will be representatives of:
 - 1. DEPARTMENT.
 - 2. ARCADIS.
 - 3. Authorities having jurisdiction over the Work, if available.
 - 4. Utility owners, as applicable.
 - 5. Others as requested by DEPARTMENT, SUBCONTRACTOR, or ARCADIS.

1.3 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revisions to this agenda, if any, will be furnished to SUBCONTRACTOR prior to conference.
 - 1. Procedural and Administrative:
 - a. Personnel and Teams:
 - 1) Designation of roles and personnel.
 - 2) Limitations of authority of personnel, including personnel who will sign Contract modifications and make binding decisions.
 - 3) Lists of proposed SUBCONTRACTOR's and manufacturers (where applicable).
 - 4) Authorities having jurisdiction.
 - b. Procedures for communications and correspondence.
 - c. Copies of the Contract Documents and availability.
 - d. SUBCONTRACTOR's.
 - e. The Work and Scheduling:
 - 1) Scope of the Work.
 - 2) Contract Times, including Milestones (if any).
 - 3) Phasing and sequencing.
 - 4) Preliminary Progress Schedule.
 - 5) Critical path activities.
 - f. Safety:
 - 1) Responsibility for safety.
 - 2) Designation of SUBCONTRACTOR's safety representative.
 - 3) Emergency procedures and accident reporting.
 - 4) Emergency contact information.
 - 5) Confined space entry procedures.
 - 6) Hazardous materials communication program.

- 7) Impact of Project on public safety.
- g. Permits.
- h. Review of insurance requirements and insurance claims.
- i. Coordination:
 - 1) Project coordination, and coordination among Others.
 - 2) Coordination with DEPARTMENT's operations.
 - 3) Progress meetings.
- j. Products and Submittals:
 - 1) Preliminary Schedule of Submittals.
 - 2) Shop Drawings, Samples, and other submittals.
 - 3) Product options, "or equals", and substitutions.
 - 4) Construction photographic documentation.
- k. Contract Modification Procedures
 - 1) Requests for interpretation
 - 2) Clarification notices
 - 3) Field Orders
 - 4) Proposal requests
 - 5) Change Order proposals
 - 6) Work Change Directives.
 - 7) Change Orders.
 - 8) Procedure for filing Claims.
- l. Payment:
 - 1) DEPARTMENT's Project financing and funding, as applicable.
 - 2) DEPARTMENT's tax-exempt status.
 - 3) Preliminary Schedule of Values, and procedures for measuring for payment.
 - 4) Retainage.
 - 5) Progress payment procedures.
 - 6) Prevailing wage rates and payrolls.
- m. Testing and inspections, including notification requirements.
- n. Disposal of demolition materials.
- o. Record documents.
- p. Preliminary Discussion of Contract Closeout:
 - 1) Procedures for Substantial Completion.
 - 2) Contract closeout requirements.
 - 3) Correction period.
 - 4) Duration of bonds and insurance.
- 2. Site Mobilization (if not covered in a separate meeting):
 - a. Working hours and overtime.
 - b. Field offices, trailers, and staging areas.
 - c. Temporary facilities.
 - d. Temporary utilities and limitations on utility consumption (where applicable).
 - e. Utility company coordination (if not done as a separate meeting).
 - f. Access to Site, access roads, and parking for construction vehicles.
 - g. Maintenance and protection of traffic.

- h. Use of premises.
- i. Protection of existing property.
- j. Security.
- k. Temporary controls, such as sediment and erosion control, noise control, dust control, storm water control, and other such measures.
- l. Site barriers and temporary fencing.
- m. Storage of materials and equipment.
- n.. Reference points and benchmarks; surveys and layouts.
- o. Site maintenance during the Project.
- p. Cleaning and removal of trash and debris.
- q. Restoration.
- 3. General discussion and questions.
- 4. Next meeting.
- 5. Site visit, if required.

1.4 EMERGENCY CONTACT INFORMATION

- A. SUBCONTRACTOR shall provide list of emergency contact information for 24-hour use throughout the Project. Emergency contact information shall be updated and kept current throughout the Project. If personnel or contact information change, provide updated emergency contact information list at the next progress meeting.
- B. SUBCONTRACTOR's list of emergency contact information shall include:
 - 1. SUBCONTRACTOR's project manager's office, field office, cellular, and home telephone numbers.
 - 2. SUBCONTRACTOR's Site superintendent's office, field office, cellular, and home telephone numbers.
 - 3. SUBCONTRACTOR's foreman's field office, cellular (if available), and home telephone numbers.
 - 4. Others and Suppliers' office, cellular, and home telephone numbers of project manager and foreman (when applicable).
- C. Additional Emergency Contact Information:
 - 1. Not used.
 - 2. Not used.
 - 3. Not used.
 - 4. ARCADIS' project manager's office, cellular, and home telephone numbers.
 - 5. ARCADIS' project engineer's office, cellular, and home telephone numbers.
 - 6. Resident Project Representative's office, field office, cellular, and home telephone numbers.
 - 7. Utility companies' 24-hour contact telephone number(s), including gas, water, sewer, oil, telephone, cable television/telecommunications, and other companies or concerns having utilities in the vicinity of the Work.
 - 8. Highway and street owners' 24-hour telephone number(s).
 - 9. Emergency telephone numbers, including: "Emergency: Dial 911", and seven-digit telephone numbers for the hospital, ambulance, police, and fire

- department nearest to the Site. Provide names of each of these institutions.
10. Other involved entities as applicable.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 31 19.23

PROGRESS MEETINGS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. Progress meetings will be held throughout the Project. SUBCONTRACTOR shall attend each progress meeting prepared to discuss in detail all items on the agenda.
 - 2. ARCADIS will preside at progress meetings and will prepare and distribute minutes of progress meetings to all meeting participants and others as requested.
- B. Date and Time:
 - 1. Regular Meetings: Every two weeks on a day and time agreeable to DEPARTMENT, ARCADIS, and SUBCONTRACTOR.
 - 2. Other Meetings: As required.
- C. Place: SUBCONTRACTOR's field office at the Site or other location mutually agreed upon by DEPARTMENT, SUBCONTRACTOR, and ARCADIS.
- D. Handouts: SUBCONTRACTOR shall bring to each progress meeting a minimum of three (3) copies of each of the following:
 - 1. List of Work accomplished since the previous progress meeting.
 - 2. Up-to-date Progress Schedule.
 - 3. Up-to-date Schedule of Submittals.
 - 4. Detailed "look-ahead" schedule of Work planned through the next progress meeting, with specific starting and ending dates for each activity, including shutdowns, deliveries of important materials and equipment, Milestones (if any), and important activities affecting the DEPARTMENT, Project, and Site.
 - 5. When applicable, list of upcoming, planned time off (with dates) for personnel with significant roles on the Project, and the designated contact person in their absence.

1.2 REQUIRED ATTENDANCE

- A. Representatives present for each entity shall be authorized to act on that entity's behalf.
- B. Required Attendees:
 - 1. SUBCONTRACTOR:
 - a. Project manager.

- b. Site superintendent.
- c. Safety representative.
- d. When needed for the discussion of a particular agenda item, representatives of Subcontractor's and Suppliers shall attend meetings.
- 2. ARCADIS:
 - a. Project manager or designated representative
 - b. Resident Project Representative (if any).
 - c. Others as required by ARCADIS.
- 3. DEPARTMENT's representative(s), as required.
- 4. Testing and inspection agencies, as required.
- 5. Others, as appropriate.

1.3 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revised agenda, if any, will be furnished to SUBCONTRACTOR prior to first progress meeting. Progress meeting agenda may be modified by ARCADIS during the Project as required.
 - 1. Review, comment, and amendment (if required) of minutes of previous progress meeting.
 - 2. Review of progress since the previous progress meeting.
 - 3. Planned progress through next progress meeting.
 - 4. Review of Progress Schedule
 - a. Contract Times, including Milestones (if any).
 - b. Critical path.
 - c. Schedules for fabrication and delivery of materials and equipment.
 - d. Corrective measures, if required.
 - 5. Submittals:
 - a. Review of status of critical submittals.
 - b. Review revisions to Schedule of Submittals.
 - 6. Contract Modifications
 - a. Requests for interpretation.
 - b. Clarification notices.
 - c. Field Orders.
 - d. Proposal requests.
 - e. Change Order proposals.
 - f. Work Change Directives.
 - g. Change Orders.
 - h. Claims.
 - 7. Applications for progress payments.
 - 8. Problems, conflicts, and observations.
 - 9. Quality standards, testing, and inspections.
 - 10. Coordination between parties.
 - 11. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.
 - 12. Safety.

13. Permits.
14. Construction photographic documentation.
15. Record documents status.
16. Punch list status, as applicable.
17. Other business.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 32 16.00.10

PROGRESS SCHEDULE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Prepare and submit Progress Schedules in accordance with this Section, unless otherwise accepted by ARCADIS.
2. Maintain and update Progress Schedules. Submit updated Progress Schedules as specified in this Section unless otherwise directed by ARCADIS.
3. ARCADIS' acceptance of the Progress Schedule, and comments or opinions concerning the activities in the Progress Schedule shall not control SUBCONTRACTOR's independent judgment relative to means, methods, techniques, sequences, and procedures of construction. SUBCONTRACTOR is solely responsible for complying with the Contract Times.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Progress Schedules:
 - a. Submit in accordance with Section 01 33 00, Submittal Procedures.
 - b. After making revisions in accordance with ARCADIS' comments on the preliminary Progress Schedule, submit two copies of Progress Schedule in accordance with the Subcontract Agreement. Submit in accordance with Section 01 33 00, Submittal Procedures.
 - c. Submit updated Progress Schedule at each progress meeting. If a Progress Schedule remains unchanged from one progress meeting to the next, submit a written statement to that effect. For monthly Progress Schedule submittals, bring to progress meeting the number of copies of the updated Progress Schedule specified in Section 01 31 19.23, Progress Meetings.
 - d. Submit each Progress Schedule submittal with letter of transmittal complying with requirements of Section 01 33 00, Submittal Procedures, and specifically indicating the following:
 - 1) Listing of activities and dates that have changed since the previous Progress Schedule submittal.
 - 2) Discussion of problems causing delays, anticipated duration of delays, and proposed countermeasures.
2. Recovery Schedules: Submit in accordance with this Section.

1.3 PROGRESS SCHEDULE FORMAT AND CONTENT

- A. Format:
 - 1. Type:
 - a. Horizontal bar chart or Gantt chart.
 - 2. Sheet Size: 11 x 17, unless otherwise accepted by ARCADIS.
 - 3. Time Scale: Indicate first date of each work week.
 - 4. Organization:
 - a. Indicate on the separate Schedule of Submittals dates for submitting and reviewing Shop Drawings, Samples, and other submittals.
 - b. Group deliveries of materials and equipment into a separate sub-schedule that is part of the Progress Schedule.
 - c. Group construction into a separate sub-schedule (that is part of the Progress Schedule) by activity.
 - d. Group critical activities that dictate the rate of progress (the “critical path”) into a separate sub-schedule that is part of the Progress Schedule. Clearly indicate the critical path on the Progress Schedule.
 - e. Organize each sub-schedule by Specification Section number.
 - 5. Activity Designations: Indicate title and related Specification Section number.
- B. Content: Progress Schedules shall indicate the following:
 - 1. Delivery dates for materials and equipment to be incorporated into the Work.
 - 2. Dates for beginning and completing each phase of the Work by activity and by trade.
 - 3. Dates corresponding to the Contract Times, and planned completion date associated with each Milestone (if any), Substantial Completion, and readiness for final payment.
- C. Coordinate the Progress Schedule with the Schedule of Submittals.

1.4 RECOVERY SCHEDULES

- A. Recovery Schedules, General:
 - 1. When updated Progress Schedule indicates that the ability to comply with the Contract Times falls ten or more days behind schedule, and there is no excusable delay, Change Order, or Work Change Directive to support an extension of the Contract Times, SUBCONTRACTOR shall prepare and submit a Progress Schedule demonstrating SUBCONTRACTOR’s plan to accelerate the Work to achieve compliance with the Contract Times (“recovery schedule”) for ARCADIS’ acceptance.
 - 2. Submit recovery schedule within five days after submittal of updated Progress Schedule where need for recovery schedule is indicated.
- B. Implementation of Recovery Schedule:
 - 1. At no additional cost to ARCADIS, do one or more of the following: furnish additional labor, provide additional construction equipment, provide suitable materials, employ additional work shifts, expedite procurement of materials

and equipment to be incorporated into the Work, and other measures necessary to complete the Work within the Contract Times.

2. Upon acceptance of recovery schedule by ARCADIS, incorporate recovery schedule into the next Progress Schedule update.
- C. Lack of Action:
1. SUBCONTRACTOR's refusal, failure, or neglect to take appropriate recovery action, or to submit a recovery schedule, shall constitute reasonable evidence that SUBCONTRACTOR is not prosecuting the Work or separable part thereof with the diligence that will ensure completion within the Contract Times. Such lack of action shall constitute sufficient basis for ARCADIS to exercise remedies available to ARCADIS under the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide submittals in accordance with this Section.
2. Provide submittals well in advance of need for the material or equipment, or procedure (as applicable), in the Work and with ample time required for delivery of material or equipment and to implement procedures following ARCADIS' approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.
3. SUBCONTRACTOR is responsible for dimensions to be confirmed and corrected at the Site, for information pertaining solely to the fabrication processes and to techniques of construction, and for coordinating the work of all trades. SUBCONTRACTOR's signature of submittal's stamp and letter of transmittal shall be SUBCONTRACTOR's representation that SUBCONTRACTOR has met his obligations under the Contract Documents relative to that submittal.

B. Samples:

1. Conform submittal of Samples to this Section and the Specification Section in which the Sample is specified.
2. Furnish at the same time Samples and submittals that are related to the same unit of Work or Specification Section. ARCADIS will not review submittals without associated Samples and will not review Samples without associated submittals.
3. Samples shall clearly illustrate functional characteristics of product, all related parts and attachments, and full range of color, texture, pattern, and material.

1.2 TYPES OF SUBMITTALS

- ###### A. Submittal types are classified as follows: 1) Action Submittals, 2) Informational Submittals, 3) Closeout Submittals, and 4) Maintenance Material submittals. Type of each required submittal is designated in the respective Specification Sections; when type of submittal is not specified in the associated Specification Section, submittal will be classified as follows:

1. Action Submittals include:
 - a. Shop Drawings.
 - b. Product data.
 - c. Delegated design submittals, which include documents prepared,

sealed, and signed by a design professional retained by SUBCONTRACTOR, SUBCONTRACTOR, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specification Section. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.

- d. Samples.
- e. Testing plans, procedures, and testing limitations.
- 2. Informational Submittals include:
 - a. Certificates.
 - b. Design data not sealed and signed by a design professional retained by SUBCONTRACTOR, SUBCONTRACTOR, or Supplier.
 - c. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potential Hazardous Environmental Condition, and similar reports.
 - d. Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.
 - e. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.
 - f. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.
 - g. Supplier reports.
 - h. Sustainable design submittals (other than sustainable design closeout documentation).
 - i. Special procedure submittals, including health and safety plans and other procedural submittals.
 - j. Qualifications statements.
- 3. Closeout Submittals include:
 - a. Maintenance contracts.
 - b. Operations and maintenance data.
 - c. Bonds, such as maintenance bonds and bonds for a specific product or system.
 - d. Warranty documentation.
 - e. Record documentation.
 - f. Sustainable design closeout documentation.
 - g. Software.
- 4. Maintenance Material Submittals include:
 - a. Spare parts.
 - b. Extra stock materials.
 - c. Tools.
- 5. When type of submittal is not specified and is not included in the list above, ARCADIS will determine the type of submittal.

- B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:
1. Requests for interpretations of the Contract Documents.
 2. Change Orders, Work Change Directives, and Field Orders.
 3. Applications for Payment
 4. Progress Schedules.
 5. Photographic documentation.
 6. Reports and documentation required in accordance with applicable permits
 7. Site survey data.

1.3 SUBMITTALS REQUIRED IN THIS SECTION

- A. Informational Submittals: Provide the following:
1. Schedule of Submittals:
 - a. Timing:
 - 1) Provide submittal within time frames specified in the Contract Documents.
 - 2) Provide updated Schedule of Submittals with each submittal of the updated Progress Schedule.
 - b. Content: In accordance with this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:
 - 1) Date by which submittal will be provided to ARCADIS.
 - 2) Whether submittal will be for a substitution or "equal". Procedures for substitutions and "or equals" are specified in the Division 01 Specifications
 - 3) Date by which ARCADIS' response is required. At least five days shall be allowed from ARCADIS' receipt of each submittal. Allow increased time for large or complex submittals.
 - 4) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other SUBCONTRACTORS.
 - c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules.
 - d. Coordinate Schedule of Submittals with the Progress Schedule.
 - e. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's critical path, or that that places extraordinary demands on ARCADIS for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.
 - f. In preparing Schedule of Submittals:
 - 1) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.

- 2) Reasonable time shall be allowed for: ARCADIS' review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to SUBCONTRACTOR.
- 3) Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.4 PROCEDURE FOR SUBMITTALS

- A. Submittal Identification System: Use the following submittal identification system, consisting of submittal number and review cycle number.
1. Submittal Number: Shall be separate and unique number correlating to each individual submittal required. SUBCONTRACTOR shall assign submittal number as follows:
 - a. First part of submittal number shall be the applicable Specification Section number, followed by a hyphen.
 - b. Second part of submittal number shall be a three-digit number (sequentially numbered from 001 through 999) assigned to each separate and unique submittal provided under the associated Specification Section.
 - c. Typical submittal number for the third submittal provided for Section 40 05 19, Ductile Iron Process Pipe, would be "40 05 19-003".
 2. Review Cycle Number: Shall be a letter designation indicating the initial submittal or re-submittal associated with each submittal number:
 - a. "A" = Initial (first) submittal.
 - b. "B" = Second submittal (e.g., first re-submittal).
 - c. "C" = Third submittal (e.g., second re-submittal).
 3. Examples:

Example Description	Submittal Identification	
	Submittal No.	Review Cycle
Initial (first) review cycle of the third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	A
Second review cycle (first re-submittal) of third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	B

- B. Letter of Transmittal for Submittals:
1. Provide separate letter of transmittal with each submittal. Each submittal shall be for one Specification Section.
 2. At beginning of each letter of transmittal, provide a reference heading indicating: SUBCONTRACTOR's name, DEPARTMENT, Project name, Contract name and number, transmittal number, and submittal number.
 3. For submittals with proposed deviations from requirements of the Contract Documents, letter of transmittal shall specifically describe each proposed variation.
- C. SUBCONTRACTOR's Review and Stamp:

1. SUBCONTRACTOR's Review: Before transmitting submittals to ARCADIS, review submittals to:
 - a. assure proper coordination of the Work;
 - b. determine that each submittal is in accordance with SUBCONTRACTOR's desires;
 - c. verify that submittal contains sufficient information for ARCADIS to determine compliance with the Contract Documents.
2. Incomplete or inadequate submittals will be returned without review.
3. SUBCONTRACTOR's Stamp and Signature:
 - a. Each submittal provided shall bear SUBCONTRACTOR's stamp of approval and signature, as evidence that submittal has been reviewed by SUBCONTRACTOR and verified as complete and in accordance with the Contract Documents.
 - b. Submittals without SUBCONTRACTOR's stamp and signature will be returned without review. Signatures that appear to be computer-generated will be regarded as unsigned and the associated submittal will be returned without review.
 - c. SUBCONTRACTOR's stamp shall contain the following:

"Project Name: _____

SUBCONTRACTOR's Name: _____

Date: _____

----- *Reference* -----

Item/Submittal Title: _____

Specifications:

Section: _____

Page No.: _____

Paragraph No.: _____

Drawing No.: _____ of _____

Location of Work: _____

Submittal No. and Review Cycle: _____

Coordinated by SUBCONTRACTOR with Submittal Nos.: _____

I hereby certify that the SUBCONTRACTOR has satisfied SUBCONTRACTOR's obligations under the Contract Documents relative to SUBCONTRACTOR's review and approval of this submittal.

Approved By (for SUBCONTRACTOR): _____

_____ "

D. Submittal Marking and Organization:

1. Mark on each page of submittal and each individual component submitted with submittal number and applicable Specification paragraph.
2. Arrange submittal information in same order as requirements are written in the associated Specification Section.
3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to ARCADIS.
4. Package together submittals for the same Specification Section. Do not provide required information piecemeal.

E. Format of Submittal and Recipients:

1. Action Submittals and Informational Submittals: Furnish in accordance with Table 01 33 00-A, except that submittals of Samples shall be as specified elsewhere in this Section:

**TABLE 01 33 00-A: SUBMITTAL CONTACTS
AND REQUIRED COPIES**

	Address for Deliveries	Contact Person	E-mail Address	No. copies	Remarks
a.	ARCADIS of New York, Inc., 855 Route 146, Suite 210 Clifton Park, NY 12065	David Hiss	david.hiss@arcadis-us.com	One Electronic	
b.	Resident Project Representative: At the Site.	TBD	TBD	One	
Notes: TBD = To Be Determined					

2. Samples:

- a. Securely label or tag Samples with submittal identification number. Label or tag shall include clear space at least three inches by three inches in size for affixing ARCADIS' review stamp. Label or tag shall not cover, conceal, or alter appearance or features of Sample. Label or tag shall not be separated from the Sample.
- b. Submit number of Samples required in Specifications. If number of Samples is not specified in the associated Specification Section, provide at least one Sample of each item required for ARCADIS' approval. Samples will not be returned to SUBCONTRACTOR. If SUBCONTRACTOR requires Sample(s) for SUBCONTRACTOR's use, notify ARCADIS in writing and provide additional Sample(s). SUBCONTRACTOR is responsible for furnishing, shipping, and transporting additional Samples.
- c. Deliver one Sample to ARCADIS' field office at the Site. Deliver balance of Samples to ARCADIS at address listed in Table 01 33 00-A, unless otherwise directed by ARCADIS.

3. Closeout Submittals:

- a. Provide the following Closeout Submittals in accordance with Table 01 33 00-A: maintenance contracts; bonds for specific products or systems; warranty documentation; and sustainable design closeout

documentation. On documents such as maintenance contracts and bonds, include on each document furnished original signature of entity issuing the document.

- b. Not Used.
 - c. Record Documentation: Submit in accordance with Section 01 78 39, Project Record Documentation.
 - d. Software: Submit number of copies required in Specification Section where the software is specified. If number of copies is not specified, provide two copies on compact disc in addition to software loaded on to DEPARTMENT's computer(s) or microprocessor(s).
4. Not Used.

F. Distribution:

- 1. Distribution of Electronic Copies: ARCADIS will distribute each reviewed submittal requiring ARCADIS' written response as follows:
 - a. SUBCONTRACTOR: Electronic Copy.
 - b. DEPARTMENT: Electronic Copy.
 - d. Resident Project Representative: Electronic Copy
 - e. ARCADIS' File: Electronic Copy.

1.5 ARCADIS' REVIEW

- A. Timing: ARCADIS' review will conform to timing accepted by ARCADIS in the accepted Schedule of Submittals.
- B. Submittals not required in the Contract Documents will not be reviewed by ARCADIS and will not be recorded in ARCADIS' submittal log. All hardcopies of such submittals will be returned to SUBCONTRACTOR.
- C. Action Submittals, Results of ARCADIS' Review: Each submittal will be given one of the following dispositions:
 - 1. Approved: Upon return of submittal marked "Approved", order, ship, or fabricate materials and equipment included in the submittal (pending ARCADIS' approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.
 - 2. Approved as Corrected: Upon return of submittal marked "Approved as Corrected", order, ship, or fabricate materials and equipment included in the submittal (pending ARCADIS' approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with corrections indicated.
 - 3. Approved as Corrected – Resubmit: Upon return of submittal marked "Approved as Corrected – Resubmit", order, ship, or fabricate materials and equipment included in the submittal (pending ARCADIS' approval or acceptance, as applicable, of source quality control submittals) or otherwise

proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with corrections indicated. Provide to ARCADIS record re-submittal with all corrections made. Receipt of corrected re-submittal is required before materials or equipment covered in the submittal will be eligible for payment.

4. Revise and Resubmit: Upon return of submittal marked “Revise and Resubmit”, make the corrections indicated and re-submit to ARCADIS for approval.
 5. Not Approved: This disposition indicates material or equipment that cannot be approved. Upon return of submittal marked “Not Approved”, repeat initial submittal procedure utilizing approvable material or equipment.
- D. Informational Submittals, Results of ARCADIS’ Review:
1. Each submittal will be given one of the following dispositions:
 - a. Accepted: Information included in submittal conforms to the applicable requirements of the Contract Documents, and is acceptable. No further action by SUBCONTRACTOR is required relative to this submittal, and the Work covered by the submittal may proceed, and products with submittals with this disposition may be shipped or operated, as applicable.
 - b. Not Accepted: Submittal does not conform to applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and conformance with the Contract Documents.
 2. The following types of Informational Submittals, when acceptable to ARCADIS, will not receive a written response from ARCADIS. Disposition as “accepted” will be recorded in ARCADIS’ submittal log. When submittals of the following are not acceptable, ARCADIS will provide written response to SUBCONTRACTOR
 - a. Material safety data sheets (MSDS).
 - b. Compaction testing reports.
 - c. Concrete testing reports.
 - d. Manufacturer’s instructions.
 - e. SSHASP including CAMP (to be approved by regulatory agency).
- E. Closeout Submittals, Results of ARCADIS’ Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Closeout Submittals will not receive a written response from ARCADIS. Disposition as “accepted” will be recorded in ARCADIS’ submittal log. When Closeout Submittal is not acceptable, ARCADIS will provide written response to SUBCONTRACTOR.
- F. Maintenance Material Submittals, Results of ARCADIS’ Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Maintenance Material Submittals will not receive a written response from ARCADIS. Disposition as “accepted” will be recorded in ARCADIS’ submittal log. When Maintenance Material Submittal is not acceptable, ARCADIS will provide written response to SUBCONTRACTOR, and SUBCONTRACTOR is responsible

for costs associated with transporting and handling of maintenance materials until compliance with the Contract Documents is achieved.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 35 29

SUBCONTRACTOR'S HEALTH AND SAFETY PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall prepare and maintain a written, Site-specific, health and safety plan (SSHASP), and conduct all construction activities in safe manner that avoids:
 - a. injuries to employees, Subcontractors, and other persons with an interest at or near the Site;
 - b. employee exposures to health hazards above occupational limits established respectively by OSHA, American Conference of Governmental Industrial Hygienists (ACGIH), and Nuclear Regulatory Commission (NRC), as applicable;
 - c. exposure of the public and DEPARTMENT's employees to air contaminants above levels established for public exposure by the USEPA, NRC, and by authorities having jurisdiction at the Site;
 - d. significant increases in concentrations of contaminants in soil, water, or sediment near the Site; or
 - e. violations of OSHA, or other Laws or Regulations.
1. SUBCONTRACTOR's SSHAPS shall be in conformance with the ARCADIS HASP and shall be at least as stringent as the provisions in the ARCADIS HASP.

B. Related Sections:

1. Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
2. Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Engage a certified industrial hygienist, accredited by the American Board of Industrial Hygiene, or safety professional certified by the Board of Certified Safety Professionals, to prepare or supervise preparation of SSHASP.
2. Submit qualifications with SSHASP.

B. Regulatory Requirements: Laws and Regulations applying to the Work under this Section include, but are not limited to:

1. 29 CFR Part 1904 (OSHA), Recording and Reporting Occupational Injuries and Illnesses.
2. 29 CFR 1910 (OSHA), Occupational Safety and Health Standards.
3. 29 CFR 1926 (OSHA), Safety and Health Regulations for Construction.

4. 49 CFR 171.8, Transportation, Definitions and Abbreviations.
5. 40 CFR 261.3, 264, and 265, Resource Conservation and Recovery Act (RCRA).

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
 1. SUBCONTRACTOR's SSHASP, in accordance with Article 1.4 of this Section.
 2. Reports:
 - a. Health and safety reports.
 - b. Accident reports.
 3. Qualifications Statements: Qualifications for industrial hygienist or safety professional, including copy of valid certifications.

1.4 SSHASP SUBMITTAL

- A. Submit SSHASP to ARCADIS the sooner of: seven days prior to pre-construction conference, or 30 days prior to SUBCONTRACTOR's scheduled mobilization at the Site.
- B. ARCADIS' review and acceptance of SSHASP will be only to determine if the topics covered in SSHASP comply with the Contract Documents.
- C. ARCADIS' review and acceptance will not extend to safety measures, means, methods, techniques, procedures of construction, or whether representations made in the SSHASP comply with Laws and Regulations, or standards of good practice.
- D. Do not perform Work at the Site until written SSHASP has been accepted by ARCADIS.
- E. Notwithstanding other provisions of the Contract Documents, changes in the Contract Price or Contract Times will not be authorized due to delay by SUBCONTRACTOR in developing, submitting, or revising the SSHASP.

1.5 SUBCONTRACTOR'S HEALTH AND SAFETY PROGRAM

- A. The Site is currently classified as Hazardous Waste site, which includes but is not limited to Hazardous Waste as defined in any of the following: 29 CFR 1926.65(a)(3), RCRA, and 49 CFR 171.8.
 1. Each employer working at the Site shall develop and implement a written SSHASP for their employees involved in Hazardous Waste operations.
 2. Comply with 29 CFR 1904, 29 CFR 1910, 29 CFR 1926, and other Laws and Regulations.
 3. Include in the SSHASP requirements for complying with DEPARTMENT's Site-specific hazard/emergency response plans, if any. During the Project, comply with DEPARTMENT's hazard/emergency response plans.

- B. SSHASP shall be kept at the Site, and shall address safety and health hazards of each phase of operations at the Site and shall include requirements and procedures for employee protection. SSHASP shall address and include the following:
1. SUBCONTRACTOR's organizational structure.
 2. Comprehensive work plan.
 3. Safety and health risk or hazard analysis for each task and operation found in the work plan.
 4. Employee training assignments including copies of OSHA 40-hour, 24-hour supervised field activities, eight-hour supervisors, and eight-hour refresher training certificates for each SUBCONTRACTOR and Subcontractor employee assigned to the Project.
 5. Personal protective equipment (PPE) to be used by employees for each task and operation being conducted. Respirator fit test certificates for SUBCONTRACTOR and Subcontractor employees assigned to the Project.
 6. Medical Surveillance Requirements: Medical clearance certificates for all SUBCONTRACTOR and Subcontractor employees assigned to the Project.
 7. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment.
 8. Site control measures, including:
 - a. preventing trespassing;
 - b. preventing unqualified or unprotected workers from entering restricted areas;
 - c. preventing "tracking" of contaminants out of the Site;
 - d. maintaining log of employees at the Site and visitors to the Site;
 - e. delineating hot, cold, and support zones;
 - f. locating personnel and equipment decontamination zones; and
 - g. communicating routes of escape and gathering points.
 9. Decontamination procedures.
 10. Response plan for safe and effective responses to emergencies, including necessary PPE and other equipment.
 11. Spill containment program. Comply with Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
 12. Comply with Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
- C. Organizational Structure:
1. Organizational structure portion of the SSHASP shall refer to or incorporate information on specific chain of command and specify the overall responsibilities of supervisors and employees, and shall include the following:
 - a. Designation of general supervisor who has responsibility and authority to direct all Hazardous Waste operations.
 - b. Name of Site safety representative who has responsibility and authority to implement and modify the SSHASP and verify compliance.
 - c. Other personnel required for Hazardous Waste operations at the Site and emergency response, and general functions and responsibilities of each.
 - d. Lines of authority, responsibility, and communication.

2. Review and update organizational structure as necessary to reflect current status of Site operations and personnel.

- D. Work Plan:
1. Comprehensive work plan portion of SSHASP shall refer to or incorporate information on the following:
 - a. Tasks and objectives of Site operations and logistics and resources required to achieve such tasks and objectives.
 - b. Anticipated activities and SUBCONTRACTOR's normal operating procedures.
 - c. Personnel and equipment requirements for implementing the work plan.
- E. SSHASP shall include procedures that will be used to ensure safe handling of Hazardous Waste during excavating, handling, loading, and transporting activities.

1.6 ACCIDENT REPORTING AND INVESTIGATION

- A. Comply with 29 CFR 1904.29, including using OSHA 300, 300-A, and 301 forms (or equivalent) to document all accidents that result in bodily injury.
- B. Submit copies of completed accident reports to DEPARTMENT and ARCADIS weekly.
- C. Based upon results of accident investigation, modify the SSHASP as required by changing tasks or procedures to prevent reoccurrence of accident.
- D. Post current copy of SUBCONTRACTOR's OSHA 300-A report, Summary of Work-related Injuries and Illnesses, at conspicuous place at the Site during from February 1 through April 30 of each year.

1.7 DAILY HEALTH AND SAFETY FIELD REPORTS

- A. Submit to DEPARTMENT and ARCADIS daily health and safety field reports including, but not limited to, weather conditions, delays encountered in construction, and acknowledgment of deficiencies noted along with corrective actions taken on current and previous deficiencies. Include daily health and safety air monitoring results, documentation of instrument calibration, new hazards encountered, and PPE utilized.
- B. Daily health and safety field reports shall include description of problems, real or anticipated, encountered during the Work that should be brought to attention of ARCADIS and notification of deviations from planned Work shown in previously submitted daily health and safety field report(s).

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 35 43.13

ENVIRONMENTAL PROCEDURES FOR HAZARDOUS MATERIALS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall develop, implement, and maintain a Hazardous Materials Management Program (HMMP) throughout the Project, in accordance with Laws and Regulations.
 - 1. Hazardous Materials Brought to Site by SUBCONTRACTOR: Transport, handle, store, label, use, and dispose of in accordance with this Section, and Laws and Regulations.
 - 2. Hazardous Material Generated by SUBCONTRACTOR:
 - a. Hazardous Material shall be properly handled, stored, labeled, transported and disposed of by SUBCONTRACTOR in accordance with Laws and Regulations, and this Section.
 - b. If SUBCONTRACTOR will generate or has generated Hazardous Material at the Site, obtain a United States Environmental Protection Agency (EPA) identification number listing SUBCONTRACTOR's name and address of the Site as generator of the Hazardous Material. Obtain identification number from state environmental agency or similar authority having jurisdiction at the Site. Submit identification number within time frame specified in Article 1.3 of this Section.
 - c. SUBCONTRACTOR shall be responsible for identifying, analysis of, profiling, transporting, and disposing of Hazardous Material generated by SUBCONTRACTOR.
 - 3. Fines or civil penalties levied against DEPARTMENT for violations committed at the Site by SUBCONTRACTOR, and costs to DEPARTMENT (if any) associated with cleanup of Hazardous Materials shall be paid by SUBCONTRACTOR.
- B. Enforcement of Laws and Regulations:
 - 1. Interests of DEPARTMENT are that accidental spills and emissions, Site contamination, and injury of personnel at the Site are avoided.
 - 2. When DEPARTMENT is aware of suspected violations, DEPARTMENT will notify SUBCONTRACTOR, and authorities having jurisdiction if DEPARTMENT reasonably concludes that doing so is required by Laws or Regulations.
- C. Related Sections:
 - 1. Section 01 35 44, Spill Prevention Control and Countermeasures Plan.

1.2 DEFINITIONS

- A. The following terms are defined for this Section and supplement the terms defined in the Agreement:
1. Hazardous Material: Material, whether solid, semi-solid, liquid, or gas, that, if not stored or used properly, may cause harm or injury to persons through inhalation, ingestion, absorption or injection, or that may negatively impact the environment through use or discharge of the material on the ground, in water (including groundwater), or to the air. Hazardous Material includes, but is not limited to, chemicals, Asbestos, Hazardous Waste, PCBs, Petroleum, Radioactive Material, and which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 United States Code (USC) §§9601 et seq. (“CERCLA”); [b] the Hazardous Materials Transportation Act, 49 USC §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 USC §§6901 et seq. (“RCRA”); [d] the Toxic Substances Control Act, 15 USC §§2601 et seq.; [e] the Clean Water Act, 33 USC §§1251 et seq.; [f] the Clean Air Act, 42 USC §§7401 et seq.; and [g] any other Law or Regulation regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Laws and Regulations applying to the Work under this Section include:
1. Code of Federal Regulations (CFR), Title 29, Part 1910, Occupational Safety and Health Standards.
 2. CFR, Title 29, Part 1926, Safety and Health Regulations for Construction.
 3. CFR Title 40, Protection of Environment.
 4. CFR, Title 49, Transportation.
 5. Occupational health and safety requirements of state labor department or similar entity; environmental Laws and Regulations of state environmental agency, Laws and Regulations of state department of transportation.
 6. New York Code of Rules and Regulations (NYCRR).
- B. Qualifications:
1. SUBCONTRACTOR’s Safety Representative: Shall prepare and actively manage the HMMP throughout the Project and shall possess valid accreditation as Certified Hazardous Materials Manager (CHMM) issued by the Institute of Hazardous Materials Management; or valid accreditation as Certified Industrial Hygienist (CIH) issued by the American Board of Industrial Hygiene (ABIH), or both. CIH proposed shall be experienced in ABIH’s practice areas of community stressors and hazard controls. Submit to ARCADIS and DEPARTMENT’s environmental representative copies of certification and qualifications of proposed safety representative.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following to the entity(ies) specified for each:
1. Hazardous Materials (including Chemicals) Proposed for Use at the Site: Submit current (dated within the past two years) material safety data sheets (MSDS) in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard), manufacturer, Supplier (if different than manufacturer), container size(s) and number of containers proposed to be at the Site, minimum and maximum volume of material intended to be stored at the Site, and description of process or procedures in which Hazardous Material will be used. Furnish information in sufficient time to obtain ARCADIS and DEPARTMENT's acceptance no later than least three days before bringing Hazardous Material to the Site. Submit to ARCADIS and DEPARTMENT's environmental representative.
 2. Hazardous Material Generated at the Site: Submit for each Hazardous Material generated at the Site identification number, analysis results, and number and size of storage containers at the Site. Furnish information within three days of SUBCONTRACTOR's receipt of analytical results. Submit to ARCADIS and DEPARTMENT's environmental representative.
 3. Permits: Copies of permits for storing, handling, using, transporting, and disposing of Hazardous Materials, obtained from authorities having jurisdiction. Submit to DEPARTMENT's environmental representative and ARCADIS.
 4. Other Documents required for the HMMP: Submit to DEPARTMENT's environmental representative requested documents within three days of SUBCONTRACTOR's receipt of request. HMMP documents may include emergency/spill response plan, communication plan, and other documents.
 5. Qualifications Statements:
 - a. SUBCONTRACTOR's Safety Representative: Submit qualifications of proposed safety representative, including summary of experience, training received, and valid certifications applicable to the Project.

1.5 HAZARDOUS MATERIALS MANAGEMENT

- A. Obtain DEPARTMENT's environmental representative's acceptance before bringing each Hazardous Material to the Site.
- B. Communication Plan: SUBCONTRACTOR shall develop a Hazardous Materials communication plan. At minimum, maintain at the Site two notebooks containing: 1) Inventory of Hazardous Materials (including all chemicals); and, 2) Current (dated within the past two years) material safety data sheets (MSDS) for all materials being used to accomplish the Work, whether or not defined as Hazardous Material in this Section. Keep one notebook in SUBCONTRACTOR's field office at the Site; keep second notebook at location acceptable by DEPARTMENT's environmental representative and ARCADIS. Keep notebooks up-to-date as materials are brought to and removed from the Site.

- C. Emergency/Spill Response Plan: Develop, implement, and maintain an emergency/spill response plan, for each Hazardous Material or each class/group of Hazardous Materials as applicable. At minimum, response plan shall include the following:
1. Description of equipment available at the Site to contain or respond to emergency related to or spill of the material.
 2. Procedures for notifying, and contact information for: authorities having jurisdiction, emergency responders, DEPARTMENT, ARCADIS, the public as applicable, and other entities as required.
 3. Response coordination procedures between SUBCONTRACTOR, DEPARTMENT, ARCADIS, and others as appropriate.
 4. Site plan showing proposed location of Hazardous Materials storage area and location of spill containment/response equipment, and location of storm water drainage inlets and drainage routes.
 5. Description of Hazardous Material handling and spill response training provided to SUBCONTRACTOR's and Others employees, in accordance with 29 CFR 1926.21(b) and other Laws and Regulations.
 6. Comply with Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
- D. Storage of Hazardous Materials and Non-Hazardous Materials:
1. Hazardous Materials containers shall bear applicable hazard diamond(s).
 2. Container Labeling:
 - a. Properly label each container of consumable materials, whether or not classified as Hazardous Materials under this Section.
 - b. Stencil SUBCONTRACTOR's name and, as applicable, Subcontractor's name, on each vessel containing Hazardous Material and, for non-Hazardous Materials, on each container over five-gallon capacity. Containers shall bear securely-attached label clearly identifying contents. Label containers that are filled from larger containers.
 - c. If DEPARTMENT becomes aware of unlabeled containers at the Site, DEPARTMENT's environmental representative will notify SUBCONTRACTOR and ARCADIS. Properly label container(s) within one hour of receipt of notification or remove container from the Site.
 3. To greatest extent possible, store Hazardous Materials off-Site until required for use in the Work.
- E. Hazardous Materials Storage Area:
1. Maintain designated storage area for Hazardous Materials that includes secondary containment. Storage area shall include barriers to prevent vehicles from colliding with storage containers, and shall include protection from environmental factors such as weather.
 2. Provide signage in accordance with Laws and Regulations, clearly identifying the Hazardous Materials storage area.
- F. SUBCONTRACTOR's safety representative shall meet at least monthly with DEPARTMENT's environmental representative and ARCADIS to review

SUBCONTRACTOR's HMMP documents, procedures, and inspect storage areas and the Site in general, to verify compliance with this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 35 44

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall provide all labor, materials, equipment, tools, professional engineering (when required), and incidentals as shown, specified, and required to comply with Laws and Regulations regarding spill prevention control and countermeasures (SPCC) planning and compliance, including 40 CFR Part 112.
- B. SUBCONTRACTOR shall determine whether a SPCC Plan is required. If SPCC Plan is required, SUBCONTRACTOR shall prepare, implement, and maintain SPCC Plan as required by Laws and Regulations.
- C. Determination of Need for SPCC Plan:
 - 1. SUBCONTRACTOR shall determine need for SPCC Plan.
 - 2. Professional Engineer:
 - a. If the Site will include storage of more than 10,000 gallons of oil in above-ground storage, or if the Site does not comply with oil discharge history criteria specified in 40 CFR 112, SUBCONTRACTOR shall retain a qualified professional engineer to determine need for SPCC Plan and, if SPCC Plan is required, professional engineer shall prepare or supervise preparation of SPCC Plan.
 - b. If a professional engineer is not required to prepare the full SPCC Plan, but the SPCC Plan includes environmentally-equivalent SPCC measures, or impracticality determinations, SUBCONTRACTOR shall retain a qualified professional engineer to prepare and certify those portions of the SPCC Plan dealing with environmentally equivalent measures and impracticality determinations; the balance of the SPCC Plan may be prepared by and self-certified by SUBCONTRACTOR.
 - 3. Submit to ARCADIS letter presenting results of evaluation of whether a SPCC Plan is required for the Project in accordance with Laws and Regulations.
- D. SPCC Plan is required if the Project activities at the Site meet the following criteria:
 - 1. The Site and activities thereon are not exempt from Laws and Regulations.
 - 2. Oil is stored, used, transferred, or otherwise handled at the Site.
 - 3. Maximum oil storage capacity at the Site equals or exceeds either of the following thresholds: 42,000 gallons of completely buried capacity, or 1,320 of above-ground capacity. Capacity includes total storage tank volume and operational storage volume at the Site for SUBCONTRACTOR's and Subcontractors, including bulk storage tanks, containers with 55-gallon

storage capacity and larger, mobile tanks located at the Site, and other containers covered by Laws and Regulations. Motive storage containers, such as those on construction equipment and vehicles, is not included. Oil includes petroleum products, fuel oil, hydraulic fluid, oil sludge, oil refuse, oil mixed with wastes other than dredged material, synthetic oil, vegetable oil, animal fats and oils, and other oils defined in Laws and Regulations.

4. There is reasonable expectation, based on location of the Site, that oil spill would reach navigable waters of the United States or adjoining shorelines.
- E. If SPCC Plan is not required, SUBCONTRACTOR shall ensure that conditions that preclude the need for SPCC Plan, including the activities of all SUBCONTRACTOR's and Subcontractors at the Site, are maintained throughout duration of the Project. Should changes that affect the storage, use, or handling of oil at the Site occur, reassess the need for SPCC Plan at no additional cost to DEPARTMENT and provide to ARCADIS evaluation letter regarding need for SPCC Plan.
- F. If SPCC Plan is required, develop SPCC Plan and submit for acceptance by DEPARTMENT, with copy to ARCADIS. SPCC Plan shall be specific to the Site and shall include the following:
1. Stamp, original signature, and license number of SUBCONTRACTOR's professional engineer, when self-certification by SUBCONTRACTOR is not allowed by Laws and Regulations.
 2. Site plan identifying the name (or tag number) and location of each tank and container that will contain a substance regulated in 40 CFR 112 and other Laws and Regulations, including above-ground and buried tanks. Site plan shall indicate general directions of storm water runoff, including storm sewers and drainage inlets, and storm sewer outfall locations.
 3. For each tank and container on the Site plan, provide a table that lists the tank or container's name and tag number, type of oil stored, and maximum storage capacity. List total storage capacity of all tanks and containers at the Site covered by SPCC Laws and Regulations.
 4. Predictions of direction, rate of flow, and total quantity of oil that could be discharged from the Site as result of storage tank or container failure.
 5. Operating procedures that prevent oil spills, including procedures for oil handling, details of secondary containment structures at fuel and oil transfer areas, and details and descriptions of equipment to be used for oil handling, including piping.
 6. Details of and descriptions of control measures installed at the Site by SUBCONTRACTOR to prevent spill from reaching navigable waters, including secondary containment and diversionary structures. For on-shore Sites, one of the following must be used, at minimum: dikes, berms, or retaining walls; curbing; culverts, gutters, or other drainage systems; weirs, booms, or other barriers; spill diversion ponds; retention ponds; sorbent materials. Where appropriate, the SPCC Plan shall clearly demonstrate that containment or diversionary structures or equipment are not practical. Include brittle fracture evaluation, where required, for field-constructed

- above-ground storage containers undergoing repair, alteration, construction, or change in service.
7. Plans for countermeasures to contain, clean up, and mitigate effects of oil spill that reaches navigable waters, including written commitment of manpower, equipment, and materials to quickly control and remove spilled oil. Include estimation of time required to contain spill after spill occurs.
 8. Contact list and telephone numbers for facility response coordinator, National Response Center, cleanup SUBCONTRACTORS, and all appropriate federal, state, and local authorities having jurisdiction to be contacted in event of spill or discharge.
 9. Program for monthly inspections of the Site by SUBCONTRACTOR for SPCC Plan compliance. Notify ARCADIS and DEPARTMENT of each inspection at least 72 hours in advance.
 10. Measures for Site security relative to oil storage.
 11. Procedures for safely handling mobile containers such as totes, drums, and fueling vehicles and construction equipment that remain at the Site.
 12. Procedures and schedules for periodic testing of integrity of tanks and containers, and associated piping and valves.
 13. Plans for bulk storage container compliance.
 14. Plans for personnel training and oil spill prevention briefings.
 15. For SPCC Plans that do not follow the format listed in Laws and Regulations, provide cross-reference to requirements of Laws and Regulations, including 40 CFR 112.7.
- G. Obtain acceptance of SPCC Plan by ARCADIS and DEPARTMENT, for coordination with DEPARTMENT's Site-specific SPCC Plan, if any.
- H. SPCC Plan shall be reviewed by SUBCONTRACTOR's professional engineer (when professional engineer is required) ARCADIS and DEPARTMENT every five years, as applicable.
- I. Post a copy of accepted, certified SPCC Plan in conspicuous location at the Site and provide copies to DEPARTMENT, ARCADIS, and Others as appropriate. Others shall comply with SPCC Plan.
- J. In event of violation of SPCC Plan or release of oils attributable to construction operations, SUBCONTRACTOR shall:
1. Immediately issue notifications in accordance with Laws and Regulations, including 40 CFR 110 and 40 CFR 112. When required by Laws and Regulations, report to National Response Center, US Environmental Protection Agency, and other authorities having jurisdiction, if any.
 2. Have spill clean-up performed in conformance with Laws and Regulations and the SPCC Plan.
 3. Pay fines or civil penalties (or responsible portion thereof) imposed by authorities having jurisdiction, and pay costs associated with clean-up of spills.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Professional Engineer:
 - a. When required by Laws and Regulations, engage a registered professional engineer legally qualified to practice in the jurisdiction where the Site is located and experienced in providing engineering services of the kind indicated.
 - b. Submit qualifications data.
 - c. Responsibilities include but are not necessarily limited to:
 - 1) Carefully reviewing Laws and Regulations relative to SPCC.
 - 2) Preparing written requests for clarifications or interpretations of criteria specified in the Contract Documents for submittal to ARCADIS by SUBCONTRACTOR, and obtaining from authorities having jurisdiction clarifications regarding Laws and Regulations as required.
 - 3) Preparing or supervising the preparation of letter-report evaluation of need for SPCC Plan in accordance with the Contract Documents. Evaluation shall include professional engineer's seal, registration number, and original signature.
 - 4) When SPCC Plan is required, preparing, supervising the preparation of, or reviewing the SPCC Plan (or designated portions thereof when oil storage at the Site will be 10,000 gallons or less) in accordance with the Contract Documents. SPCC Plan (or designated portions thereof) shall include professional engineer's seal, registration number, and original signature.
 - 5) Periodically re-evaluating the need for SPCC Plan and issuing findings as letter-reports with seal, license number, and signature. When SPCC Plan is required, periodically evaluating the SPCC Plan and providing recommendations for compliance with Laws and Regulations, in accordance with the Contract Documents.
 - 6) Certifying that:
 - a) it is familiar with the Laws and Regulations, including 40 CFR 112, and
 - b) it has visited, examined, and is familiar with the Site, planned modifications to the Site under the Project as such modifications pertain to SPCC Laws and Regulations, and
 - c) it has performed the evaluations and prepared SPCC Plan in accordance with the Contract Documents, and
 - d) procedures for required testing and inspections have been established, and
 - e) the said evaluations and SPCC Plan are adequate for the Project, and
 - f) the said evaluations and SPCC Plan conform to all Laws and Regulations, applicable industry standards, and to prevailing standards of practice.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Certifications: With each evaluation letter and SPCC Plan submittal, include certification signed by preparer of submittal that the submittal conforms to the Contract Documents and Laws and Regulations. Signature on all certifications shall be original.
 2. Evaluations:
 - a. Submit letter presenting results of evaluation of whether a SPCC Plan is required for the Project. Submit evaluation no later than fourteen days after the Contract Times commence running, unless longer time is allowed by ARCADIS.
 - b. Submit updated evaluations as required when conditions at the Site change. Submit updated evaluation no later than seven days after the conditions at the Site change, or within seven days of ARCADIS' request, unless longer time is allowed by ARCADIS.
 3. SPCC Plan: When SPCC Plan is required:
 - a. Submit jointly to DEPARTMENT and ARCADIS. Submit within fourteen days of receipt of ARCADIS' acceptance of evaluation submittal.
 - b. Update and resubmit the SPCC Plan, or acceptable SPCC Plan amendments, as required when conditions at the Site change. Submit updated SPCC Plan or amendments no later than seven days after the change in conditions at the Site change giving rise to the SPCC Plan change or amendment, or within seven days of ARCADIS' request, unless longer time is allowed by ARCADIS.
 4. SPCC Plan Distribution: When SPCC Plan is required, submit copies of letters transmitting SPCC Plan and amendments (if any) to SUBCONTRACTORS and SUBCONTRACTOR's working at the Site.
 5. Qualifications Statements: SUBCONTRACTOR's professional engineer, when requested by ARCADIS.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 41 26

STORMWATER POLLUTION PREVENTION PLAN AND PERMIT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall comply with the Project's State Pollution Discharge Elimination System (SPDES) Permit for New York. SUBCONTRACTOR shall be a co-permittee with ARCADIS and DEPARTMENT and is responsible for providing necessary materials and taking appropriate measures to comply with requirements of the permit and minimize pollutants in storm water runoff from the Site.
- B. Documents: The following are part of the Work included under this Section:
 - 1. Storm Water Pollution Prevention Plan (SWPPP): Prepared by SUBCONTRACTOR and filed with authority having jurisdiction over storm water discharges during construction. The SWPPP is part of the Contract Documents.
 - 2. Sediment and Erosion Control Permit: Prepared by SUBCONTRACTOR and filed with the authority having jurisdiction over sediment and erosion control during construction. Sediment and erosion control permit is part of the Contract Documents.
 - 3. SWPPP Revisions: Prepared by SUBCONTRACTOR and submitted to ARCADIS. At minimum, SUBCONTRACTOR shall file a SWPPP Revision prior to starting Work at the Site, and as required by authorities having jurisdiction. SWPPP Revision shall include SUBCONTRACTOR's proposed temporary means for storm water control during all phases of the Work and include plans for storm water conveyance and retention, as applicable. Coordinate with excavation plan submittals required in Division 31 of the Specifications. Should SUBCONTRACTOR propose deviations to the SWPPP included in the Contract Documents, or if Project-specific modifications of the SWPPP are required to conform to field conditions, SUBCONTRACTOR shall provide additional SWPPP Revisions as necessary, in accordance with requirements of authorities having jurisdiction and applicable permits. SWPPP Revisions shall use the SWPPP Revision form included in this Section, with supporting documents attached as required, or forms provided by authorities having jurisdiction.
 - 4. Storm Water Certification Statement: To be provided by SUBCONTRACTOR to ARCADIS on the form included with this Section, or on a form provided by authority having jurisdiction. Do not perform Work at the Site until the Storm Water Certification has been submitted to ARCADIS.
 - 5. Notice of Intent (NOI): Prepared by SUBCONTRACTOR or ARCADIS and submitted to authorities having jurisdiction following ARCADIS's receipt and acceptance of SUBCONTRACTOR's SWPPP Revision and preliminary Progress Schedule. NOI will be filed with authorities having jurisdiction by ARCADIS within ten days of ARCADIS' acceptance of SUBCONTRACTOR's SWPPP Revision and preliminary Progress Schedule. Do not perform Work at Site until NOI is submitted to authorities having jurisdiction.
 - 6. Co-permittee Agreement: Prepared by SUBCONTRACTOR using forms included with the SWPPP, and submitted to ARCADIS within five days of the date the Contract

Times commence running, for signature by DEPARTMENT. ARCADIS will file co-permittee agreement with authorities having jurisdiction. Do not perform Work at the Site until co-permittee agreement is submitted to authorities having jurisdiction.

7. Storm Water Inspection Report: Prepared by ARCADIS' Resident Project Representative (RPR) using the form included with this Section, or a form provided by authority having jurisdiction. Storm water inspection reports will be filed in a log book kept at the Site by ARCADIS. Copy of each report will be furnished to SUBCONTRACTOR upon request. Storm water inspection report will be completed for each of the following:
 - a. Pre-construction: After placement of storm water management measures, including sediment and erosion controls, and temporary field offices and other temporary facilities, prior to starting other Work at the Site.
 - b. During the Work: Every seven days until Notice of Termination is completed. When the Site is stabilized relative to storm water, erosion, and discharge of sediment, inspection frequency during temporary shutdowns and seasonal shutdowns is once per month until Notice of Termination is completed.
 - c. Final: Final inspection report will be prepared prior to completion of Notice of Termination.
 8. Notice of Termination (NOT): Prepared by SUBCONTRACTOR on the form included with storm water permit and provided to ARCADIS for review and signature by DEPARTMENT. ARCADIS will submit the NOT to authority having jurisdiction. Submit the NOT following completion of all Work that may result in pollution in storm water discharges, including landscaping Work. Final Payment will not be made until the NOT is filed with authority having jurisdiction.
- D. Prevent discharge of sediment to and erosion from the Site to surface waters, drainage routes, public streets and rights-of-way, and private property, including dewatering operations. Prevent trash and demolition and construction debris from leaving the Site via storm water runoff. Provide berms, dikes, and other acceptable methods of directing storm water around work areas to drainage routes. Prior to starting the Work associated with such discharge, construction-related discharges to publicly owned conveyance or treatment systems shall be approved by owner of system to which the discharge will be directed.
- E. Do not cause or contribute to a violation of water quality standards, Laws, or Regulations. Notify ARCADIS of revisions to the SWPPP necessary to protect receiving water quality and comply with applicable permits. Provide and implement measures to control pollutants in storm water runoff from the Site to prevent:
1. Turbidity increases that will cause a substantial visible contrast to natural conditions.
 2. Increase in suspended, colloidal, and settleable solids that would cause sediment deposition or impair receiving water quality and use.
 3. Presence of residue from oil and floating substances, visible oil, and globules of grease.
- F. SUBCONTRACTOR shall pay civil penalties and other costs incurred by ARCADIS or DEPARTMENT, including additional engineering, RPR, and inspection services, associated with non-complying with applicable permits related to storm water discharges associated with construction activity and sediment and erosion controls associated with the Work.
- G. Contract Price includes all material, labor, and other permits and incidental costs related to:

1. Preparing SWPPP Revisions and other documents that are SUBCONTRACTOR's responsibility, in accordance with this Section.
 2. Installing and maintaining structural and non-structural items used in complying with the SWPPP and its revisions.
 3. Clean-up, disposal, and repairs following wet weather events or spills caused by SUBCONTRACTOR.
 4. Implementing and maintaining "best management practices", as defined in applicable permits and Laws or Regulations, to comply with requirements that govern storm water discharges at the Site.
 5. Inspections of storm water, sediment, and erosion controls as specified.
- H. Coordinate requirements of this Section with requirements for earthwork, erosion control, and landscaping in the Contract Documents, applicable permit requirements, and Laws and Regulations.
- I. Implement SWPPP controls and practices prior to starting other Work at the Site. Each SUBCONTRACTOR and Others identified in the SWPPP and SWPPP Revisions shall sign a copy of the storm water certification statement.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with Laws and Regulations relative to environmental protection and restoration, including:
1. Storm water permit applicable to the Work and Site.
 2. State and local erosion and sediment control guidelines and requirements,
 3. State and local storm water regulations and guidance.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Submit the following, in accordance with Article 1.1 and Article 1.4 of this Section; for Projects involving Work at multiple Sites, submit each of the following for each Site, as applicable:
 - a. SWPPP Revisions.
 - b. Co-permittee Agreement.
 - c. Storm Water Certification Statement.
 - d. Notice of Termination
 2. Approval to Discharge to Publicly-owned Treatment Works: For storm water discharges associated with construction activity that are discharged to a publicly owned conveyance or treatment system, prior to commencing discharges, submit system owner's written approval for such discharges.
 3. Storm Water Site Plan Updates: Within three days after each storm water inspection, submit updated storm water site plan.

1.4 SWPPP REVISIONS

- A. SUBCONTRACTOR shall prepare a SWPPP Revision in accordance with the Project's storm water permit when:
1. There is a significant change in design, construction, operation, or maintenance of the Project that significantly affects the potential of discharging pollutants to Waters of the United States, and has not otherwise been addressed in the SWPPP.
 2. SWPPP proves to be ineffective relative to:
 - a. eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by this permit, or
 - b. achieving general objectives of controlling pollutants in storm water discharges from permitted construction activity.
 3. Prepare and submit SWPPP Revision identifying SUBCONTRACTORS and Others responsible for implementing part of the SWPPP.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 INSPECTIONS AND REPAIRS

- A. Perform Site inspections and assessments as required in applicable storm water permit and this Section. Inspections and assessments shall be done by SUBCONTRACTOR's site superintendent or project manager, together with ARCADIS' RPR.
- B. Inspections:
1. During the Work, Site inspections shall be performed:
 - a. After SWPPP controls are provided and prior to starting other Work at the Site.
 - b. During the Work: Every seven days until Notice of Termination is completed. When the Site is stabilized relative to storm water, erosion, and discharge of sediment, inspection required frequency during temporary shutdowns and seasonal shutdowns is once per month until Notice of Termination is completed
 - c. Prior to SUBCONTRACTOR submitting the Notice of Termination.
 2. During each inspection, verify sediment control practices and record approximate degree of sediment accumulation as percentage of acceptable sediment storage volume; inspect erosion and sediment control practices and record maintenance performed; observe and record deficiencies relative to implementation of the SWPPP. RPR or ARCADIS will complete Storm Water Inspection Reports and SUBCONTRACTOR shall record and submit the following.
 - a. Storm Water Site Plan: On a copy of the Site plan included in the Contract Documents or other map of the Site acceptable to ARCADIS, indicate extent of all disturbed areas and drainage pathways. Indicate areas expected to undergo initial disturbance or significant site work within the next fourteen days.
 - b. Indicate on storm water site plan areas of Site that have undergone temporary or permanent stabilization.

- c. Indicate on storm water site plan all disturbed areas that have not undergone active site Work during the previous fourteen days.
- C. Maintain at the Site a copy of storm water site plans from storm water inspection submit each storm water map to ARCADIS and RPR. RPR will maintain at the Site a log book with a copy of each Storm Water Inspection Reports.
- D. Cooperate with representatives of authorities having jurisdiction during periodic visits to Site, and promptly provide information requested by authorities having jurisdiction.
- E. Complete repairs to SWPPP controls in accordance with applicable requirements and to satisfaction of ARCADIS within two calendar days of each inspection.

3.2 ATTACHMENTS

- A. The documents listed below, following the “End of Section” designation, are part of this Specification Section. Notice of Intent (NOI) form, Co-permittee Agreement form, and Notice of Termination (NOT) form are included with storm water permit.
 - 1. Storm Water Inspection Report form (two pages).
 - 2. Storm Water Permit Certification form (one page).
 - 3. SWPPP Revision Form (one page).
 - 4. Storm Water Permit.
 - 5. Sediment and Erosion Control Permit.

+ + END OF SECTION + +

STORM WATER INSPECTION REPORT

DEPARTMENT: Site: Project: SUBCONTRACTOR:
--

Date of Inspection: _____

Day of Week:

S	M	T	W	T	F	S
---	---	---	---	---	---	---

Sheet No. _____ of _____ Sheets

If pertinent to the Operation	
Weather	
Temperature	

This inspection and maintenance form is to be used when the Work is subject to a Storm Water General Permit for Construction Activity. Inspections must be performed at least once every seven calendar days; for sites that are stabilized and temporarily shut down inspections may be reduced to once per month. Each erosion and sediment control measure installed on the Site is to be inspected and the SUBCONTRACTOR must complete all required maintenance within two calendar days from the date of inspection.

- Reason for this inspection:**
- ☐ Pre-construction Site assessment
 - ☐ Seven calendar day inspection
 - ☐ Monthly inspection (when Site is stabilized and shut down)
 - ☐ Post-construction inspection prior to Notice of Termination

Key for erosion and sediment control measures to be inspected: [Use the following designations in the table below] (1) mulch, (2) seed and mulch, (3) check dams, (4) haybale/strawbales, (5) silt fence, (6) sediment trap, (7) turbidity curtains, (8) pipe slope drains, (9) drainage structure inlet protection, (10) rolled erosion control products, (11) soil stabilizers, (12) construction entrances, (13) pipe inlet/outlet protection, (14) water diversion structures, (15) sedimentation basins, (16) cofferdams, (17) Other _____.

ID	Location	Disturbance		Measure		Remarks (Evaluate integrity of measure, describe evidence of erosion)	Approximate Sediment Accumulation (% of Depth)	Maintenance Required? (Y or N) (If Yes, Describe Below)
		Existing? (Y or N)	Next 14 Days? (Y or N)	Code #	Temp or Perm? (T, P or NA)			
1								
2								
3								
4								
5								
6								
7								
8								

ID	Location	Disturbance		Measure		Remarks (Evaluate integrity of measure, describe evidence of erosion)	Approximate Sediment Accumulation (% of Depth)	Maintenance Required? (Y or N) (If Yes, Describe Below)
		Existing? (Y or N)	Next 14 Days? (Y or N)	Code #	Temp/Perm or N/A? (T, P or NA)			
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

DESCRIPTION OF REQUIRED MAINTENANCE AND ANY EXISTING DEFICIENCIES IN THE SWPPP:
Specify for each location using row ID number.

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein may be punishable by Law.

Signature: _____ Prepared: _____ Copy to SUBCONTRACTOR: _____

Resident Project Representative

(Date)

(Date)

Qualified Professional Name ARCADIS of New York, Inc.
(w/Firm Name, if Consultant)

STORM WATER PERMIT CERTIFICATION

Contract Number: _____

Project: _____

DEPARTMENT: _____

Each SUBCONTRACTOR and SubSUBCONTRACTOR identified in the Storm Water Pollution Prevention Plan (SWPPP) must certify that they understand the permit conditions and their responsibilities. Every SUBCONTRACTOR and SubSUBCONTRACTOR performing an activity that involves soil disturbance shall sign this certification and submit it to the Engineer prior to performing the Work. This certification shall be signed by an owner, principal, president, secretary, or treasurer of the firm.

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction Site identified in such SWPPP as a condition of authorization to discharge storm water. I also understand that my firm and its employees and SubSUBCONTRACTORs shall comply with the terms and conditions of DEPARTMENT's general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards, Laws, or Regulations.

Firm: _____

Address: _____

City: _____ State _____ Zip _____

Name (Print) Signature Date

Title

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REVISION

DEPARTMENT:
Site:
Project:
SUBCONTRACTOR:

Date of Inspection: _____

Sheet No. _____ of _____ Sheets

This form shall be used when revisions to the current Storm Water Pollution Prevention Plan (SWPPP) are required by the Storm Water General Permit for Construction Activity or the Contract Documents.

Reason for the Revision(s): Revisions were requested by State: ☐ Yes ☐ No

Describe the Revision(s) to the SWPPP: _____

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein may be punishable by Law.

Signature: _____ Prepared: _____ Submitted: _____
(Date) (Date)

Copy to: ☐ Engineer ☐ SUBCONTRACTOR _____

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 41 27

EARTHMOVING PERMIT AND DUST CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall obtain, pay for, and comply with permits required for earthmoving and dust-generating operations related to the Work, and develop and comply with provisions of dust control plan.
 - 2. Provide necessary labor, materials, equipment, and incidentals to: apply sufficient dust suppressants; properly clean all track-out areas to driveways, roadways, and highways; and provide adequate physical stabilizations of soils to comply with earthmoving permits and accepted dust control plan. Control fugitive dust generation from SUBCONTRACTOR's operations including the following areas:
 - a. Construction areas.
 - b. Vehicle and equipment parking areas.
 - c. Material and equipment storage areas.
 - d. Site office, trailer, and staging areas.
 - e. Haul and access roadways.
 - f. Track-out areas.
 - g. Other areas where SUBCONTRACTOR will work, store materials or equipment, or park vehicles and equipment.
 - 3. Do not cause or allow dust-generating operations, earthmoving operations, use of property, or other operations that result in fugitive dust emissions that exceed limits prescribed by authorities having jurisdiction.
 - 4. Pay fines and civil penalties incurred by ARCADIS or DEPARTMENT because of SUBCONTRACTOR's actions or violations of earthmoving permits and dust control plan.
- B. Post copy of earthmoving permits and accepted dust control plan at conspicuous location at the Site.
- C. Recordkeeping:
 - 1. Maintain daily written log to record the actual application or implementation of reasonably available control measures (RACM) described in the accepted dust control plan.
 - 2. Maintain the written log and supporting documentation at the Site, and submit copies to ARCADIS or DEPARTMENT upon request.
 - 3. Retain copies of dust control plan, RACM implementation records, and supporting documentations for at least three years after Substantial Completion.

1.2 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Dust Control Plan:
 - a. In accordance with Article 1.3 of this Section. Submit within the earlier of 30 days after the Contract Times commence running or prior to commencing earth-disturbing operations at the Site.
 2. Earthmoving Permit:
 - a. Submit copy of permits obtained from authorities having jurisdiction, within seven days following obtaining such permits. Do not commence earthmoving operations at the Site until required permits are obtained.
 3. Daily Logs and RACM Records:
 - a. Submit upon request of DEPARTMENT or ARCADIS.
 4. Field Quality Control Submittals:
 - a. When opacity monitoring is required, submit results no later than two business days following completion of observations.

1.3 DUST CONTROL PLAN

- A. Develop and submit to ARCADIS and DEPARTMENT a dust control plan that shall include the following:
1. Names, address, and telephone number of person(s) responsible for preparing and overseeing implementation of dust control plan. Designate one person responsible for overseeing implementation of dust control plan for the Project.
 2. Name(s), address(es), and telephone number(s) of person(s) responsible for dust generating operations.
 3. Site plan delineating total area of land surface to be disturbed. Delineate each area of phased disturbances if applicable.
 4. Total disturbed area in acres; earthmoving and dust-generating operations and activities to be performed at the Site; actual and potential sources of fugitive dust emissions; and delivery, transportation, and storage areas for the Site, including types of materials stored and appropriate size of material stockpiles.
 5. Description of reasonably available control measures (RACM) to be implemented during dust-generating operations at actual and potential sources of fugitive dust.
 6. Description of dust suppressants to be used including product data and material safety data sheets (MSDS); method, frequency, and intensity of application; type, number, and capacity of application equipment; and certifications related to the suppressant's appropriate and safe use. Calcium Chloride is not allowed.
 7. Description of specific surface treatment(s) or RACM proposed for controlling material deposition along paved surfaces (e.g., "track-out") where unpaved Site surfaces or Site access points meet paved surfaces.
 8. As contingency measure, designate and include description of at least one alternative RACM for each actual and potential fugitive dust source.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FIELD QUALITY CONTROL

A. Monitoring.

1. Upon direction of DEPARTMENT or ARCADIS, obtain opacity observations for visible emissions of fugitive dust in accordance with:
 - a. USEPA Method 9, Visual Determination of Opacity of Emissions from Stationary Sources (Emission Measurement Technical Information Center Test Method 009).
2. Obtain opacity observations from at least six locations at downwind perimeter of the Site during construction operations. Submit written report of observations.
3. Opacity observations shall be by person trained and experienced with the method specified.
4. No additional compensation or time will be authorized for opacity observations.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.1 DEFINITIONS

- A. Definitions and terminology applicable to all the Contract Documents are included in the Agreement.
- B. Terminology used in the Specifications includes:
 - 1. “Indicated” refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs or schedules in the Specifications and similar locations in the Contract Documents. Terminology such as “shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference without limitation on the location.
 - 2. “Installer”, “applicator”, or “erector” is SUBCONTRACTOR or another entity engaged by SUBCONTRACTOR, either as an employee or Subcontractor, to perform a particular construction activity, including installation, erection, application or similar Work. Installers shall be experienced in the Work that installer is engaged to perform.
 - a. The term “experienced”, when used with the term “installer” means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction, and complying with requirements of the Supplier of the material or equipment being installed.
 - 3. Trades: Use of a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter”, unless otherwise indicated in the Contract Documents or required by Laws or Regulations. Such terminology also does not imply that specified requirements apply exclusively to trade personnel of the corresponding generic name.
 - 4. “Assigned specialists” and similar terms: Certain Sections of the Specifications require that specific construction activities be performed by specialists recognized as experts in those operations. Engage said specialists for those activities, and their engagement is a requirement over which SUBCONTRACTOR has no option. These requirements do not conflict with enforcement of building codes and other Laws and Regulations. Also, such requirements are not intended to interfere with local trade union jurisdictional settlements and similar conventions. Such assignments shall not relieve SUBCONTRACTOR of responsibility for complying with the requirements of the Contract Documents.

1.2 APPLICABLE CODES

- A. References in the Contract Documents to local code(s) shall mean the following:
1. National Electric Code.
 2. NFPA 101, Life Safety Code.

1.3 DEPARTMENT'S REFERENCED SPECIFICATIONS

- A. Except as otherwise specified, the Work shall comply with the Contract Documents.
- B. Maintain complete copy of referenced specifications at the Site.

1.4 ABBREVIATIONS

- A. Common abbreviations that may be found in the Contract Documents are listed below, alphabetically by their written-out meaning:

alternating current	a-c
ampere	A
Architectural Barriers Act	ABA
Americans with Disabilities Act	ADA
Americans with Disabilities Act Accessibility Guidelines	ADAAG
ante meridian	a.m.
average	avg
biochemical oxygen demand	BOD
brake horsepower	bhp
British thermal unit	Btu
Centigrade (or Celsius)	C
chlorinated polyvinyl chloride	CPVC
chlorofluorocarbons	CFC
Code of Federal Regulations	CFR
cubic inch	cu in
cubic foot	cu ft
cubic yard	cu yd, or CY
cubic feet per minute	cfm
cubic feet per second	cfs
decibel	db
degree Centigrade (or Celsius)	(Write) degrees C or °C
degrees Fahrenheit	degrees F or °F
diameter	dia

direct current	d-c
dollars	\$
each	ea
efficiency	eff
Fahrenheit	F
feet	ft
feet per hour	fph
feet per minute	fpm
feet per second	fps
figure	Fig
flange	flg
foot-pound	ft-lb
gallon	gal
gallons per hour	gph
gallons per minute	gpm
gallons per second	gps
gram	g
grams per liter	g/L
Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
inch	in.
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID
iron pipe size	IPS
thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilowatt	kw
kilowatt-hour	kwhr or kwh
linear foot	lin ft or LF
liter	L
Leadership in Energy and Environmental Design (USGBC)	LEED
maximum	max

mercury	Hg
milligram	mg
milligrams per liter	mg/l or mg/L
milliliter	ml
millimeter	mm
million gallons per day	mgd or MGD
million gallon	MG
minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
nitrogen oxide (total concentration of mono-nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO ₂))	NO _x
nominal pipe size	NPS
number	no.
operator interface terminal	OIT
ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	ppb
polyvinyl chloride	PVC
post meridian	p.m.
pound	lb
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
revolutions per minute	rpm
second	sec
specific gravity	sp gr, or SG
square	sq

square foot	sq ft, or sf
square inch	sq in.
square yard	sq yd, or SY
standard	std
standard cubic feet per minute	scfm
total dynamic head	TDH
totally-enclosed fan-cooled	TEFC
volt	V
volts alternating current	vac
volts direct current	vdc
volatile organic compounds	VOC

1.5 REFERENCE STANDARDS

- A. Provisions of reference standards are in effect in accordance with the Specifications.
- B. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.
- C. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only. Following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACS	American Chemical Society
ADSC- IAFD	International Association of Foundation Drilling.
AEIC	Association of Edison Illuminating Companies
AF&PA	American Forest and Paper Association
ABMA	American Bearing Manufacturers Association (formerly Anti-

	Friction Bearing Manufacturers Association (AFBMA))
AGMA	American Gear Manufacturers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMA	Acoustical Materials Association
AMCA	Air Movement and Control Association
AMP	National Association of Architectural Metal Manufacturers, Architectural Metal Products Division
ANSI	American National Standards Institute
APA	The Engineered Wood Association
API	American Petroleum Institute
APHA	American Public Health Association
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industry
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BAAQM D	Bay Area Air Quality Management District
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association
CBMA	Certified Ballast Manufacturers Association

CDA	Copper Development Association
CEMA	Conveyor Equipment Manufacturers Association
CGA	Compressed Gas Association
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DIN	Deutsches Institut fur Normung eV (German Institute for Standardization)
DIPRA	Ductile Iron Pipe Research Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ETL	Intertek Testing Services, Inc. (formerly ETL Testing Laboratories, Inc.)
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Factory Mutual (FM Global)
FRPI	Fiberglass Reinforced Plastics Institute
FS	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
HEW	United States Department of Health, Education and Welfare
HI	Hydraulic Institute
HMI	Hoist Manufacturers Institute
HUD	United States Department of Housing and Urban Development
IBC	International Building Code
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IFI	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
ISO	Insurance Services Office
ISO	International Organization for Standardization

LPI	Lightning Protection Institute
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSS	Manufacturers' Standardization Society
MMA	Monorail Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NAPF	National Association of Pipe Fabricators, Inc.
NARUC	National Association of Regulatory Utilities Commissioners
NBHA	National Builders Hardware Association
NBS	United States Department of Commerce, National Bureau of Standards
NCMA	National Concrete Masonry Association
NEC	National Electric Code
NELMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NHPMA	Northern Hardwood and Pine Manufacturers Association
NIST	United States Department of Commerce, National Institute of Standards and Technology
NLGA	National Lumber Grades Authority
NRCA	National Roofing SUBCONTRACTORS Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NSSGA	National Stone, Sand, and Gravel Association
NTMA	National Terrazzo and Mosaic Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PFI	Pipe Fabrication Institute
PPI	Plastics Pipe Institute
PGMC	Primary Glass Manufacturers Council

PS	Product Standards Section, United States Department of Commerce
RCSC	Research Council on Structural Connections (part of AISC)
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
SCAQMD	Southern California Air Quality Management District
SCPRF	Structural Clay Products Research Foundation
SCTE	Society of Cable Telecommunications Engineers
SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturing Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning SUBCONTRACTOR's National Association
SPI	Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SWI	Steel Window Institute
TCNA	Tile Council of North America
TEMA	Tubular Exchanger Manufacturers Association
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
UL	Underwriters Laboratories, Inc.
USAB	United States Access Board
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
USGS	United States Geological Survey
USPHS	United States Public Health Service
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association
WCMA	Wood Component Manufacturers Association
WDMA	Window and Door Manufacturers Association
WWEMA	Water and Wastewater Equipment Manufacturers Association
WWPA	Western Wood Products Association

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 45 29.13

TESTING LABORATORY SERVICES FURNISHED BY SUBCONTRACTOR

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall employ and pay for services of independent testing laboratory to perform specified services.
2. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
 - a. Other tests in the Contract Documents that are not specifically assigned to others.
3. SUBCONTRACTOR shall pay for:
 - a. Tests not specifically indicated in the Contract Documents as being DEPARTMENT's responsibility.
 - b. Tests made for SUBCONTRACTOR's convenience.
 - c. Repeat tests required because of SUBCONTRACTOR's negligence or defective Work, and retesting after failure of test for the same item to comply with the Contract Documents.
4. Testing laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents; and perform duties of SUBCONTRACTOR.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
2. ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
3. NIST SRM, Standard Reference Materials.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:
 - a. Comply with applicable requirements of ASTM E329.
 - b. Testing laboratory shall be licensed to operate in the same state as the Site. Where applicable, laboratory shall be certified by the authority having jurisdiction for the types of testing required.
 - c. Testing equipment used by laboratory shall be calibrated at maximum intervals of twelve months by devices of accuracy traceable to one of the following: NIST SRM, ISO/IEC 17025, certified by state or local bureau

of weights and measures, or values of natural physical constants generally accepted in the engineering and scientific community.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following:
 - 1. Quality Control Submittals and Test Reports: Testing laboratory shall promptly submit to SUBCONTRACTOR results of testing and inspections, including:
 - a. Date issued.
 - b. Project title, number, and name of the Site.
 - c. Testing laboratory name and address.
 - d. Name and signature of inspector or person obtaining samples.
 - e. Date of inspection or sampling.
 - f. Record of temperature and weather.
 - g. Date of test.
 - h. Identification of material or product tested, and associated Specification Section.
 - i. Location in the Project.
 - j. Type of inspection or test.
 - k. Results of tests and observations regarding compliance with the Contract Documents.
 - 2. Qualifications Statements:
 - a. Testing Laboratory:
 - 1) Qualifications statement indicating experience and facilities for tests required under the Contract Documents.
 - 2) Copy of report of inspection of facilities during most recent NIST inspection tour. Include memorandum of remedies of deficiencies reported during inspection.
 - 3) Copy of certificate of calibration for each instrument or measuring device proposed for use, by accredited calibration agency.

1.5 TESTING LABORATORY DUTIES

- A. Testing laboratory shall:
 - 1. Cooperate with SUBCONTRACTOR and provide qualified personnel promptly on notice.
 - 2. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and the Contract Documents; and ascertain compliance with requirements of the Contract Documents.
 - 3. Promptly notify ARCADIS and SUBCONTRACTOR of irregularities or deficiencies in the Work that are observed during performance of services.
 - 4. Promptly submit to SUBCONTRACTOR copies of reports of inspections and tests.
 - 5. Perform additional tests and services, as required by SUBCONTRACTOR.

1.6 SUBCONTRACTOR'S RESPONSIBILITIES

A. SUBCONTRACTOR shall:

1. Cooperate with testing laboratory personnel.
2. Provide to testing laboratory preliminary representative samples of materials and products to be tested, in required quantities.
3. Promptly submit to ARCADIS copies of results of tests and inspections received from testing laboratory.
4. Provide to laboratory the preliminary design mix proposed for concrete and other material mixes to be tested by testing laboratory.
5. Provide labor and facilities:
 - a. For access to the Work to be tested, and where required, to Suppliers' operations.
 - b. For obtaining and handling samples at the Site.
 - c. For facilitating inspections and tests.
 - d. For testing laboratory's exclusive use for storing and curing of test samples.
 - e. Forms for preparing concrete test beams and cylinders.
6. Notify laboratory and ARCADIS sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
7. Arrange with laboratory and pay for additional services, sampling, and testing required for SUBCONTRACTOR's convenience.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 45 29.23

TESTING LABORATORY SERVICES FURNISHED BY DEPARTMENT

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. ARCADIS will employ and pay for an independent testing laboratory to perform specified services. Testing laboratory selected will be subject to ARCADIS' acceptance.
2. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
 - a. Other tests in the Contract Documents that are not specifically assigned to others.
3. SUBCONTRACTOR shall pay for:
 - a. Tests not specifically indicated in the Contract Documents as being ARCADIS' responsibility.
 - b. Tests made for SUBCONTRACTOR's convenience.
 - c. Repeat tests required because of SUBCONTRACTOR's negligence or defective Work
 - d. Tests required after failure of two or more of the same test for the same item to comply with the Contract Documents, for tests initially paid for by ARCADIS.
4. Testing laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents; and perform duties of SUBCONTRACTOR.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
2. ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
3. NIST SRM, Standard Reference Materials.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:
 - a. Testing laboratory will comply with applicable requirements of ASTM E329.

- b. Testing laboratory will be authorized to operate in the same state as the Site. Where applicable, laboratory will be certified by the authority having jurisdiction for the types of testing required.
- c. Testing equipment used by laboratory will be calibrated at maximum intervals of twelve months by devices of accuracy traceable to one of the following: NIST SRM, ISO/IEC 17025, certified by state or local bureau of weights and measures, or values of natural physical constants generally accepted in the engineering and scientific community.

1.4 SUBMITTALS

A. Informational Submittals:

1. Quality Control Submittals and Test Reports: Promptly submit to ARCADIS and SUBCONTRACTOR results of testing and inspections, in accordance with Section 01 33 00, Submittal Procedures, including:
 - a. Date issued.
 - b. Project title, number, and name of the Site.
 - c. Testing laboratory name and address.
 - d. Name and signature of inspector or person obtaining samples.
 - e. Date of inspection or sampling.
 - f. Record of temperature and weather.
 - g. Date of test.
 - h. Identification of material or product tested, and associated Specification Section.
 - i. Location in the Project.
 - j. Type of inspection or test.
 - k. Results of tests and observations regarding compliance with the Contract Documents.
2. Qualifications Statements: Upon SUBCONTRACTOR's request, testing laboratory will submit the following:
 - a. Testing Laboratory:
 - 1) Qualifications statement indicating experience and facilities for tests required under the Contract Documents.
 - 2) Copy of report of inspection of facilities during most recent NIST inspection tour. Include memorandum of remedies of deficiencies reported during inspection.
 - 3) Copy of certificate of calibration for each instrument or measuring device proposed for use, by accredited calibration agency.

1.5 TESTING LABORATORY DUTIES

A. ARCADIS -hired testing laboratory will:

1. Cooperate with SUBCONTRACTOR and ARCADIS and provide qualified personnel promptly when notified.
2. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and the Contract

Documents; and ascertain compliance with requirements of the Contract Documents.

3. Promptly advise ARCADIS and SUBCONTRACTOR in writing of irregularities and deficiencies in the Work observed during performance of services.
4. Submit to ARCADIS and SUBCONTRACTOR written reports of inspections and tests required by the Contract Documents.
5. Perform additional tests and services as required by ARCADIS to verify compliance with the Contract Documents.

1.6 SUBCONTRACTOR'S COORDINATION WITH TESTING LABORATORY

- A. SUBCONTRACTOR shall perform and provide the following relative to ARCADIS-hired testing laboratory:
 1. Provide to testing laboratory representative samples of materials to be tested, in required quantities.
 2. Provide labor and facilities:
 - a. For access to the Work to be tested, and where required, to Suppliers' operations.
 - b. For obtaining and handling samples at the Site.
 - c. For facilitating inspections and tests.
 - d. For laboratory's exclusive use for storing and curing of test samples.
 - e. Forms for preparing concrete test beams and cylinders.
 3. Notify testing laboratory and ARCADIS sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.
 4. Arrange with testing laboratory and pay for additional services, sampling, and testing required for SUBCONTRACTOR's convenience.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 51 05

TEMPORARY UTILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall provide all temporary utilities required for the Project.
 - 1. Make all arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities.
 - 2. Pay all utility service costs, including cost of electricity, water, fuel, and other utility services required for the Work.
 - 3. Continuously maintain adequate utilities for all purposes during the Project, until removal of temporary utilities and temporary facilities. At minimum, provide and maintain temporary utilities through Substantial Completion and removal of temporary field offices and sheds.
 - 4. Should DEPARTMENT occupy part of the Project prior to Substantial Completion of the entire Work, cost of utilities consumed via temporary utilities serving the portion occupied by DEPARTMENT will be shared proportionately between DEPARTMENT and SUBCONTRACTOR as mutually agreed to by the parties.
 - 5. Maintain, including cleaning, temporary utilities and continuously provide consumables as required.
 - 6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and requirements of Project.
 - 7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.
- B. Provide the following temporary utilities:
 - 1. Electricity
 - 2. Lighting.
 - 3. Telephone and communications.
 - 4. Heating, ventilating, and temporary enclosures.
 - 5. Water.
 - 6. Sanitary facilities.
 - 7. First-aid facilities.
 - 8. Fire protection.

1.2 REQUIREMENTS FOR TEMPORARY UTILITIES AND TEMPORARY FACILITIES

- A. Electrical:
 - 1. Provide temporary electrical service required for the Work, including continuous power for temporary field offices and sheds. Provide temporary outlets with circuit breaker protection and ground fault protection.

B. Lighting.

1. Minimum lighting shall be five foot-candles for open areas and ten foot-candles for stairs and shops. Provide minimum of one, 300-watt lamp every 15 feet in indoor Work areas. Provide night security lighting of five foot-candles, minimum, within 50 feet of all parts of the Site during hours of darkness, controlled by photocell.

C. Telephone and Communications.

1. Provide temporary telephone and communications required for SUBCONTRACTOR's operations at the Site and for summoning emergency medical assistance.

D. Heating, Ventilating, and Enclosures.

1. Provide sufficient temporary heating, ventilating, and enclosures to ensure safe working conditions and prevent damage to existing facilities and the Work.
2. Except where otherwise specified, temporary heating shall maintain temperature of the area served between 50 degrees F and maximum design temperature of building or facility and its contents.
3. Maintain temperature of areas occupied by DEPARTMENT's personnel or electronic equipment, including offices, lunch rooms, locker rooms, toilet rooms, and rooms containing computers, microprocessors, and control equipment, between 65 degrees F and 80 degrees F with relative humidity less than 75 percent.
4. Required temperature range for storage areas and certain elements of the Work, including preparation of materials and surfaces, installation or application, and curing as applicable, shall be in accordance with the Contract Documents for the associated Work and the Supplier's recommended temperature range for storage, application, or installation, as appropriate.
5. Provide temporary ventilation sufficient to prevent accumulation in construction areas and areas occupied by DEPARTMENT of hazardous and nuisance levels or concentrations of dust and particulates, mist, fumes or vapors, odors, and gases, associated with construction.
6. Provide temporary enclosures and partitions required to maintain required temperature and humidity.

E. Water.

1. Provide temporary water facilities including piping, valves, meters if not provided by owner of existing waterline, backflow preventers, pressure regulators, and other appurtenances. Provide freeze-protection as required.
2. Provide water for temporary sanitary facilities, field offices, Site maintenance and cleaning and, when applicable, disinfecting and testing of systems.
3. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water system.

F. Sanitary Facilities.

1. Provide suitably-enclosed chemical or self-contained toilets for SUBCONTRACTOR's employees and visitors to the Site. Location of

- temporary toilets shall be acceptable to DEPARTMENT.
2. Provide supply of potable drinking water and related facilities and consumables for all personnel using the Site.
 3. Provide suitable temporary washing facilities for employees and visitors.
- G. First-aid Facilities.
1. Provide temporary first-aid stations at or immediately adjacent to the Site's major work areas, and inside SUBCONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by SUBCONTRACTOR's safety representative.
 2. Provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section 01 31 19.13, Pre-Construction Conference.
- H. Fire Protection.
1. Provide temporary fire protection, including portable fire extinguishers rated not less than 2A or 5B in accordance with NFPA 10, Portable Fire Extinguishers, for each temporary building and for every 3,000 square feet of floor area under construction.
 2. Comply with NFPA 241, Safeguarding Building Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary systems may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.
- B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.
- B. Location of Temporary Utilities and Temporary Facilities:
1. Locate temporary systems for proper function and service.
 2. Temporary systems shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas,

materials handling, hoisting systems, storage areas, finishes, and work of utility companies.

3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, and similar systems in place for short durations.

- C. Modify and extend temporary systems as required by progress of the Work.

3.2 USE

- A. Maintain temporary systems to provide safe, continuous service as required.
- B. Properly supervise operation of temporary systems:
 1. Enforce compliance with Laws and Regulations.
 2. Enforce safe practices.
 3. Prevent abuse of services.
 4. Prevent nuisances and hazards caused by temporary systems and their use.
 5. Prevent damage to finishes.
 6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.
- C. At end of each work day, check temporary systems and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary utilities, facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.
- B. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.
- C. When permanent utilities and systems that were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

+ + END OF SECTION + +

SECTION 01 52 13

SUBCONTRACTOR'S FIELD OFFICE AND SHEDS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall provide field office for CONSULTANT'S and SUBCONTRACTOR's use with at least the minimum facilities specified.
 - 2. Provide required storage and work sheds.
 - 3. Furnish required survey equipment.
 - 4. Pay for required permits and utilities. Field offices and sheds shall comply with Laws and Regulations.
- B. Location:
 - 1. Locate field offices and sheds in accordance with the Contract Documents and in accordance with the Site mobilization discussions at the preconstruction conference.
- C. Furnish in field office one complete set of the Contract Documents for ready reference by interested parties. In addition to the reference set, comply with Section 01 78 39, Project Record Documents.

PART 2 – PRODUCTS

2.1 FIELD OFFICE AND SHEDS, FURNISHINGS, AND EQUIPMENT

- A. Field Office and Furnishings:
 - 1. Construction: As required by SUBCONTRACTOR and sufficient for Project meetings.
 - 2. Utilities and Services: Provide the following:
 - a. Telephone service.
 - b. Computer network and related facilities as required for SUBCONTRACTOR needs.
 - 2. Furnishings:
 - a. Conference Facilities: Provide conference area with conference table and chairs sufficient for twenty people. Conference facilities and furnishings shall be provided with suitable utilities, lighting, and temperature controls prior to the first progress meeting, unless otherwise approved by ARCADIS.
 - b. Other furnishings required by SUBCONTRACTOR.
 - 3. Provide on field office an exterior identification sign displaying SUBCONTRACTOR's company name. Maximum size of sign shall be four

feet by eight feet. Sign shall be suitable for outdoor use for the duration of the Project.

4. Furnish and maintain at SUBCONTRACTOR's field office three protective helmets for use by visitors to the Site.

B. Survey Equipment:

1. Furnish a Nikon AE-7C 30x Auto Level, Model Number #6152111, for use by Arcadis.

C. Storage and Work Sheds:

1. Provide storage and work sheds sized, furnished, and equipped to accommodate personnel, materials, and equipment involved in the Work, including temporary utility services and facilities required for environmental controls sufficient for personnel, materials, and equipment.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Installation:

1. Install field offices, sheds, and related facilities in accordance with Laws and Regulations.
2. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions.

3.2 MAINTENANCE AND REMOVAL

A. Maintenance:

1. Clean and maintain field offices and sheds as required.
2. Provide consumables as required.

B. Removal:

1. Do not remove field offices and sheds until after Substantial Completion of the entire Work, unless otherwise approved by ARCADIS.
2. The survey equipment under Part 3 – PRODUCTS, Section 2.1.B.1, above, shall be retained by Arcadis at the end of the Project.
3. Remove field offices and sheds and restore areas prior to final inspection.

+ + END OF SECTION + +

SECTION 01 52 16

FIRST AID FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide first-aid facilities during the Project, including:
 - a. Paying all costs for first-aid facilities, including installation, maintenance, and removal.
 - b. Maintaining, including cleaning, first-aid facilities. Keep first-aid facilities continuously supplied with consumables.
 - c. Facilities shall be adequate for personnel using the Site.
 - d. Providing facilities in compliance with Laws and Regulations.

B. First-aid facilities provided shall include:

1. Potable drinking water supply and cups.
2. Suitable washing facilities for employees.
3. First-aid stations at or immediately adjacent to the Site's major work areas, and inside SUBCONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by SUBCONTRACTOR's safety representative. Other SUBCONTRACTORS shall provide first-aid stations in their own field office.
5. Provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section 01 31 19.13, Pre-Construction Conference.
6. When work is in progress, provide at the Site at least one person trained in first-aid. First-aid-trained personnel shall possess valid certificate indicating that they have successfully completed first-aid training course by the American Red Cross or similar entity.

C. Restrictions:

1. Existing Facilities: Shall not be used by SUBCONTRACTORS without written permission of DEPARTMENT with conditions for use.
2. Permanent Facilities Provided Under the Project: Shall not be used by SUBCONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Location of potable drinking water supply shall be as required by SUBCONTRACTOR and convenient for access by personnel.
- B. Location of temporary first-aid facilities shall be as specified in Paragraph 1.1.B of this Section.

3.2 USE

- A. Use of Temporary Facilities:
 - 1. Properly supervise temporary facilities.
 - 2. Properly dispose of wastes.

3.3 REMOVAL

- A. Completely remove temporary facilities and materials when no longer required. Repair damage caused by temporary facilities and their removal and restore Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.

+ + END OF SECTION + +

SECTION 01 52 19

SANITARY FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall provide all temporary sanitary facilities required for the Project.
 - 1. Make all arrangements with temporary sanitary facility companies for temporary sanitary services and obtain required permits and approvals for temporary sanitary services.
 - 2. Pay all temporary sanitary facility service costs, including cost of electricity, water, fuel, and other utility services required for the Work.
 - 3. Continuously maintain adequate temporary sanitary facilities for all purposes during the Project, until removal of temporary sanitary facilities. At minimum, provide and maintain temporary sanitary facilities through Substantial Completion and removal of temporary field offices and sheds.
 - 4. Maintain, including cleaning, temporary sanitary facilities and continuously provide consumables as required.
 - 6. Temporary sanitary facilities shall be adequate for personnel using the Site and requirements of Project.
 - 7. Provide temporary sanitary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

1.2 REQUIREMENTS FOR TEMPORARY SANITARY FACILITIES

- A. Sanitary Facilities.
 - 1. Provide suitably-enclosed chemical or self-contained toilets for SUBCONTRACTOR's employees and visitors to the Site. Location of temporary toilets shall be acceptable to ARCADIS.
 - 2. Provide supply of potable drinking water and related facilities and consumables for all personnel using the Site.
 - 3. Provide suitable temporary washing facilities for employees and visitors.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary sanitary facilities may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.
- B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary sanitary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.
- B. Location of Temporary Sanitary Facilities:
 - 1. Locate temporary sanitary facilities for proper function and service.
 - 2. Temporary sanitary facilities shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of utility companies.
- C. Modify and extend temporary sanitary facilities as required by progress of the Work.

3.2 USE

- A. Maintain temporary sanitary facilities to provide safe, continuous service as required.
- B. Properly supervise operation of temporary sanitary facilities:
 - 1. Enforce compliance with Laws and Regulations.
 - 2. Enforce safe practices.
 - 3. Prevent abuse of services.
 - 4. Prevent nuisances and hazards caused by temporary sanitary facilities and their use.
 - 5. Prevent damage to finishes.
 - 6. Ensure that temporary sanitary facilities do not interrupt continuous progress of construction.
- C. At end of each work day, check temporary sanitary facilities and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary sanitary facilities and materials when no longer required. Repair damage caused by temporary sanitary facilities and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.
- C. When permanent sanitary facilities were used for temporary sanitary facilities, upon Substantial Completion replace all consumables used during the Work.

+ + END OF SECTION + +

SECTION 01 55 13

ACCESS ROADS AND PARKING AREAS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide temporary construction roads, walks, parking areas, and appurtenances required during the Project for use by SUBCONTRACTOR, other SUBCONTRACTORS employed on the Project, DEPARTMENT's, and emergency vehicles.
2. Temporary roads and parking areas shall be designed and maintained by SUBCONTRACTOR and shall be fully passable to vehicles in all weather conditions.

B. Use of Existing Access Roads:

1. SUBCONTRACTOR is allowed to use DEPARTMENT's existing roads upon the Effective Date of the Agreement.
2. Prevent interference with traffic on existing roads and parking areas. At all times, keep access roads and entrances serving the Site clear and available to DEPARTMENT, DEPARTMENT's employees, emergency vehicles, and other SUBCONTRACTORS. Do not use access roads or Site entrances for parking or storage of materials or equipment.
3. SUBCONTRACTOR shall indemnify and hold harmless DEPARTMENT and ARCADIS from expenses caused by SUBCONTRACTOR's operations over existing roads and parking areas.
4. Schedule deliveries to minimize use of driveways and Site entrances.

1.2 SITE ACCESS

A. Site Access:

1. SUBCONTRACTOR access to the Site shall be via the designated entrance.

1.3 SUBCONTRACTOR PARKING

A. SUBCONTRACTOR employee vehicles shall park in designated area(s).

B. Park construction vehicles and equipment in work areas off of permanent roads and parking areas, in areas of the Site designated for SUBCONTRACTOR staging.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials for temporary roads and parking areas shall comply with the Contract Documents.
- B. Traffic controls shall comply with requirements of authorities having jurisdiction.

PART 3 – EXECUTION

3.1 TEMPORARY ROADS AND PARKING AREAS

- A. Temporary Roads and Parking in Areas Different from Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic loads during the Project. Locate temporary roads and parking areas as shown.
 - 2. Provide reasonably level, graded, well-drained subgrade of satisfactory soil material, compacted to at least 95 percent of maximum dry density in the upper six inches.
 - 3. Where required to support loads and provide separation between subgrade and subbase materials, provide geotextile or geogrid as required.
 - 4. Provide crushed stone or gravel subbase material a minimum of six inches thick, roller-compacted to level, smooth, dense surface. Subbase for temporary roads and areas traveled by construction vehicles shall be adequate for loads and traffic served.
- B. Temporary Roads and Parking in Same Areas as Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic and construction loads during the Project. Locate temporary roads and parking areas in same location as permanent roads and parking areas. Extend temporary roads and parking areas, within construction limits indicated, as required for construction operations.
 - 2. Coordinate elevations of temporary roads and parking areas with permanent roads and parking areas.
 - 3. Prepare subgrade, subbase, and base for temporary roads and parking areas in accordance with Contract Documents requirements for permanent roads. Where required by subgrade conditions and construction loads and traffic, provide geotextile or geogrid, as required, on compacted subgrade for subbase support and separation of subbase and subgrade materials.
 - 4. Delay installation of top (wearing) courses of permanent pavement until road will no longer be subject to heavy construction traffic. Repair damage to pavement's bituminous base courses before installing permanent top courses.

3.2 TRAFFIC CONTROLS

A. Traffic Controls:

1. Provide temporary traffic controls at intersections of temporary roads, including intersections with other temporary roads, intersections with public roads, and intersections with permanent access roads at the Site.
2. Provide warning signs on permanent roads and drives, and provide “STOP” signs for traffic on temporary roads where required and at entrances to permanent pavement.
3. Comply with requirements of authorities having jurisdiction.

3.3 MAINTENANCE OF ROADS

A. General:

1. Maintain temporary roads and parking to continuously provide at the Site access for construction vehicles and trucks, DEPARTMENT vehicles, deliveries for DEPARTMENT, emergency vehicles, and parking areas for DEPARTMENT’s personnel.
2. Public roads shall be passable at all times unless a road closure is allowed in writing by authority having jurisdiction.
3. When granular material of temporary roads and parking without hard surfacing become intermixed with soil or when temporary roads otherwise create a nuisance, remove intermixed granular-and-soil material and replace with clean aggregate as required.
4. Provide snow and ice removal for temporary roads and parking areas.

B. Cleaning and Dust Control:

1. Cleaning: Clean paved surfaces over which construction vehicles travel. Perform cleaning minimum of two times per week or more frequently as directed by ARCADIS, by mechanical sweeping. Clean the following surfaces:
 - a. Roads and concrete foundations within limits of the Project.
 - b. Permanent roads at the Site, between the Site entrance and the work areas, between the Site entrance and construction parking and staging areas.
 - c. Public roads that require sweeping and cleaning due to construction operations.
2. Dust Control:
 - a. Control dust resulting from construction activities to prevent nuisances at the Site and in nearby areas.
 - b. Apply water or use other methods subject to ARCADIS’ acceptance that will minimize airborne dust. Do not use water when water will cause hazardous or objectionable conditions such as ice, mud, ponds, and pollution.
 - c. Provide dust control that is non-polluting and does not contribute to tracking-out of dirt and dust onto pavement. Re-apply dust control treatment as required.

- d. Comply with Section 01 41 27, Earthmoving and Dust Control, and Section 01 57 05, Temporary Controls.
- C. Protection of Underground Facilities: Provide temporary, heavy-duty steel roadway plates to protect existing manholes, handholes, valve boxes, vaults, and other Underground Facilities near to or visible at the ground surface.

3.4 REMOVALS AND RESTORATION

- A. Removals:
 - 1. Remove temporary roads, walks, and parking areas that are not intended for, or acceptable for, integration into permanent pavement. Return areas of temporary roads, walks, and parking to pre-construction condition unless otherwise required by the Contract Documents. Remove temporary gates, fencing, and traffic controls associated with temporary roads and parking areas.
 - 2. Where areas of temporary roads and parking will be permanently landscaped, remove pavement, aggregate, soil and other material that does not comply with the Contract Documents regarding fill, subsoil, and landscaping. Remove and properly dispose of materials contaminated with oil, bitumen, and other petrochemical compounds, and other substances that might impair growth of plants and lawns.
- B. Restoration:
 - 1. Repair or replace paving, curbs, gutters, and sidewalks affected by temporary roads and parking, and restore to required conditions in accordance with authorities having jurisdiction.
 - 2. Restore to pre-construction conditions existing roads, walks, and parking areas damaged by SUBCONTRACTOR, subject to approval of the owner of affected roads, walks, and parking areas.

+ + END OF SECTION + +

SECTION 01 55 26

MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall keep all streets and traffic ways open for passage of traffic and pedestrians during the Work, unless otherwise approved by owner of the street, traffic way, or right-of-way, as applicable.
2. Construction traffic shall access the Site only via entrance(s) indicated in Section 01 55 13, Access Roads and Parking Areas.
3. Unless otherwise shown or indicated in the Contract Documents, maintenance and protection of traffic shall be in accordance with New York State Department of Transportation.

B. Coordination:

1. Coordinate with owner of the highway or street right-of-way, as applicable, for maintenance and protection of traffic requirements.
2. Give required advance notice to fire departments, police departments, and other emergency services as applicable of proposed construction operations.
3. Give reasonable notice to owners or tenants of private property who may be affected by construction operations. Give such notice not less than five days prior to when such property will or may be affected by construction operations.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Procedure Submittals: Detailed plan, procedures, and sequencing for maintaining and protecting traffic in accordance with the Contract Documents and requirements of authorities having jurisdiction. Include in the submittal the following:
 - a. Traffic staging plan, and construction sequencing as applicable to maintenance and protection of traffic.
 - b. Product data, including manufacturer's catalog information and specifications, for temporary signage, temporary signals, temporary illumination devices, and other products to be utilized in maintaining and protecting traffic.
 - c. Indication of number and types of personnel dedicated to maintaining and protecting traffic during construction.
 - d. Indication of plan acceptance from authorities having jurisdiction.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment used for maintenance and protection of traffic shall comply with the reference specification indicated in Paragraph 1.1.A.3 of this Section.

PART 3 – EXECUTION

3.1 GENERAL PROVISIONS

- A. When required to cross, obstruct or temporarily close a street or traffic way, provide and maintain suitable bridges, detours, or other acceptable temporary expedient for the accommodation of traffic. Closings shall be for shortest duration practical, and passage shall be restored immediately after completion of filling and temporary paving or bridging.
- B. Provide signs, signals, barricades, flares, lights and other equipment, service, and personnel required to regulate and protect all traffic and warn of hazards. Such Work shall comply with requirements of DEPARTMENT and authorities having jurisdiction at the Site. Remove temporary equipment and facilities when no longer required, and restore grounds to original or to specified conditions, as applicable.
- C. Hydrants, valves, fire alarm boxes, postal boxes and delivery service boxes, and other facilities that may require access during construction shall be kept accessible for use.

3.2 TRAFFIC SIGNALS AND SIGNS

- A. Provide and operate traffic control and directional signals required to direct and maintain an orderly flow of traffic in areas under SUBCONTRACTOR's control, and areas affected by construction operations.
- B. Provide traffic control and directional signs, mounted on temporary barriers or standard posts, at the following locations:
 - 1. Each change of direction of a roadway and at each crossroad.
 - 2. Detours and areas of hazard.
 - 3. Parking areas.
 - 4. Traffic entrance to and exit from each construction area.

3.3 TRAFFIC CONTROL PERSONNEL

- A. When construction operations encroach on traffic lanes, furnish qualified and suitably-equipped traffic control personnel as required for regulating traffic and in accordance with requirements of authorities having jurisdiction. Traffic control personnel shall use appropriate flags or mobile signs.

3.4 FLARES AND LIGHTS

- A. During periods of low visibility provide flares and lights for the following:
 - 1. To clearly delineate traffic lanes, to guide traffic, and to warn of hazardous areas.
 - 2. For use by traffic control personnel directing traffic.
- B. Provide adequate illumination of critical traffic and parking areas.

3.5 PARKING CONTROL

- A. Control all SUBCONTRACTOR-related vehicular parking at the Site to preclude interfering with: traffic and parking, access by emergency vehicles, DEPARTMENT's operations, and construction operations. Provide temporary parking facilities for the public, as required because of construction or operations.
- B. Control parking of construction and private vehicles at the Site as follows:
 - 1. Maintain free vehicular access to and through parking areas.
 - 2. Prohibit parking on or adjacent to access roads, and in non-designated areas.
 - 3. Construction vehicles shall possess current vehicle registration.
 - 4. Private vehicles shall park only in designated areas.

3.6 HAUL ROUTES

- A. Submit proposed haul routes to ARCADIS and DEPARTMENT and obtain approval of authorities having jurisdiction.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to expedite traffic flow, and to minimize interference with normal traffic.

3.7 REMOVAL

- A. Maintain and protect traffic throughout the Project. Provide maintenance and protection of traffic measures at the Site until no longer required due to the progress of the Work. When no longer required, completely remove maintenance and protection of traffic measures and restore the Site to pre-construction condition or to condition required by the Contract Documents, as applicable.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 57 05

TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall provide and maintain methods, equipment, and temporary construction as required to control environmental conditions at the Site and adjacent areas.
 - 2. Maintain controls until no longer required.
 - 3. Temporary controls include, but are not limited to, the following:
 - a. Erosion and sediment controls.
 - b. Noise controls.
 - c. Dust control.
 - d. Control of water, including storm water runoff.
 - e. Pollution control.
- B. Related Sections:
 - 1. Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
 - 2. Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - 3. Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
 - 4. Section 01 41 27, Earthmoving Permit and Dust Control.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable provisions and recommendations of the following:
 - 1. New York State Department of Environmental Conservation..

1.3 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Shop Drawings:
 - a. Plan for construction staging and maintenance of the Site relative to erosion and sediment controls. Indicate on a Site plan approximate areas of planned disturbance of soils and soil cove over time during the Project. For areas not indicated in the Contract Documents as being disturbed and that SUBCONTRACTOR proposes to disturb, Shop Drawing shall include proposed erosion and sediment control measures for the additional area.
 - 2. Product Data:
 - a. Silt fencing materials.

- B. Informational Submittals: Submit the following:
 - 1. Procedural Submittals:
 - a. Proposed dust control measures, when submittal is requested by ARCADIS.

PART 2 – PRODUCTS

2.1 MATERIALS FOR TEMPORARY EROSION AND SEDIMENT CONTROLS

- A. Materials for temporary erosion and sediment controls shall be as shown or indicated on the Drawings.

2.1 MATERIALS FOR TEMPORARY EROSION AND SEDIMENT CONTROLS

- A. General:
 - 1. Materials utilized for erosion and sediment controls shall be in accordance with the applicable regulatory requirements indicated in Article 1.2 of this Section, unless otherwise shown or indicated in the Contract Documents.
- B. Not used.
- C. Straw Bale Dike.
 - 1. Bales shall be firmly-packed, unrotted straw bound firmly with baling wire. Cross-sectional area on the small end of each bale shall be approximately 12 inches by 12 inches or larger.
 - 2. Posts shall comply with requirements for silt fencing support posts, or may be suitable reinforcing steel.
- D. Mulch Materials and Soil Stabilization.
 - 1. Mulch shall be unrotted straw or salt hay.
 - 2. Soil stabilization emulsions, when used, shall be an inert, eco-friendly chemical manufactured for the specific purpose of erosion control and soil stabilization, applied with mulch or stabilization fibers.
 - 3. Wood-fiber or paper-fiber, when used, shall be 100 percent natural and biodegradable.
 - 4. Erosion control mat or netting shall be biodegradable. Acceptable materials include jute, excelsior, straw or coconut fiber, and cotton.
- E. Protection of Storm Water Drainage Inlets and Catch Basins:
 - 1. Inlet Filter Bag:
 - a. Product and Manufacturer: Provide one of the following for each drainage inlet or catch basin to be protected:
 - 1) Silt Sack, by Atlantic Construction Fabrics (ACF) Environmental
 - 2) Or equal.

- b. Inlet filter bag permeability shall be not less than 40 gallons per square foot of bag area exposed to the flow. Fabric shall be woven polypropylene with double stitching to prevent bursting.
 - c. Inlet filter bags shall fit inside the drainage inlet or catch basin and shall be secured by the structure's grate or by other acceptable means.
 - d. Inlet filter bags shall have means of removing inlet filter bag and the silt and sediment collected in the bag, without dumping filter bag's contents into the drainage inlet or catch basin.
- F. Temporary Settlement Basin.
 - 1. Embankment Material: Comply with requirements for general fill in Division 31 Sections on earthwork, excavation, and fill.
 - 2. Provide outfall structure consisting of overflow weir and discharge pipe, and provide emergency spillway.
 - 2. Overflow Weir and Discharge Pipe: Suitably-sized piping of corrugated metal, high-density polyethylene, or other suitable material. Pipe may be new or used; if used, pipe shall be in good condition.
- G. Filter Bag on Dewatering Pump Discharge:
 - 1. Provide filter bag on discharge of each dewatering pump drawing from an excavation. Filter bag is not required on pumps associated with dewatering wells.
 - 2. Products and Manufacturers: Provide one of the following:
 - a. UltraTech Dewatering Bag, by Interstate Products.
 - b. Filter Bag, by US Fabrics.
 - c. Dewatering (Filter) Bag, Indian Valley Industries.
 - d. DirtBag, by Atlantic Construction Fabrics (ACF) Environmental
 - e. Or equal.
 - 3. Size filter bags for maximum flow of the pump. Filter bags shall be specifically fabricated for use as a dewatering pump filter bag.
 - 4. Provide sufficient spare filter bags for continuous dewatering operations.

PART 3 – EXECUTION

3.1 NOISE CONTROL

- A. Noise Control – General:
 - 1. SUBCONTRACTOR's vehicles and equipment shall minimize noise emissions to greatest degree practicable. Provide mufflers, silencers, and sound barriers when necessary.
 - 2. Noise levels shall comply with Laws and Regulations, including OSHA requirements and local ordinances.

3.2 DUST CONTROL

- A. Dust Control – General:

1. Control objectionable dust caused by SUBCONTRACTOR's operation of vehicles and equipment, clearing, and other actions. To minimize airborne dust, apply water or use other methods subject to acceptance of ARCADIS and approval of authorities having jurisdiction.
2. SUBCONTRACTOR shall prevent blowing and movement of dust from exposed soil surfaces and access roads to reduce on- and off-Site damage, nuisances, and health hazards associated with dust emissions. Control may be achieved by irrigation in which the Site shall be sprinkled with water until the surface is moist. Apply dust controls as frequently as required without creating nuisances such as excessive mud and ponding of water at the Site.
3. Remove dust from roadways and access roads at maximum intervals of seven days by mechanical brooming or other method acceptable to ARCADIS.

B. Comply with Section 01 41 27, Earthmoving Permit and Dust Control.

3.3 PEST AND RODENT CONTROL

A. Pest and Rodent Control – General:

1. Provide rodent and pest control as required to prevent infestation of the Site and storage areas.
2. Employ methods and use materials that do not adversely affect conditions at the Site or on adjoining properties.
3. In accordance with Laws and Regulations, promptly and properly dispose of pests and rodents trapped or otherwise controlled.

3.4 WATER CONTROL

A. Water Control – General:

1. Provide methods to control surface water and water from excavations and structures to prevent damage to the Work, the Site, and adjoining properties.
2. Control fill, grading, and ditching to direct water away from excavations, pits, tunnels and other construction areas and to direct drainage to proper runoff courses to prevent erosion, damage, or nuisance.

B. Equipment and Facilities for Water Control: Provide, operate, and maintain equipment and facilities of adequate size to control surface water.

C. Discharge and Disposal: Dispose of drainage water in manner to prevent flooding, erosion, and other damage to any and all parts of the Site and adjoining areas, and that complies with Laws and Regulations.

3.5 POLLUTION CONTROL

A. Pollution Control – General:

1. Provide means, methods, and facilities required to prevent contamination of soil, water, and atmosphere caused by discharge of noxious substances from construction operations.

2. Equipment used during construction shall comply with Laws and Regulations.
 3. Refer to Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
- B. Spills and Contamination:
1. Provide equipment and personnel to perform emergency measures required to contain spills and to remove contaminated soils and liquids.
 2. Excavate contaminated material and properly dispose of off-Site, and replace with suitable compacted fill and topsoil.
 3. Refer to Section 01 35 44, Spill Prevention Control and Countermeasures Plan
- C. Protection of Surface Waters: Implement special measures to prevent harmful substances from entering surface waters. Prevent disposal of wastes, effluents, chemicals, and other such substances in or adjacent to surface waters and open drainage routes, in sanitary sewers, or in storm sewers.
- D. Atmospheric Pollutants:
1. Provide systems for controlling atmospheric pollutants related to the Work.
 2. Prevent toxic concentrations of chemicals and vapors.
 3. Prevent harmful dispersal of pollutants into atmosphere.
- E. Solid Waste:
1. Provide systems for controlling and managing solid waste related to the Work.
 2. Prevent solid waste from becoming airborne, and from discharging to surface waters and drainage routes.
 3. Properly handle and dispose of solid waste.

3.6 EROSION AND SEDIMENT CONTROL

- A. Installation and Maintenance of Erosion and Sediment Controls – General:
1. General:
 - a. Provide erosion and sediment controls as shown and indicated on the Drawings and elsewhere in the Contract Documents. Provide erosion and sediment controls as the Work progresses into previously undisturbed areas.
 - b. Installation of erosion and sediment controls shall be in accordance with the applicable regulatory requirements indicated in Article 1.2 of this Section, unless otherwise shown or indicated in the Contract Documents.
 - c. Use necessary methods to successfully control erosion and sedimentation, including ecology-oriented construction practices, vegetative measures, and mechanical controls. Use best management practices (BMP) in accordance with Laws and Regulations, and regulatory requirements indicated in Article 1.2 of this Section, to control erosion and sedimentation during the Project.
 - d. Plan and execute construction, disturbances of soils and soil cover, and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and

- sedimentation. Provide temporary measures for controlling erosion and sedimentation, as indicated in the Contract Documents and as required for the Project.
- e. Where areas must be cleared for storage of materials or equipment, or for temporary facilities, provisions shall be made for regulating drainage and controlling erosion and sedimentation, subject to the ARCADIS' approval.
 - f. Provide erosion and sediment controls, including stabilization of soils, at the end of each workday.
- 2. Coordination:
 - a. Coordinate erosion and sediment controls with this Section's requirements on water control and with Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - b. Coordinate temporary erosion and sediment controls with construction of permanent drainage facilities and other Work to the extent necessary for economical, effective, and continuous erosion and sediment control.
 - 3. Before commencing activities that will disturb soil or soil cover at the Site, provide all erosion and sediment control measures required by the Contract Documents for the areas where soil or soil cover will be disturbed.
 - 4. In general, implement construction procedures associated with, or that may affect, erosion and sediment control to ensure minimum damage to the environment during construction. SUBCONTRACTOR shall implement any and all additional measures required to comply with Laws and Regulations, and Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - 5. Vegetation Removal: Remove only those shrubs, grasses, and other vegetation that must be removed for construction. Protect remaining vegetation.
 - 6. Access Roads and Parking Areas: When possible, access roads and temporary roads shall be located and constructed to avoid adverse effects on the environment. Provisions shall be made to regulate drainage, avoid erosion and sedimentation, and minimize damage to vegetation.
 - 7. Earthwork and Temporary Controls:
 - a. Perform excavation, fill, and related operations in accordance with Section 31 23 05, Excavation and Fill.
 - b. Control erosion to minimize transport of silt from the Site into existing waterways and surface waters. Such measures shall include, but are not limited to, using berms, silt fencing, baled straw silt barriers, gravel or crushed stone, mulching and soil stabilization, slope drains, and other methods. Apply such temporary measures to erodible materials exposed by activities associated with the construction of the Project.
 - c. Hold to a minimum the areas of bare soil exposed at one time.
 - d. Construct fills and waste areas by selectively placing fill and waste materials to eliminate surface silts and clays that will erode.
 - e. In performing earthwork, eliminate depressions that could serve as mosquito pools.
 - f. SUBCONTRACTOR shall provide special care in areas with steep slopes, where disturbance of vegetation shall be minimized to maintain soil stability.

8. Inspection and Maintenance:
 - a. Periodically inspect areas of earthwork and areas where soil or soil cover are disturbed to detect evidence of the start of erosion and sedimentation; apply corrective measures as required to control erosion and sedimentation. Continue inspections and corrective measures until soils are permanently stabilized and permanent vegetation has been established
 - b. Inspect not less often than the frequency specified in Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - c. Repair or replace damaged erosion and sediment controls within 24 hours of SUBCONTRACTOR becoming aware of such damage.
 - d. Periodically remove silt and sediment that has accumulated in or behind sediment and erosion controls. Properly dispose of silt and sediment.
9. Duration of Erosion and Sediment Controls:
 - a. Maintain erosion and sediment controls in effective working condition until the associated drainage area has been permanently stabilized.
 - b. Maintain erosion and sediment controls until the Site is restored and site improvements including landscaping, if any, are complete with underlying soils permanently stabilized.
10. Work Stoppage: If the Work is temporarily stopped or suspended for any reason, SUBCONTRACTOR shall provide additional temporary controls necessary to prevent environmental damage to the Site and adjacent areas while the Work is stopped or suspended.
11. Failure to Provide Adequate Controls: In the event SUBCONTRACTOR repeatedly fails to satisfactorily control erosion and siltation, DEPARTMENT reserves the right to employ outside assistance or to use DEPARTMENT's own forces for erosion and sediment control. Cost of such work, plus engineering and inspection costs, will be deducted from monies due SUBCONTRACTOR.

- B. Erosion and Sediment Controls:
 1. Refer to Contract Drawings..

3.7 REMOVAL OF TEMPORARY CONTROLS

- A. Removals – General:
 1. Upon completion of the Work, remove temporary controls and restore Site to specified condition; if condition is not specified, restore Site to pre-construction condition.
 2. After soils are permanently stabilized, remove from the Site temporary erosion and sediment controls.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 57 33

SECURITY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall safely guard all the Work, the Project, products, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion. SUBCONTRACTOR's duty includes safely guarding DEPARTMENT's property in vicinity of the Work and Project, and other private property in the vicinity of the Project from injury and loss in connection with performance of the Project.
2. Employ watchmen as required to provide required security and prevent unauthorized entry during active work hours.
3. Costs for security required under this Section shall be paid by SUBCONTRACTOR.
4. Make no claim against DEPARTMENT for damage resulting from trespass.
5. Pay full compensation for, or repair or replace, damage to property of DEPARTMENT and others arising from failure to furnish adequate security.
6. Provide temporary fencing in accordance with the Contract Documents.

1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Temporary Fencing: Submit site plan drawings showing proposed locations and extent of breaches in site security fencing and proposed locations and extent of temporary site security fencing.
2. Product Data:
 - a. Temporary Fencing: Manufacturer's literature, specifications, and installation instructions for temporary fencing proposed for site security use.

B. Informational Submittals: Submit the following:

1. Employee Information: Submit the following to ARCADIS:
 - a. Format of employee background data.
 - b. Background data for employees to whom identification badges will be furnished.
 - c. Updated listing of employees to whom identification badges have been issued. Submit updated listing within 24 hours of a change in the list or change in an employee's Site access status.

1.3 SUBCONTRACTOR'S SITE ACCESS AND SECURITY PROCEDURES

- A. Comply with Section 01 55 13, Access Roads and Parking Areas.
- B. Comply with DEPARTMENT's security procedures and access restrictions at the Site throughout the Project. Comply with the following:
 - 1. Personnel Identification: All construction personnel and others associated with the Project shall wear at all times at the Site a badge bearing SUBCONTRACTOR's name, employer (if other than SUBCONTRACTOR), employee's name and, as applicable, employee number.
 - 2. Parking: Do not park outside of designated SUBCONTRACTOR parking area, which will be designated by ARCADIS. Prepare and maintain parking area as required. Personal vehicles are not allowed outside the SUBCONTRACTOR parking area.

PART 2 – PRODUCTS

2.1 TEMPORARY FENCING

- A. If security fencing or barriers are breached or temporarily removed for the Project, provide and maintain temporary security fencing equal to existing, unless otherwise specified, in manner satisfactory to ARCADIS and DEPARTMENT.

PART 3 – EXECUTION

3.1 TEMPORARY FENCING

- A. Install temporary fencing used for site security in accordance with the Contract Documents and fence manufacturer's instructions. Provide temporary fencing for site security so that integrity of site security is maintained throughout the Project.
- B. Maintain temporary fencing throughout the Project. Repair damage to temporary fencing and replace fencing when required to maintain site security.
- C. Remove temporary fencing when permanent site security fencing is in place and fully functional, or when otherwise directed by DEPARTMENT or ARCADIS.

+ + END OF SECTION + +

SECTION 01 58 00

PROJECT IDENTIFICATION AND SIGNS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall furnish, install, and maintain temporary signage for Project identification and construction site information.
 - 2. Temporary signs required are indicated in Part 2 of this Section.
 - 3. Do not display any other temporary signs, other than those specified, without prior approved of DEPARTMENT.

1.2 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Sign Painter: Shall be a professional in the type of Work required, regularly engaged in work similar to that required.

1.3 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Shop Drawings:
 - a. Layout of each temporary sign, indicating layout, text, font, character size, graphics if any, materials type and grade, including sign board, trim, supports, and bracing.
 - 2. Product Data:
 - a. Specifications and product data for finishes proposed for use, when requested by ARCADIS.
 - 3. Samples: Provide color Samples when requested by ARCADIS.

PART 2 – PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Performance Criteria: Temporary signs, including supports and bracing, shall withstand sustained winds of 75 mile per hour.
- B. Temporary Signage Required: Provide the following temporary signs:
 - 1. Project Sign:
 - a. Location: As directed by ARCADIS.
 - b. Format: As shown on the Contract Drawings.

- C. Materials:
 - 1. Sign Board:
 - a. Signs shall be 3/4-inch thick, exterior-grade plywood, unless otherwise shown or indicated.
 - b. Provide signs with trim, mitered on edges.
 - 2. Supports and Bracing: Provide supports and bracing as required to adequately support and brace temporary signs to comply with the performance criteria indicated in this Section.
- D. Finishing: Paint sign with exterior gloss-finish enamel, suitable for long-term exposure to sunlight without fading for the duration of the Project.

PART 3 – EXECUTION

3.1 INSTALLATION, MAINTENANCE, AND REMOVAL

- A. Location of signs shall be as shown or indicated on the Contract Documents, or as directed by ARCADIS.
- B. Maintenance:
 - 1. Maintain temporary signage so that signs are clean, legible, and upright. Cut grass, weeds, and other plants so that temporary signs are not covered or obscured.
 - 2. Repair and repaint damaged temporary signs. Relocate signs as required by progress of the Project.
- C. Remove temporary signage upon Substantial Completion of the entire Project, or when directed by ARCADIS.

+ + END OF SECTION + +

SECTION 01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes the general requirements for preparing for shipping, delivering, and handling materials and equipment.
2. SUBCONTRACTOR shall make all arrangements for transporting, delivering, and handling of materials and equipment required for prosecution and completion of the Work.
3. When required, move stored materials and equipment without additional compensation and without changes to the Contract Times.

1.2 SUBMITTALS

- A. Refer to individual Specification Sections for submittal requirements relative to delivering and handling materials and equipment.

1.3 PREPARING FOR SHIPMENT

- A. When practical, factory-assemble materials and equipment. Match mark or tag separate parts and assemblies to facilitate field assembly. Cover machined and unpainted parts that may be damaged by the elements with strippable, protective coating.
- B. Package materials and equipment to facilitate handling, and protect materials and equipment from damage during shipping, handling, and storage. Mark or tag outside of each package or crate to indicate the associated purchase order number, bill of lading number, contents by name, DEPARTMENT's contract name and number, SUBCONTRACTOR name, equipment number, and approximate weight. Include complete packing lists and bills of materials with each shipment.
- C. Protect materials and equipment from exposure to the elements and keep thoroughly dry and dust-free at all times. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Lubricate bearings and other items requiring lubrication in accordance with manufacturer's instructions.
- D. Advance Notice of Shipments:
1. Keep ARCADIS informed of delivery of all materials and equipment to be incorporated in the Work.

2. Upon receipt of Supplier's advance notice of shipment, at least seven days prior to delivery of materials and equipment, provide ARCADIS written notification of anticipated date and place of arrival of the following:
 - a. Geotextile Separation Fabric
- E. Do not ship materials and equipment until:
1. Related Shop Drawings, Samples, and other submittals have been approved or accepted (as applicable) by ARCADIS, including, but not necessarily limited to, all Action Submittals associated with the materials and equipment being delivered.
 2. Manufacturer's instructions for handling, storing, and installing the associated materials and equipment have been submitted to and accepted by ARCADIS in accordance with the Specifications.
 3. Results of source quality control testing (factory testing), when required by the Contract Documents for the associated materials or equipment, have been reviewed and accepted by ARCADIS.
 4. Facilities required for handling materials and equipment in accordance with manufacturer's instructions are in place and available.
 5. Required storage facilities have been provided.

1.4 DELIVERY

- A. Scheduling and Timing of Deliveries:
1. Arrange deliveries of materials and equipment in accordance with the accepted Progress Schedule and in ample time to facilitate inspection prior to installation.
 2. Schedule deliveries to minimize space required for and duration of storage of materials and equipment at the Site or delivery location, as applicable.
 3. Coordinate deliveries to avoid conflicting with the Work and conditions at Site, and to accommodate the following:
 - a. Work of other SUBCONTRACTORS and DEPARTMENT.
 - b. Storage space limitations.
 - c. Availability of equipment and personnel for handling materials and equipment.
 - d. DEPARTMENT's use of premises.
 4. Deliver materials and equipment to the Site during regular working hours.
 5. Deliver materials and equipment to avoid delaying the Work and the Project, including work of other SUBCONTRACTORS, as applicable. Deliver anchor system materials, including anchor bolts to be embedded in concrete or masonry, in ample time to avoid delaying the Work.
- B. Deliveries:
1. Shipments shall be delivered with SUBCONTRACTOR's name, SUBCONTRACTOR's name (if applicable), Site name, Project name, and contract designation (example: "ABC Construction Co., City of Somewhere, Idaho, Wastewater Treatment Plant Primary Clarifier Improvements, Contract 25, General Construction") clearly marked.

2. Site may be listed as the “ship to” or “delivery” address; but DEPARTMENT shall not be listed as recipient of shipment unless otherwise directed in writing by ARCADIS.
 3. Provide SUBCONTRACTOR’s telephone number to shipper; do not provide DEPARTMENT’s telephone number.
 4. Arrange for deliveries while SUBCONTRACTOR’s personnel are at the Site. SUBCONTRACTOR shall receive and coordinate shipments upon delivery. Shipments delivered to the Site when SUBCONTRACTOR is not present will be refused by DEPARTMENT, and SUBCONTRACTOR shall be responsible for the associated delays and additional costs, if incurred.
 5. Comply with Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
- C. Containers and Marking:
1. Have materials and equipment delivered in manufacturer’s original, unopened, labeled containers.
 2. Clearly mark partial deliveries of component parts of materials and equipment to identify materials and equipment, to allow easy accumulation of parts, and to facilitate assembly.
- D. Inspection of Deliveries:
1. Immediately upon delivery, inspect shipment to verify that:
 - a. Materials and equipment comply with the Contract Documents and approved or accepted (as applicable) submittals.
 - b. Quantities are correct.
 - c. Materials and equipment are undamaged.
 - d. Containers and packages are intact and labels are legible.
 - e. Materials and equipment are properly protected.
 2. Promptly remove damaged materials and equipment from the Site and expedite delivery of new, undamaged materials and equipment, and remedy incomplete or lost materials and equipment to furnish materials and equipment in accordance with the Contract Documents, to avoid delaying progress of the Work.
 3. Advise ARCADIS in writing when damaged, incomplete, or defective materials and equipment are delivered, and advise ARCADIS of the associated impact on the Progress Schedule.

1.5 HANDLING OF MATERIALS AND EQUIPMENT

- A. Provide equipment and personnel necessary to handle materials and equipment, including those furnished by DEPARTMENT, by methods that prevent soiling or damaging materials and equipment and packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring, and otherwise damaging materials and equipment and surrounding surfaces.

- C. Handle materials and equipment by methods that prevent bending and overstressing.
- D. Lift heavy components only at designated lifting points.
- E. Handle materials and equipment in safe manner and as recommended by the manufacturer to prevent damage. Do not drop, roll, or skid materials and equipment off delivery vehicles or at other times during handling. Hand-carry or use suitable handling equipment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section includes general requirements for storing and protecting materials and equipment.

1.2 STORAGE

- A. Store and protect materials and equipment in accordance with manufacturer's recommendations and the Contract Documents.
- B. SUBCONTRACTOR shall make all arrangements and provisions necessary for, and pay all costs for, storing materials and equipment. Excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be placed to avoid injuring the Work and existing facilities and property, and so that free access is maintained at all times to all parts of the Work and to public utility installations in vicinity of the Work. Store materials and equipment neatly and compactly in locations that cause minimum inconvenience to DEPARTMENT, other SUBCONTRACTORS, public travel, and owners, tenants, and occupants of adjoining property. Arrange storage in manner to allow easy access for inspection.
- C. Areas available at the Site for storing materials and equipment are shown or indicated in the Contract Documents, or as approved by ARCADIS.
- D. Store materials and equipment to become DEPARTMENT's property to facilitate their inspection and ensure preservation of quality and fitness of the Work, including proper protection against damage by freezing, moisture, and high temperatures with ambient temperatures as high as 115 degrees F. Store in indoor, climate-controlled storage areas all materials and equipment subject to damage by moisture, humidity, heat, cold, and other elements, unless otherwise acceptable to DEPARTMENT. When placing orders to Suppliers for equipment and controls containing computer chips, electronics, and solid-state devices, SUBCONTRACTOR shall obtain, coordinate, and comply with specific temperature and humidity limitations on materials and equipment, because temperature inside cabinets and components stored in warm temperatures can approach 200 degrees F.
- E. SUBCONTRACTOR shall be fully responsible for loss or damage (including theft) to stored materials and equipment.
- F. Do not open manufacturer's containers until time of installation, unless recommended by the manufacturer or otherwise specified in the Contract

Documents.

- G Do not store materials or equipment in structures being constructed unless approved by ARCADIS in writing.
- H Do not use lawns or other private property for storage without written permission of the owner or other person in possession or control of such premises.

1.3 PROTECTION

- A. Equipment to be incorporated into the Work shall be boxed, crated, or otherwise completely enclosed and protected during shipping, handling, and storage, in accordance with Section 01 65 00, Product Delivery Requirements.
- B. Store all materials and equipment off the ground (or floor) on raised supports such as skids or pallets.
- C. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Painted equipment surfaces that are damaged or marred shall be repainted in their entirety in accordance with equipment manufacturer and paint manufacturer requirements, to the satisfaction of ARCADIS.
- D. Protect electrical equipment, controls, and instrumentation against moisture, water damage, heat, cold, and dust. Space heaters provided in equipment shall be connected and operating at all times until equipment is placed in operation and permanently connected.

1.4 UNCOVERED STORAGE

- A. The following types of materials may be stored outdoors without cover on supports so there is no contact with the ground:
 - 1. None.

1.5 COVERED STORAGE

- A. The following materials and equipment may be stored outdoors on supports and completely covered with covering impervious to water:
 - 1. Grout and mortar materials.
 - 2. Separation fabric.
 - 3. Soil materials and granular materials such as aggregate.
 - 4. Organic Soil Amendment.
 - 5. Rough lumber.
- B. Tie down covers with rope, and slope covering to prevent accumulation of water.
- C. Store loose granular materials, with covering impervious to water, in well-drained area or on solid surfaces to prevent mixing with foreign matter.

1.6 FULLY PROTECTED STORAGE

- A. Store all material and equipment not named in Articles 1.4 and 1.5 of this Section on supports in buildings or trailers that have concrete or wooden flooring, roof, and fully closed walls on all sides. Covering with visquine plastic sheeting or similar material in space without floor, roof, and walls is not acceptable. Comply with the following:
 - 1. Provide heated storage for materials and equipment that could be damaged by low temperatures or freezing.
 - 2. Provide air-conditioned storage for materials and equipment that could be damaged by high temperatures.
 - 3. Protect mechanical and electrical equipment from being contaminated by dust, dirt, and moisture.
 - 4. Maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

1.7 HAZARDOUS PRODUCTS

- A. Prevent contamination of personnel, storage area, and the Site. Comply with Laws and Regulations, manufacturer's instructions, and Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

1.8 MAINTENANCE OF STORAGE

- A. On scheduled basis, periodically inspect stored materials and equipment to ensure that:
 - 1. Condition and status of storage facilities is adequate to provide required storage conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Materials and equipment exposed to elements are not adversely affected.

1.9 RECORDS

- A. Keep up-to-date account of materials and equipment in storage to facilitate preparation of Applications for Payment, if the Contract Documents provide for payment for materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall provide field engineering services and professional services of the types indicated for the Project, including:
1. Furnishing civil, structural, and other professional engineering services specified or required to execute SUBCONTRACTOR's construction methods.
 2. Developing and making all detail surveys and measurements required for construction; including slope stakes, batter boards, and all other working lines, elevations, and cut sheets.
 3. Providing materials required for benchmarks, control points, batter boards, grade stakes, structure and pipeline elevation stakes, and other items.
 4. Keeping a transit, theodolite, or total station (theodolite with electronic distance measurement device); leveling instrument; and related implements such as survey rods and other measurement devices, at the Site at all times, and having a skilled instrument person available when necessary for laying out the Work.
 5. Being solely responsible for all locations, dimensions and levels. No data other than Change Order, Work Change Directive, or Field Order shall justify departure from dimensions and levels required by the Contract Documents.
 6. Rectifying all Work improperly installed because of not maintaining, not protecting, or removing without authorization established reference points, stakes, marks, and monuments.
 7. Providing such facilities and assistance necessary for ARCADIS to check lines and grade points placed by SUBCONTRACTOR. Do not perform excavation or embankment work until all cross-sectioning necessary for determining payment quantities for Unit Price Work have been completed and accepted by ARCADIS.

1.2 SUBCONTRACTOR'S FIELD ENGINEER

- A. SUBCONTRACTOR shall designate an on-site individual with experience and capability of performing all field engineering tasks required of SUBCONTRACTOR, including:
1. Preparing and maintaining daily reports of activity on the Work. Submit reports to ARCADIS including the following information, at minimum:
 - a. Number of employees at the Site.
 - b. Number employees at the Site for each Subcontractor.
 - c. Breakdown of employees by trades.
 - d. Major equipment and materials installed as part of the Work.
 - e. Major construction equipment utilized.

- f. Location of areas in which construction was performed.
 - g. Materials and equipment received.
 - h. Work performed, including field quality control measures and testing.
 - i. Weather conditions.
 - j. Safety.
 - k. Delays encountered, amount of delay incurred, and the reasons for the delay.
 - l. Instructions received from ARCADIS or DEPARTMENT.
2. Submit two copies of SUBCONTRACTOR's daily reports at ARCADIS' field office by 9:00 a.m. the next working day after the day covered in the associated report. Daily report shall be signed by responsible member of SUBCONTRACTOR's staff, such as SUBCONTRACTOR's project manager or superintendent, or foreman designated by SUBCONTRACTOR as having authority to sign daily reports.
 3. Check all formwork, reinforcing, inserts, structural steel, bolts, sleeves, piping, other materials and equipment for compliance with the Contract Documents.
 4. Maintain field office files and drawings, record documents, and coordinate field engineering services with Subcontractors and Suppliers as appropriate. Prepare layout and coordination drawings for construction operations.
 5. Check and coordinate the Work for conflicts and interferences, and immediately advise ARCADIS and Resident Project Representative, if any, of all discrepancies of which SUBCONTRACTOR is aware.
 6. Cooperate as required with ARCADIS and Resident Project Representative, if any, in observing the Work and performing field inspections.
 7. Review and coordinate the Work with Shop Drawings and SUBCONTRACTOR's other submittals.

1.3 SUBCONTRACTOR'S SURVEYOR

- A. Employ or retain the services, as needed, at the Site a surveyor with experience and capability of performing surveying and layout tasks required in the Contract Documents and as required for the Work. Surveyor shall be a professional land surveyor registered and licensed in the jurisdiction where the Project is located, or a professional engineer registered and licensed as a professional engineer in the jurisdiction where the Project is located and authorized under Laws and Regulations to practice surveying. Surveyor's tasks include, but are not necessarily limited to, the following:
 1. Providing required surveying equipment, including transit or theodolite, level, stakes, and surveying accessories.
 2. Establishing required lines and grades for constructing all facilities, structures, pipelines, and site improvements.
 3. Preparing and maintaining professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the Work.
 4. Prior to backfilling operations, survey, locate, and record on a copy of the Contract Documents accurate representation of buried Work and Underground Facilities encountered.

5. Complying with requirements of the Contract Documents relative to surveying and related work.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following:
 1. Field Engineering:
 - a. Submit daily reports as indicated in this Section.
 - b. When requested by ARCADIS, submit documentation verifying accuracy of field engineering.
 2. Surveying:
 - a. Complete plan for conducting survey work, submitted ten days prior to beginning survey Work.
 - b. Example of proposed survey field books to be maintained by SUBCONTRACTOR's surveyor. Example shall have sufficient information and detail, including example calculations and notes, to demonstrate that field books will be organized and maintained in a professional manner, complying with the Contract Documents.
 - c. Submit original field books within two days after completing survey Work.
 - d. Submit certified survey in accordance with this Section.
 3. Certificates: When requested by ARCADIS, submit certificate signed by professional engineer or professional surveyor, as applicable, certifying that elevations and locations of the Work comply with the Contract Documents. Explain all deviations, if any.
 4. Qualifications Statements:
 - a. Field Engineer: Name and address. When requested by ARCADIS, submit qualifications.
 - b. Surveyor: Name and address of firm, and resumes of each professional land surveyor and crew chief conducting the survey Work. Submit at least ten days prior to beginning survey Work. During the Project, submit resume for each new registered land surveyor and crew chief employed by or retained by SUBCONTRACTOR at least ten days prior to starting on the survey Work.

1.5 RECORDS

- A. Maintain at the Site a complete and accurate log of control and survey Work as it progresses.
 1. Survey data shall be in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the locality where the Site is located. Original field notes, computations, and other surveying data shall be recorded by SUBCONTRACTOR's surveyor in SUBCONTRACTOR-furnished hard-bound field books, and shall be signed and sealed by SUBCONTRACTOR's surveyor. Completeness and accuracy of survey Work, and completeness and accuracy of survey records, including field books, shall be responsibility of SUBCONTRACTOR. Failure to organize and

maintain survey records in an appropriate manner that allows reasonable and independent verification of calculations, and to allow identification of elevations, dimensions, and grades of the Work, shall be cause for rejecting the survey records, including field books.

2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by ARCADIS.
- B. Upon completion of foundation walls and major Site improvements, prepare a certified survey, signed and sealed by professional surveyor, showing dimensions, locations, angles and elevations of construction and locations and elevations of Underground Facilities encountered during the Work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 SURVEYING

- A. Reference Points:
1. DEPARTMENT's established reference points damaged or destroyed by SUBCONTRACTOR will be re-established by DEPARTMENT at SUBCONTRACTOR's expense.
 2. From DEPARTMENT-established reference points, establish lines, grades, and elevations necessary to control the Work. Obtain measurements required for executing the Work to tolerances specified in the Contract Documents.
 3. Establish, place, and replace as required, such additional stakes, markers, and other reference points necessary for control, intermediate checks, and guidance of construction operations.
- B. Surveys to Determine Quantities for Payment:
1. For each application for progress payment, perform such surveys and computations necessary to determine quantities of Work performed or placed. Perform surveys necessary for ARCADIS to determine final quantities of Work in place.
 2. Notify ARCADIS at least 24 hours before performing survey services for determining quantities. Unless waived in writing by ARCADIS, perform quantity surveys in presence of ARCADIS.
- C. Construction Surveying: Comply with the following:
1. Alignment Staking: Provide alignment stakes at 50-foot intervals on tangent, and at 25-foot intervals on curves.

2. Slope Staking: Provide slope staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Re-stake at every ten-foot difference in elevation.
3. Structure: Stake out structures, including elevations, and check prior to and during construction.
4. Pipelines: Stake out pipelines including elevations, and check prior to and during construction.
5. Road: Stake out roadway elevations at 50-foot intervals on tangent, and at 25-foot intervals on curves.
6. Cross-sections: Provide original, intermediate, and final staking as required, for site work other locations as necessary for quantity surveys.
7. Easement Staking: Provide easement staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Also provide wooden laths with flagging at 100-foot maximum intervals.
8. Record Staking: Provide permanent stake at each blind flange and each utility cap is provided for future connections. Stakes for record staking shall be material acceptable to ARCADIS.

D. Accuracy:

1. Establish SUBCONTRACTOR's temporary survey references points for SUBCONTRACTOR's use to at least second-order accuracy (e.g., 1:10000). Construction staking used as a guide for the Work shall be set at least third-order accuracy (e.g., 1:5000). Basis on which such orders are established shall provide the absolute margin for error specified below.
2. Horizontal accuracy of easement staking shall be plus or minus 0.1 feet. Accuracy of other staking shall be plus or minus 0.04 feet horizontally and plus or minus 0.02 feet vertically.
3. Survey calculations shall include an error analysis sufficient to demonstrate required accuracy.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 71 33

PROTECTION OF THE WORK AND PROPERTY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage, as specified in the Agreement and this Section.
2. To prevent damage, injury, or loss, SUBCONTRACTOR's actions shall include the following:
 - a. Storing apparatus, materials, supplies, and equipment in an orderly, safe manner that does not unduly interfere with progress of the Work or work of other SUBCONTRACTORS or utility companies.
 - b. Providing suitable storage facilities for materials and equipment subject to damage or degradation by exposure to weather, theft, breakage, or other cause.
 - c. Placing upon the Work or any part thereof only loads consistent with the safety and integrity of that portion of the Work and existing construction.
 - d. Frequently removing and disposing of refuse, rubbish, scrap materials, and debris caused by SUBCONTRACTOR's operations so that, at all times, the Site is safe, orderly, and workmanlike in appearance.
 - e. Providing temporary barricades and guard rails around the following: openings, scaffolding, temporary stairs and ramps, around excavations, for elevated walkways, and other hazardous areas.
3. Do not, except after written consent from proper parties, enter or occupy privately-owned land with personnel, tools, materials or equipment, except on lands and easements provided by DEPARTMENT.
4. SUBCONTRACTOR has full responsibility for preserving public and private property and facilities on and adjacent to the Site. Direct or indirect damage done by, or on account of, any act, omission, neglect, or misconduct by SUBCONTRACTOR in executing the Work, shall be restored by SUBCONTRACTOR, at his expense to condition equal to that existing before damage was done.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 BARRICADES AND WARNING SIGNALS

A. Barricades and Warning Signals – General:

1. Where the Work is performed on or adjacent to roadway, access road, right-of-way, or public place:
 - a. Provide barricades, fences, lights, warning signs, danger signals, watchmen, and take other precautionary measures for protecting persons, property, and the Work.
 - b. Paint barricades to be visible at night.
 - c. From sunset to sunrise, furnish and maintain at least one light at each barricade.
 - d. Erect sufficient barricades to keep vehicles from being driven on or into Work under construction.
 - e. Furnish watchmen in sufficient numbers to protect the Work.
2. Provide temporary barricades to protect personnel and property for Work not in or adjacent to vehicular travel areas, including indoor work, in accordance with Laws and Regulations.
3. SUBCONTRACTOR's responsibility for maintaining temporary barricades, signs, lights, and for providing watchmen shall continue until the Work is accepted in accordance with the Contract Documents.

B. Temporary Fencing: Refer to Section 01 57 33, Security.

3.2 PROTECTION OF EXISTING STRUCTURES

A. Underground Facilities:

1. Underground Facilities known to DEPARTMENT and ARCADIS, except water, gas, sewer, electric, and communications services to individual buildings and properties, are shown. Information shown for Underground Facilities is the best available to DEPARTMENT and ARCADIS but, in accordance with the Agreement, is not guaranteed to be correct or complete.
2. SUBCONTRACTOR shall explore ahead of trenching and excavation Work and shall uncover obstructing Underground Facilities sufficiently to determine their location, to prevent damage to Underground Facilities, and to prevent service interruption to building or parcels served by Underground Facilities. If SUBCONTRACTOR damages an Underground Facility, SUBCONTRACTOR shall restore it to original condition, in accordance with requirements of the owner of the damaged facility and the Agreement.
3. Necessary changes in the location of the Work may be directed by ARCADIS to avoid Underground Facilities not shown or indicated on the Contract Documents.

4. If permanent relocation of an existing Underground Facilities is required and is not otherwise shown or indicated in the Contract Documents, SUBCONTRACTOR will be directed in writing to perform the Work. When the relocation Work results in a change in the Contract Price, Contract Time, contract modification procedures and payment for such Work shall be in accordance with the Contract Documents.
- B. Surface Structures:
1. Surface structures are existing buildings, structures, and other facilities at or above ground surface, including their foundations or any extension below ground surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, exposed piping and utilities, poles, exposed wires, posts, signs, markers, curbs, walks, fencing, and other facilities visible at or above ground surface.
 2. Existing surface facilities, including but not limited to guard rails, posts, guard cables, signs, poles, markers, curbs, and fencing, that are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at SUBCONTRACTOR's expense.
- C. Protection of Underground Facilities and Surface Structures:
1. SUBCONTRACTOR shall sustain in their places and protect from direct or indirect injury all Underground Facilities and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure or facility. Before proceeding with the Work of sustaining and supporting such structure or facility, SUBCONTRACTOR shall satisfy ARCADIS that methods and procedures to be used have been approved by party owning same.
 2. SUBCONTRACTOR shall bear all risks attending the presence or proximity of all Underground Facilities and surface structures within or adjacent to limits of the Work, in accordance with the Contract Documents. SUBCONTRACTOR shall be responsible for damage and expense for direct or indirect injury caused by his Work to structures and facilities. SUBCONTRACTOR shall repair immediately damage caused by his Work, to the satisfaction of owner of damaged structure or facility.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 73 24

CONNECTIONS TO EXISTING FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes requirements for connections to existing facilities.
 - 2. SUBCONTRACTOR shall provide labor, materials, tools, equipment, and incidentals shown, specified, and required for connections to existing facilities.
- B. Coordination:
 - 1. Review installation procedures under other Sections and coordinate Work that must be performed with or before the Work specified in this Section.
- C. Related Sections:
 - 1. Section 01 73 29, Cutting and Patching.
- D. General:
 - 1. Requirements for cutting and patching are in Section 01 73 29, Cutting and Patching.
 - 2. To extent possible, materials, equipment, systems, piping, and appurtenances that will be placed into service upon completion of connection to existing facilities shall be checked, successfully tested, and in condition for operation prior to making connections to existing facilities, if valves, gates, or similar watertight and gastight isolation devices are not provided at the connection point.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall perform cutting and coring, and rough and finish patching of holes and openings in existing construction.
2. Provide cutting, coring, fitting and patching, including attendant excavation and fill, required to complete the Work, and to:
 - a. remove and replace defective Work;
 - b. remove samples of installed Work as specified or required for testing;
 - c. remove construction required to perform required alterations or additions to existing work;
 - d. uncover the Work for ARCADIS' observation of covered Work or observation by authorities having jurisdiction;
 - e. connect to completed Work not performed in proper sequence;
 - f. remove or relocate existing utilities and pipes that obstruct the Work in locations where connections must be made;
 - g. make connections or alterations to existing or new facilities.

B. Coordination:

1. Cutting, coring, and rough patching shall be performed by the SUBCONTRACTOR requiring the opening. Finish patching shall be responsibility of SUBCONTRACTOR and shall be performed by trade associated with application of the particular finish.

1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Cutting and Patching Request:
 - a. Submit written request to ARCADIS, well in advance of executing cutting or alteration that affects one or more of the following:
 - 1) Design function or intent of Project.
 - 2) Work of ARCADIS, DEPARTMENT or Others.
 - 3) Structural value or integrity of an element of the Project.
 - 4) Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 5) Efficiency, operational life, maintenance, or safety of operational elements.
 - 6) Visual qualities of sight-exposed elements.
 - b. Request shall include:

- 1) Identification of Project and contract name and number.
 - 2) Description of affected Work of SUBCONTRACTOR and work of others (if any).
 - 3) Necessity for cutting.
 - 4) Effect on work of DEPARTMENT, other SUBCONTRACTORS (if any), and on structural or weatherproof integrity of Project.
 - 5) Description of proposed Work, describing: scope of cutting and patching; trades who will be executing the Work; products proposed to be used; extent of refinishing; schedule of operations; alternatives to cutting and patching, if any.
 - 7) Designation of entity responsible for cost of cutting and patching, when applicable.
 - 8) Written permission of other SUBCONTRACTORS (if any) whose work will be affected.
2. Recommendation Regarding Cutting and Patching:
 - a. Should conditions of work, or schedule, indicate a change of materials or methods, submit written recommendation to ARCADIS including:
 - 1) Conditions indicating change.
 - 2) Recommendations for alternative materials or methods.
 - 3) Items required with substitution request, in accordance with the substitution request requirements of the Contract Documents.
 3. Product Data:
 - a. Submit manufacturer's product data for the protective compound to be applied to core-drilled surfaces and cut concrete surfaces.
- B. Informational Submittals: Submit the following:
1. Submit written indication designating the day and time that the construction associated with cutting and patching will be uncovered, to provide for observation. Do not begin cutting or patching operations until submittal is accepted by ARCADIS.
 2. X-ray Investigations:
 - a. Proposed method of investigation. Submit and obtain ARCADIS' acceptance prior to performing X-ray inspections.
 - b. Report of X-ray evaluation of slabs, floors, and walls to be cut or core-drilled.
- C. Comply with submittal requirements in the Division 02 through Division 49 Specifications for patching materials.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials - General:
1. Use materials in conformance with the Contract Documents.

2. If not shown or indicated in the Contract Documents, use materials and products that are identical to existing materials and products affected by cutting and patching Work.
 3. For exposed surfaces, use materials that visually match existing adjacent surfaces to fullest extent possible. If identical materials are unavailable or cannot be used, use materials whose installed performance will equal or surpass that of existing materials.
 4. Replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, using materials that do not void required or existing warranties.
- B. Compound Applied to Core-Drilled Surfaces and Cut Concrete Surfaces:
1. After core-drilling and before installing the utility or equipment through the penetration, coat exposed concrete and steel with solvent-free, two-component, epoxy protective coating.
 2. Product and Manufacturer: Provide one of the following:
 - a. Sikagard 62, by Sika Corporation.
 - b. Or equal.

PART 3 – EXECUTION

3.1 GENERAL

- A. Perform cutting and coring in such manner that limits extent of patching.
- B. Structural Elements: Do not cut or patch structural elements in manner that would change structural element's load-carrying capacity as load deflection ratio.
- C. Operating Elements: Do not cut or patch operating elements in manner that would reduce their capacity to perform as intended. Do not cut or patch operating elements or related components in manner that would increase maintenance requirements or decrease operational life or safety.
- D. Replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, using methods that do not void required or existing warranties.

3.2 INSPECTION

- A. Examine surfaces to be cut or patched and conditions under which cutting or patching are to be performed before starting cutting or patching work.
- B. Report unsatisfactory or questionable conditions to ARCADIS in writing. Do not proceed with the Work until unsatisfactory conditions are corrected.

- C. Non-Destructive Investigation:
 - 1. In advance of cutting or coring through existing slabs or walls, use X-ray or other non-destructive methods accepted by ARCADIS to determine location of reinforcing steel, electrical conduits, and other items embedded in slabs or walls.
 - 2. Submit to ARCADIS written report of findings of evaluation.
 - 3. Perform X-ray investigation and submit results to ARCADIS sufficiently in advance of cutting work to allow time to identify and implement alternatives if changes to the Work are necessary because of conduit or other features in floor or wall.

3.3 PREPARATION

- A. Provide temporary support required to maintain structural integrity of Project, to protect adjacent Work from damage during cutting, and to support the element(s) to be cut.
- B. Protection of Existing Construction During Cutting and Patching:
 - 1. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that will be exposed during cutting and patching operations.
 - 2. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
 - 3. Do not cut existing pipe, conduit, ductwork, or other utilities serving facilities scheduled to be removed or relocated until provisions have been made to bypass them.

3.4 CORING

- A. Core-drill holes to be cut through concrete and masonry walls, slabs, or arches, unless otherwise accepted by ARCADIS in writing.
- B. Coring:
 - 1. Perform coring with non-impact rotary tool using diamond core-drills. Size holes for pipe, conduit, sleeves, equipment or mechanical seals, as required, to be installed through the penetration.
 - 2. Do not core-drill through electrical conduit or other utility lines embedded in walls or slabs without approval of ARCADIS. To extent possible, avoid cutting reinforcing steel in slabs and walls.
- C. Protection:
 - 1. Protect existing equipment, utilities, and adjacent areas from water and other damage covered by core-drilling operations.
 - 2. After core-drilling and before installing the utility or equipment through the penetration, coat exposed concrete and steel with protective coating material

indicated in Paragraph 2.1.B of this Section. Apply protective coating in accordance with manufacturer's instructions.

D. Cleaning:

1. Vacuum or otherwise remove slurry and tailings from the work area following core-drilling.

3.5 CUTTING

A. Cutting – General:

1. Cut existing construction using methods least likely to damage elements retained or adjoining construction, and that provide proper surfaces to receive installation or repair.
2. In general, use hand or small power tools suitable for sawing or grinding. Avoid using hammering and chopping when possible.
3. Cut holes and slots as small as possible, neatly to the size required, and with minimum disturbance of adjacent surfaces.
4. Provide adequate bracing of area to be cut prior to start of cutting.
5. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed side.
6. Provide equipment of adequate size to remove cut panel.
7. Provide temporary covering over cut openings where not in use.

B. Cutting – Concrete and Masonry:

1. Cut through concrete and masonry using concrete wall saw with diamond saw blades.
2. Provide for control of slurry generated during sawing.
3. After cutting concrete and before installing subsequent construction on or through the opening, coat exposed concrete and steel with protective coating material indicated in Paragraph 2.1.B of this Section. Apply protective coating in accordance with manufacturer's instructions.

3.6 PATCHING

A. Patching – General:

1. Patch construction by filling, repairing, refinishing, closing-up, and similar operations following performance of other Work.
2. Patch with durable seams that are as inconspicuous as possible. Provide materials and comply with installation requirements indicated in the Contract Documents.
3. Patch to provide airtight connections to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
4. Where feasible, test patched areas to demonstrate integrity of installation.

B. Restoration:

1. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in manner that eliminates evidence of patching and refinishing.
2. For continuous surfaces, refinish to nearest intersection.
3. For an assembly, refinish the entire unit that was patched.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 CLEANING

A. Cleaning and Restoration:

1. Clean areas and spaces where cutting, coring, or patching were performed.
2. Clean piping, conduit, and similar constructions before applying paint or other finishing materials.
3. Restore damaged coverings of pipe and other utilities to original condition.

+ + END OF SECTION + +

SECTION 01 77 19

CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL

- A. Scope:
 - 1. Section Includes.
 - a. Substantial Completion.
 - b. Final inspection.
 - c. Request for final payment.

1.2 SUBSTANTIAL COMPLETION

- A. Procedures for requesting and documenting Substantial Completion are in the Agreement.

1.3 FINAL INSPECTION

- A. Procedures for requesting and documenting the final inspection are in the Agreement.

1.4 REQUEST FOR FINAL PAYMENT

- A. Procedure:
 - 1. Submit request for final payment in accordance with the Agreement, using procedure specified in Section 01 29 76, Progress Payment Procedures.
- B. Request for final payment shall include:
 - 1. Documents required for progress payments in Section 01 29 76, Progress Payment Procedures.
 - 2. Releases or Waivers of Lien Rights:
 - a. When submitting releases or waivers of Lien rights, provide release or waiver by SUBCONTRACTOR and each Subcontractor and Supplier that provided SUBCONTRACTOR with labor, material, or equipment totaling \$1,000 or more.
 - b. Provide list of Subcontractors and Suppliers for which release or waiver of Lien is required.
 - c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver to SUBCONTRACTOR, and shall include Subcontractor's or Supplier's corporate seal, when applicable.
 - d. Release or waiver of Lien may be conditional upon receipt of final payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The closeout forms will be provided by ARCADIS.

+ + END OF SECTION + +

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall maintain and submit to ARCADIS with record documents in accordance with the Specifications and Agreement.
- B. Maintenance of Record Documents:
 - 1. Maintain in SUBCONTRACTOR's field office, in clean, dry, legible condition, complete sets of the following record documents: Drawings, Specifications, and Addenda; Shop Drawings, Samples, and other SUBCONTRACTOR submittals, including records of test results, approved or accepted as applicable, by ARCADIS; Change Orders, Work Change Directives, Field Orders, photographic documentation, survey data, and all other documents pertinent to the Work.
 - 2. Provide files and racks for proper storage and easy access to record documents. File record documents in accordance with the edition of the Construction Specification Institute's "MasterFormat" used for organizing the Project Manual, unless otherwise accepted by ARCADIS.
 - 3. Make record documents available for inspection upon request of ARCADIS or DEPARTMENT.
 - 4. Do not use record documents for purpose other than serving as Project record. Do not remove record documents from SUBCONTRACTOR's field office without ARCADIS's approval.
- C. Submittal of Record Documents:
 - 1. Submit to ARCADIS the following record documents:
 - a. Drawings.
 - b. Project Manual including Specifications and Addenda (bound).
 - 2. Prior to readiness for final payment, submit to ARCADIS one copy of final record documents. Submit complete record documents; do not make partial submittals.
 - 3. Submit record documents with transmittal letter on SUBCONTRACTOR letterhead complying with letter of transmittal requirements in Section 01 33 00, Submittal Procedures.
 - 4. Record documents submittal shall include certification, with original signature of official authorized to execute legal agreements on behalf of SUBCONTRACTOR, reading as follows:

“*[Insert SUBCONTRACTOR's corporate name]* has maintained and submitted record documentation in accordance with the Agreement, Section 01 78 39, Project Record Documents, and other elements of Contract Documents. We

certify that each record document submitted is complete, accurate, and legible relative to the Work performed under our Contract, and that the record documents comply with the requirements of the Contract Documents.

[Provide signature, print name, print signing party's corporate title, and date]"

1.2 RECORDING CHANGES

A. General:

1. At the start of the Project, label each record document to be submitted as, "PROJECT RECORD" using legible, printed letters. Letters on record copy of the Drawings shall be two inches high.
2. Keep record documents current. Make entries on record documents within two working days of receipt of information required to record the change.
3. Do not permanently conceal the Work until required information has been recorded.
4. Accuracy of record documents shall be such that future searches for items shown on the record documents may rely reasonably on information obtained from ARCADIS-accepted record documents.
5. Marking of Entries:
 - a. Use erasable, colored pencils (not ink or indelible pencil) for marking changes, revisions, additions, and deletions to record documents.
 - b. Clearly describe the change by graphic line and make notations as required. Use straight-edge to mark straight lines. Writing shall be legible and sufficiently dark to allow scanning of record documents into legible electronic files.
 - c. Date all entries on record documents.
 - d. Call attention to changes by drawing a "cloud" around the change(s) indicated.
 - e. Mark initial revisions in red. In the event of overlapping changes, use different colors for subsequent changes.

B. Drawings:

1. Record changes on copy of the Drawings. Submittal of SUBCONTRACTOR-originated or -produced drawings as a substitute for recording changes on the Drawings is unacceptable.
2. Record changes on plans, sections, schematics, and details as required for clarity, making reference dimensions and elevations (to Project datum) for complete record documentation.
3. Record actual construction including:
 - a. Depths of various elements of foundation relative to Project datum.
 - b. Horizontal and vertical location of Underground Facilities referenced to permanent surface improvements. For each Underground Facility, including pipe fittings, provide dimensions to at least two permanent, visible surface improvements.
 - c. Location of exposed utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.

- d. Changes in structural and architectural elements of the Work, including changes in reinforcing.
 - e. Field changes of dimensions, arrangements, and details.
 - f. Changes made in accordance with Change Orders, Work Change Directives, and Field Orders.
 - g. Changes in details on the Drawings. Submit additional details prepared by SUBCONTRACTOR when required to document changes.
4. Recording Changes for Schematic Layouts:
- a. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray physical layout. For such cases, the final physical arrangement shall be determined by SUBCONTRACTOR subject to acceptance by ARCADIS.
 - b. Record on record documents all revisions to schematics on Drawings, including: piping schematics, ducting schematics, process and instrumentation diagrams, control and circuitry diagrams, electrical one-line diagrams, motor control center layouts, and other schematics when included in the Contract. Record actual locations of equipment, lighting fixtures, in-place grounding system, and other pertinent data.
 - c. When dimensioned plans and dimensioned sections on the Drawings show the Work schematically, indicate on the record documents, by dimensions accurate to within one inch in the field, centerline location of items of Work such as conduit, piping, ducts, and similar items
 - 1) Clearly identify the Work item by accurate notations such as “cast iron drain”, “rigid electrical conduit”, “copper waterline”, and similar descriptions.
 - 2) Show by symbol or note the vertical location of Work item; for example, “embedded in slab”, “under slab”, “in ceiling plenum”, “exposed”, and similar designations. For piping not embedded, also provide elevation dimension relative to Project datum.
 - 3) Descriptions shall be sufficiently detailed to be related to Specifications.
 - d. ARCADIS may furnish written waiver of requirements relative to schematic layouts shown on plans and sections when, in ARCADIS’s judgment, dimensioned layouts of Work shown schematically will serve no useful purpose. Do not rely on waiver(s) being issued.
5. Supplemental Drawings:
- a. In some cases, drawings produced during construction by ARCADIS or SUBCONTRACTOR supplement the Drawings and shall be included with record documents submitted by SUBCONTRACTOR. Supplemental record drawings shall include drawings provided with Change Orders, Work Change Directives, and Field Orders and that cannot be incorporated into the Drawings due to space limitations.
 - b. Supplemental drawings provided with record drawings shall be integrated with the Drawings and include necessary cross-references between drawings. Supplemental record drawings shall be on sheets the same size as the Drawings.

- c. When supplemental drawings developed by SUBCONTRACTOR using computer-aided drafting/design (CADD) software are to be included in record drawings, submit electronic files for such drawings in AutoCAD 2011 format as part of record drawing submittal. Submit electronic files on compact disc labeled, "Supplemental Record Drawings", together with SUBCONTRACTOR name, Project name, and Contract name and number.

C. Specifications and Addenda:

- 1. Mark each Section to record:
 - a. Manufacturer, trade name, catalog number, and Supplier of each product and item of equipment actually provided.
 - b. Changes made by Addendum, Change Orders, Work Change Directives, and Field Orders.

1.3 ELECTRONIC FILES FURNISHED BY ARCADIS

A. CADD files will be furnished by ARCADIS upon the following conditions:

- 1. SUBCONTRACTOR shall submit to ARCADIS a letter on SUBCONTRACTOR letterhead requesting CADD files and providing specific definition(s) or description(s) of how files will be used, and specific description of benefits to DEPARTMENT (including credit proposal, if applicable) if the request is granted.
- 2. SUBCONTRACTOR shall execute ARCADIS's standard agreement for release of electronic files and shall abide by all provisions of the agreement for release of electronic files.
- 3. Layering system incorporated in CADD files shall be maintained as transmitted by ARCADIS. CADD files transmitted by ARCADIS containing cross-referenced files shall not be bound by SUBCONTRACTOR. Drawing cross-references and paths shall be maintained. If SUBCONTRACTOR alters layers or cross-reference files, SUBCONTRACTOR shall restore all layers and cross-references prior to submitting record documents to ARCADIS.
- 4. SUBCONTRACTOR shall submit record drawings to ARCADIS in same CADD format that files were furnished to SUBCONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 02 41 00

DEMOLITION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified and required for demolition, removal, and disposal Work.
2. The Work under this Section includes, but is not necessarily limited to:
 - a. Demolition and removal of existing materials and equipment as shown or indicated in the Contract Documents. The Work includes demolition of structural concrete, foundations, walls, doors, windows, structural steel, metals, roofs, masonry, attachments, appurtenances, piping, electrical and mechanical systems and equipment, paving, curbs, sidewalks, gutters, fencing and similar existing facilities.
 - b. Demolition and removal of all Underground Facilities underneath, and above-grade piping and utilities in, the building(s) and structures shown or indicated for demolition, unless the Underground Facilities or above-grade facilities are shown or indicated as to remain.
 - c. Remove from slabs, foundations, walls, and footings that are to be demolished all utilities and appurtenances embedded in such construction.
3. Demolitions and removals specified under other Sections shall comply with requirements of this Section.
4. Perform demolition Work within areas shown or indicated.
5. Pay all costs associated with transporting and, as applicable, disposing of materials and equipment resulting from demolition.

B. Coordination:

1. Review procedures under this and other Sections and coordinate the Work that will be performed with or before demolition and removals.

C. Related Sections:

1. None.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Electrical Removals: Entity and personnel performing electrical removals shall be electrician legally qualified to perform electrical construction and electrical work in the jurisdiction where the Site is located.

2. Plumbing Removals: Entity and personnel performing plumbing removals shall be plumber legally qualified to perform plumbing construction and plumbing work in the jurisdiction where the Site is located.

B. Regulatory Requirements:

1. Demolition, removal, and disposal Work shall be in accordance with 29 CFR 1926.850 through 29 CFR 1926.860 (Subpart T - Demolition), and all other Laws and Regulations.
2. Comply with requirements of authorities having jurisdiction.

1.3 SUBMITTALS

1. Notification of Intended Demolition Start: Submit in accordance with Paragraph 3.1.A of this Section.
2. Qualifications Statements:
 - a. Name and qualifications of entity performing electrical removals, including copy of licenses required by authorities having jurisdiction.
 - b. Name and qualifications of entity performing plumbing removals, including copy of licenses required by authorities having jurisdiction.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

A. Notification:

1. At least 48 hours prior to commencing demolition or removal, notify ARCADIS in writing of planned start of demolition Work. Do not start removals without permission of ARCADIS.

B. Protection of Surrounding Areas and Facilities:

1. Perform demolition and removal Work in manner that prevents damage and injury to property, structures, occupants, the public, and facilities. Do not interfere with use of, and free and safe access to and from, structures and properties.
2. Closing or obstructing of roads, drives, sidewalks, and passageways adjacent to the Work is not allowed unless indicated otherwise in the Contract Documents. Conduct the Work with minimum interference to vehicular and pedestrian traffic.
3. Provide temporary barriers, lighting, sidewalk sheds, and other necessary protection.
4. Repair damage to facilities that are to remain.

- C. Existing Utilities: In addition to requirements of Division 01 Specifications, do the following:
1. Cooperate with utility owners in keeping adjacent services and facilities in operation.
 2. Sanitary Sewer: Before proceeding with demolition, locate and cap all sewer lines and service laterals discharging from the building or structure being demolished.
 3. Storm Water: Existing storm water system shall remain in place until demolitions of existing building or structure is completed. Upon completing demolition, cut and cap storm sewer laterals at locations shown on the Drawings. Remove existing storm water piping and related structures between points of cutting, and backfill, restore to grade, and stabilize the area over the removed facilities.
 4. Water Piping: Before proceeding with demolition, locate and cap all potable and non-potable waterlines and service laterals serving the building or structure being demolished.
 5. Other Utilities: Before proceeding with demolition, locate and cap as required all other utilities, such as fuel and gas; heating, ventilating, and air conditioning; electric; and communications; and service laterals serving the building or structure being demolished.
 6. Shutdown of utility services shall be coordinated by SUBCONTRACTOR, assisted by DEPARTMENT as required relative to contacting utility owners.

3.2 DEMOLITION – GENERAL

- A. Locate construction equipment used for demolition Work and remove demolished materials and equipment to avoid imposing excessive loading on supporting and adjacent walls, floors, framing, facilities, and Underground Facilities.
- B. Pollution Controls:
1. Use water sprinkling, temporary enclosures, and other suitable methods to limit emissions of dust and dirt to lowest practical level. Comply with Section 01 57 05, Temporary Controls, and Laws and Regulations.
 2. Do not use water when water may create hazardous or objectionable conditions such as icing, flooding, or pollution.
 3. Clean adjacent structures, facilities, properties, and improvements of dust, dirt, and debris caused by demolition Work.
- C. Explosives:
1. Blasting is not allowed.
- D. Demolition of Site Improvements:
1. Pavement, Sidewalks, Curbs, and Gutters: Demolition of asphalt or concrete pavement, sidewalks, curbs, and gutters, as applicable, shall terminate at cut edges. Edges shall be linear and have a vertical cut face.
 2. Fencing, Guardrails, and Bollards: Remove to the limits shown or indicated on the Drawings. Completely remove below-grade posts and concrete.

3. Manholes, Vaults, Chambers, and Handholes: Remove to the limits shown or indicated on the Drawings.
 4. Underground Facilities Other than Manholes, Vaults, Chambers, and Handholes: Remove to the extent shown or indicated on the Drawings. Unless otherwise shown or indicated, cap ends of piping to remain in place in accordance with the "Mechanical Removals" Article in this Section.
 5. Not Used.
- E. Salvage and Ownership:
1. Refer to Section 01 11 13, Summary of Work, for requirements on salvage, ownership, and handling of equipment and materials removed during demolition and removal Work.
 2. Materials and equipment to remain OWNER's property shall be carefully removed and appropriately handled by SUBCONTRACTOR to avoid damage and invalidation of warranties in effect, and shall be cleaned and stored at the Site (or other site specified in the Contract Documents) at place designated by ARCADIS or DEPARTMENT.
- F. Finishing of Surfaces Exposed by Removals: Unless otherwise shown or indicated in the Contract Documents, surfaces of walls, floors, ceilings, and other areas exposed by removals, and that will remain as finished surfaces, shall be repaired and re-finished with materials that match existing adjacent surface, or as otherwise approved by ARCADIS.

3.3 STRUCTURAL REMOVALS

- A. Remove structures to lines and grades shown or indicated, unless otherwise directed by ARCADIS. Where limits are not shown or indicated, limits shall be four inches outside item to be installed. Removals beyond limits shown or indicated shall be at SUBCONTRACTOR's expense and such excess removals shall be reconstructed to satisfaction of ARCADIS without additional cost to DEPARTMENT.
- B. Recycling and Reuse of Demolition Materials:
1. All concrete, brick, tile, masonry, roofing materials, reinforcing steel, structural metals, miscellaneous metals, plaster, wire mesh, and other items contained in or upon building or structure to be demolished shall be removed, transported, and disposed of away from the Site, unless otherwise approved by ARCADIS.
 2. Do not use demolished materials as fill or backfill adjacent to structures, in pipeline trenches, or as subbase under structures or pavement.
- C. After removing concrete and masonry walls or portions thereof, slabs, and similar construction that ties in to the Work or to existing construction, neatly repair the junction point to leave exposed only finished edges and finished surfaces.
- D. Where parts of existing structures are to remain in service following demolition, remove the portions shown or indicated for removal, repair damage, and leave the building or structure in proper condition for the intended use.

1. Remove concrete and masonry to the lines shown or indicated by sawing, drilling, chipping, and other suitable methods. Leave the resulting surfaces true and even, with sharp, straight corners that will result in neat joints with new construction and be satisfactory for the purpose intended.
 2. Do not damage reinforcing bars beyond the area of concrete and masonry removal. Do not saw-cut beyond the area to be removed.
 3. Reinforcing bars that are exposed at surfaces of removed concrete and masonry that will not be covered with new concrete or masonry shall be removed to 1.5 inches below the final surface. Repair the resulting hole, with repair mortar for concrete and grout for masonry, to be flush with the surface.
 4. Where existing reinforcing bars are shown or indicated to extend into new construction, remove existing concrete so that reinforcing bars are clean and undamaged.
- E. Where equipment or material anchored to concrete or masonry are removed and anchors are not to be re-used, remove the anchors to not less than 1.5 inches beneath surface of concrete or masonry member. Repair the resulting hole, using repair mortar for concrete and grout for masonry, to be flush with the surface. Alternately, when the anchor is stainless steel, the anchor may be cut flush with the surface of the concrete or masonry, when so approved by ARCADIS.
- E. Jambs, sills and heads of windows, passageways, doors, or other openings (as applicable) cut-in to the Work or to existing construction shall be dressed with masonry, concrete, or metal to provide smooth, finished appearance.
- F. Where anchoring materials, including bolts, nuts, hangers, welds, and reinforcing steel, are required to attach the Work to existing construction, provide such materials under this Section, unless specified elsewhere in the Contract Documents.

3.4 MECHANICAL REMOVALS

- A. Mechanical demolition and removal Work includes dismantling and removing existing piping, ductwork, pumps, equipment, tanks, and appurtenances as shown, indicated, and required for completion of the Work. Mechanical removals include cutting and capping as required, except that which is included under Section 01 73 29, Cutting and Patching.
- B. Demolition and Removals of Piping, Ductwork, and Similar Items:
1. Purge piping and tanks (as applicable) of chemicals or fuel (as applicable) and make safe for removal and capping. Remove to the extent shown or indicated existing process, water, waste and vent, chemical, gas, fuel, and other piping. Remove piping to the nearest solid piping support, and provide caps on ends of remaining piping. Where piping to be demolished passes through existing walls to remain, cut off and cap pipe on each side of the wall.
 2. Caps, Closures, Blind Flanges, and Plugs:
 - a. Provide closure pieces, such as blind flanges and caps, where shown or required to complete the Work.

- b. Where used in this Section, the term “cap” means the appropriate type closure for the piping or ductwork being closed, including caps, blind flanges, and other closures.
 - c. Caps shall be compatible with the piping or ductwork to which the cap is attached, fluid-tight and gastight, and appropriate for the fluid or gas conveyed in the pipe or duct.
 - d. Unless otherwise shown or indicated, caps shall be mechanically fastened, fused, or welded to pipe or duct. Plug piping with means other than specified in this Section only when so shown or indicated in the Contract Documents or when allowed by ARCADIS.
- 3. When Underground Facilities are altered or removed, properly cut and cap piping left in place, unless otherwise shown or indicated.
 - 4. Remove waste and vent piping, and ductwork to extent shown and cap as required. Where demolished vent piping, stacks, and ductwork passes through existing roofing, patch the roof with the same or similar materials. Completed patch shall be watertight and comply with roofing manufacturer’s recommendations.
 - 5. Modifications to potable water piping and other plumbing and heating system work shall comply with Laws and Regulations. All portions of potable water system that have been modified or opened shall be hydrostatically tested and disinfected in accordance with the Contract Documents, and Laws and Regulations. Hydrostatically test other, normally-pressurized, plumbing piping and heating piping.

C. Equipment Demolition and Removals:

- 1. To the extent shown or indicated, remove existing process equipment; pumps; storage tanks; hoisting and conveying equipment; heating, ventilating, and air conditioning equipment; generators; and other equipment.
- 2. Where required, disassemble equipment to avoid imposing excessive loading on supporting walls, floors, framing, facilities, and Underground Facilities. Disassemble equipment as required for access through and egress from building or structure. Disassembly shall comply with Laws and Regulations. Provide required means to remove equipment from building or structure.
- 3. Remove control panels, operator stations, and instruments associated with equipment being removed, unless shown or indicated otherwise.
- 4. Remove fuel appurtenances as applicable, including fuel storage tanks. Dispose of tank contents in accordance with Laws and Regulations.
- 5. Remove equipment supports as applicable, anchorages, base, grout, and piping. Remove anchorage systems in accordance with the “Structural Removals” Article in this Section. Remove small-diameter piping back to header unless otherwise indicated.
- 6. Remove access platforms, ladders, and stairs related to equipment being removed, unless otherwise shown or indicated.

3.5 DISPOSAL OF DEMOLITION DEBRIS

- A. Remove from the Site all debris, waste, rubbish, and material resulting from demolition operations and equipment used in demolition Work.
- B. Transportation and Disposal:
 - 1. Non-hazardous Material: Properly transport and dispose of non-hazardous demolition debris at appropriate landfill or other suitable location, in accordance with Laws and Regulations. Non-hazardous material does not contain Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, or other material designated as hazardous in Laws and Regulations.
 - 2. Hazardous Material: When handling and disposal of hazardous materials is included in the Work, properly transport and dispose of hazardous materials in accordance with the Contract Documents and Laws and Regulations.
- C. Submit to ARCADIS information required in this Section on proposed facility(ies) where demolition material will be recycled. Upon request, ARCADIS or DEPARTMENT, shall be allowed to visit recycling facility(ies) to verify adequacy and compliance status. During such visits, recycling facility operator shall cooperate and assist ARCADIS and DEPARTMENT.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 02 51 41

OFF-SITE TRANSPORTATION AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes procedures to transport and dispose all items specified for off-site disposal.
- B. SUBCONTRACTOR generated hazardous waste shall be confined to contamination reduction or exclusion zones until transported off-site for proper disposal.
- C. Remedial work which generates hazardous waste from inactive hazardous waste disposal sites (defined at 27-1301 of the Environmental Conservation Law) are not subject to the special assessment "tax" because of the exemption found at 27-0923 (3) (c) of the Environmental Conservation Law. The SUBCONTRACTOR remains responsible for paying any local and county taxes which might be applicable to the disposal of wastes from the remedial work.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only:
 - 1. Code of Federal Regulations (CFR).
 - a. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 - b. 49 CFR 172 Tables, Hazardous Material Communication Requirements, and Emergency Response Information Requirements.
 - 2. Codes, Rules, and Regulations of the State of New York (NYCRR):
 - a. 6 NYCRR Part 364 Waste Transportation Permits.
 - b. 6 NYCRR Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities.

1.3 SUBMITTALS

- A. Transportation Plan:
 - 1. Submit two copies of a detailed Transportation Plan to ARCADIS.
 - 2. The Transportation Plan must be approved before materials are transported off site.
- B. Records:
 - 1. Written acceptance of waste profile from TSDF.
 - 2. Hazardous Waste Manifests.
 - 3. Decontamination Certificates.
 - 4. Submit written confirmation from TSDF of acceptance of waste.

5. Profile sampling results.
6. Manifests after permanent disposal.
7. Certificates of disposal for non-hazardous waste.
8. Signed bills of lading for salvaged or recycled materials.

1.4 PERMITS AND REGULATIONS

- A. Comply with all municipal, county, state, and federal regulations regarding transportation of hazardous and non-hazardous materials. These include:
 1. Trucks used for transportation of material for disposal off site shall be permitted pursuant to 6 NYCRR Part 364.
 2. Vehicle operator possession of a commercial driver's license with hazardous materials endorsement (if applicable).
 3. Registration of vehicle as a hazardous waste carrier (if applicable).
 4. Utilization of shipping papers or hazardous waste manifest (40 CFR 262 and 6 NYCRR Part 372).
 5. Proper marking and placarding of vehicles in accordance with 49 CFR.
 6. Placement of emergency response procedures and emergency telephone numbers in vehicle, and operator familiarity with emergency response procedures.
 7. Compliance with load, height, and weight regulations.

1.5 DISPOSAL FACILITIES

- A. Facilities must have valid Federal/state permits appropriate for the waste being disposed of. Permits must be valid during the entire project period.
- B. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.
- C. The disposal facility must comply with policies adopted by the DEPARTMENT with respect to off-site disposal of waste.
- D. Prior to shipment of hazardous wastes off the site, the SUBCONTRACTOR shall confirm by written communication from the designated TSDF that it is authorized, has the capacity, and will provide or assure that the ultimate disposal method is followed for the particular hazardous waste on the manifest.
- E. RCRA Wastes:
 1. The facility must have an RCRA Permit or RCRA Interim Status for RCRA wastes.
 2. The facility must not have any significant RCRA violations or other environmental conditions that could affect its satisfactory operation:
 - a. Significant violations include Class 1 RCRA violations as defined in EPA's RCRA Enforcement Response Policy dated December 1984, including but not limited to groundwater, closure, post closure, and financial violations.
 - b. Other environmental conditions include those conditions affecting the

- satisfactory operation of the facility and violations of state and/or federal laws other than RCRA.
- c. Under limited circumstances, EPA Administrator may allow disposal of hazardous substances at a RCRA facility having significant RCRA violations or other environmental conditions affecting satisfactory operation, providing that the facility owner or operator has entered into a consent order or decree to correct the problems, and disposal only occurs within the facility at a new or existing unit that is in compliance with RCRA requirements.
3. Landfill disposal must be in a unit meeting applicable RCRA minimum technical requirements:
 - a. Current RCRA minimum technical requirements for land disposal include the use of a double liner system.
 - b. Under limited circumstances (low waste toxicity, mobility, and persistence), EPA may approve the use of a single-lined land disposal unit for RCRA wastes where use of such a unit adequately protects public health and the environment.
- F. TSCA Wastes:
1. The facility must have a current TSCA permit.
 2. The facility must not have any significant violations, corrective actions, or other environmental conditions that could affect its satisfactory operation.
- G. Non-hazardous Wastes:
1. The facility must have a state permit, if applicable.
 2. The facility must be permitted in good standing with applicable agency regulatory requirements.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Equipment supplied shall be in good repair and good working condition.
- B. Haul trucks that have visible oil or hydraulic fluid leaks will not be allowed on site.
- C. Clean up oil or hydraulic fluid spills.

2.2 TRANSPORTATION

- A. Submit a Transportation Plan which includes:
 1. Type, condition, and average daily number of vehicles to be used.
 2. Travel routes and time restrictions.
 3. Decontamination methods for vehicles, equipment, and containers.
 4. Emergency response plan.
 5. A list of all shippers and their federal and state transporter ID numbers.
 6. A list of proposed disposal facilities including name, address, telephone

number, contact name, and Federal/state permit numbers.

PART 3 - EXECUTION

3.1 VEHICLE LOADING AND DECONTAMINATION

A. General:

1. The SUBCONTRACTOR shall provide all equipment, personnel, and facilities necessary to load waste materials in accordance with the regulatory requirements listed herein, and in accordance with the regulations of those states through which the SUBCONTRACTOR plans to transport materials.
2. Vehicle operators shall be trained in conformance with federal and state regulations for waste haulers (hazardous, special, and non-hazardous).
3. All vehicles hauling waste materials from the exclusion zone shall be decontaminated in the contamination reduction zone prior to leaving the Site.
4. A written decontamination certification shall be provided to ARCADIS for each shipment stating that:
 - a. No soil from the exclusion zone or the contamination reduction zone adheres to the vehicle (including tires and undercarriage).
 - b. The vehicles are not leaking materials or dripping liquids in any amount.
 - c. Any waste materials, debris, and contaminated materials are covered with a tarpaulin, or are otherwise completely enclosed so as not to cause or permit discharge from the vehicle during transport.

3.2 MEASUREMENT

- A. Upon entering and leaving the Site, the transport vehicle shall be weighed on a certified scale under ARCADIS' supervision to determine the amount of material being removed from the Site.
- B. A printed ticket with the time, date, and net weight of material being transported for disposal shall be obtained. A copy of this ticket shall be given directly to ARCADIS as it is produced.
- C. Measured gross weight of the vehicle or calculated net weight of material outside the certified capacity of the scale will not be accepted by ARCADIS and the SUBCONTRACTOR shall not be reimbursed for the associated costs of material disposal above the certified capacity of scale.
- D. The SUBCONTRACTOR shall off-load materials above the certified capacity of scale on site at no additional cost to the DEPARTMENT.

3.3 MANIFESTING

- A. Complete all required manifest forms and bill of lading forms for the DEPARTMENT for proper transportation and disposal of all materials. The

DEPARTMENT will provide a generator identification number if required.

- B. Comply with 40 CFR 262 in completion and submittal of the Hazardous Waste Manifests. The Hazardous Waste Manifests for the transportation and disposal of waste removed from the Site shall include all information in accordance with 49 CFR 172.101.
- C. Notify ARCADIS in writing a minimum of two weeks prior to the date(s) the manifests are ready to be signed.
- D. ARCADIS will sign the special waste or hazardous waste manifest for the DEPARTMENT, which is the generator.
- E. Place on the manifest all information and data required by both the waste generator and transporter. The SUBCONTRACTOR'S hazardous waste specialist shall accompany each prepared manifest with written certification that the manifest has been filled out in compliance with accordance with all EPA, DOT, and state regulations.
- F. Provide ARCADIS with two fully executed copies of each shipment manifested prior to shipping wastes off site.
- G. The SUBCONTRACTOR is responsible for proper distribution of manifests and bills of lading.

3.4 TRANSPORTATION

- A. Prior to shipment of hazardous wastes off the project area, the SUBCONTRACTOR shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated TSDF or SWMF.
- B. The SUBCONTRACTOR shall be responsible for obtaining permits and authorizations necessary to use the selected shipping routes. Comply with restrictions imposed by local governmental agencies regarding use of the routes.
- C. Materials shall be transported only at the times and by the routes indicated in the approved Transportation Plan, unless written permission is received from ARCADIS to do otherwise.

3.5 SAMPLING

- A. Perform all sampling and analyses required by the disposal facility at no additional cost to the DEPARTMENT.
- B. Provide copies of the results to ARCADIS.

3.6 REPORTING

A. Manifests:

1. After the waste has been permanently disposed of, the Hazardous Waste Manifests shall be completed in accordance with 6 NYCRR Part 372 and submitted by the SUBCONTRACTOR to ARCADIS with a copy to be forwarded to the DEPARTMENT.
2. In accordance with 40 CFR 262.42, generator shall contact the transporter and TSD facility to determine the status of the HTW if the manifest is not returned to the generator within 35 days of the date waste was accepted by the initial transporter.
3. The generator shall file an exception report with EPA and NYSDEC if he has not received a completed copy of the manifest from the designated TSD facility with 45 days of the date the waste was accepted by the original transporter.
4. The SUBCONTRACTOR shall be responsible for providing the generator with the information needed to complete the exception report.

B. Certificates of Disposal:

1. Provide Certificates of Disposal for all wastes shipped off site.
2. The Certificates of Disposal shall be submitted to ARCADIS within 60 days of the shipment of wastes off site.

C. Bill of Lading:

1. Items and materials that have been recycled or salvaged shall only require a signed bill of lading or receipt of materials and quantity received.

+ + END OF SECTION + +

SECTION 31 05 19

GEOSYNTHETICS FOR EARTHWORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall provide all labor, materials, equipment, and services required to provide and place geosynthetics as shown and specified.
- B. Related Sections:
 - 1. Section 31 23 05, Excavation and Fill.

1.2 REFERENCES

- A. Standards referenced in this Section are listed below:
 - 1. American Society for Testing and Materials, (ASTM).
 - a. ASTM D 1117, Test Methods for Non-Woven Fabrics.
 - b. ASTM D 3776, Test Methods for Mass per Unit Area (Weight) of Woven Fabric.
 - c. ASTM D 5034, Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test).

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Geotextile manufacturer shall be a specialist in the manufacture of geotextile cushion fabric, and have produced and successfully installed a minimum of five million square feet.

1.4 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Product Data:
 - a. Submit geotextile manufacturer's data, specifications, installation instructions and dimensions.
- B. Informational Submittals: Submit the following:
 - 1. Certificates:
 - a. Submit an affidavit certifying that the filter fabric furnished complies with all requirements specified herein.
 - b. No fabric shall be shipped until the affidavit is submitted to ARCADIS.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Each roll of geotextile delivered to the Site shall be labeled by the manufacturer identifying the manufacturer's name, product identification, lot number, roll number and roll dimensions.
- B. All rolls and packages shall be inspected by SUBCONTRACTOR upon delivery to the Site. SUBCONTRACTOR shall notify ARCADIS if any loss or damage exists to geotextile filter fabric. Replace loss and repair damage to new condition, in accordance with manufacturer's instructions.
- C. Geotextile shall be protected from ultraviolet light exposure, precipitation or other inundation, mud, dirt, dust, puncture, cutting or any other damaging or deleterious conditions. Geotextile rolls shall be shipped and stored in relatively opaque and watertight wrappings.

PART 2 - PRODUCTS

2.1 GEOTEXTILE SEPARATION FABRIC

- A. Geotextile shall be a needle punched, nonwoven fabric composed of 100 percent polypropylene staple filaments, which are formed into a stable network such that the filaments retain their relative position. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Geotextile shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	<u>Minimum Value</u>
Weight	oz/yd ²	ASTM D 3776	10.0
Grab Tensile Strength	lb	ASTM D 5034	250
Grab Strength Elongation	%	ASTM D 5034	50
Trapezoid Tear Strength	lb	ASTM D 1117	100
Water Permeability, "k"	cm/sec	CFMC GET-2	1.20
Water Flow Rate	gal/min/ft ²	CFMC GET-2	80

- B. Product and Manufacturer: Provide one of the following:
 - 1. US 250NW as manufactured by US Fabrics, Inc.
 - 2. Or equal.

2.2 GEOTEXTILE SUBGRADE FABRIC

- A. Geotextile shall be a needle punched, nonwoven fabric composed of 100 percent polypropylene staple filaments, which are formed into a stable network such that the filaments retain their relative position. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Geotextile shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	Minimum <u>Value</u>
Weight	oz/yd ²	ASTM D 3776	16.0
Grab Tensile Strength	lb	ASTM D 5034	380
Grab Strength Elongation	%	ASTM D 5034	50
Trapezoid Tear Strength	lb	ASTM D 1117	145
Water Permeability, "k"	cm/sec	CFMC GET-2	0.70
Water Flow Rate	gal/min/ft ²	CFMC GET-2	50

B. Product and Manufacturer: Provide one of the following:

1. US 380NW as manufactured by US Fabrics, Inc.
2. Or equal.

2.3 FENCE FABRIC

A. Geotextile shall be a woven fabric composed of 100 percent polypropylene staple filaments, which are formed into a stable network such that the filaments retain their relative position. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Geotextile shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	Minimum <u>Value</u>
Grab Tensile Strength	lb	ASTM D 5034	124
Grab Strength Elongation	%	ASTM D 5034	15x20%
Trapezoid Tear Strength	lb	ASTM D 1117	65
Water Permeability, "k"	cm/sec	CFMC GET-2	0.1
Water Flow Rate	gal/min/ft ²	CFMC GET-2	10

B. Product and Manufacturer: Provide one of the following:

1. 2130 as manufactured by GEOTEX, Inc.
2. Or equal.

PART 3 - EXECUTION

3.1 INSPECTION

A. SUBCONTRACTOR shall examine the conditions under which the Work is to be installed and notify ARCADIS, in writing, of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION - GENERAL

A. All geotextiles shall be weighted with sandbags or the equivalent when required. Such sandbags shall be installed during placement and shall remain until replaced with cover material or geomembrane.

- B. SUBCONTRACTOR shall take any necessary precautions to prevent damage to underlying layers during placement of the geotextile.
- C. During placement of geotextiles, care shall be taken not to entrap in the geotextile stone, excessive dust, or moisture that could damage the geomembrane, generate clogging, or hamper subsequent seaming.
- D. Geotextiles shall not be exposed to precipitation prior to being installed, and shall not be exposed to direct sunlight for more than 15 days.
- E. Geotextiles shall be overlapped 12 inches.

3.3 GEOTEXTILE REPAIR

- A. Any holes or tears in the fabric shall be repaired as follows:
 - 1. On slopes: A fabric patch shall be sewn into place using a double sewn lock stitch (1/4-inch to 3/4-inch apart and no closer than 1 inch from any edge). Should any tear exceed ten percent of the width of the roll, that roll shall be removed from the slope and replaced.
 - 2. Non-slopes: A fabric patch shall be spot-seamed in place with a minimum of 24 inches of overlap in all directions.

3.4 PLACEMENT OF COVER MATERIALS

- A. SUBCONTRACTOR shall place all cover materials in such a manner to ensure the geotextile is not damaged; minimal slippage of the geotextile on underlying layers; and no excess tensile stresses in the geotextile.

+ + END OF SECTION + +

SECTION 31 11 00

CLEARING AND GRUBBING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform clearing and grubbing as shown and specified in the Contract Documents.
2. The Work includes removing from the Site and disposing of trees, stumps, brush, roots, shrubs, vegetation, logs, rubbish, and other objectionable material.
3. Pay all costs associated with transporting and disposing of debris resulting from clearing.
4. Limits of Clearing and Grubbing Work: Clear and grub all areas within the Work areas unless otherwise shown or indicated in the Contract Documents.

B. Related Sections:

1. Section 01 57 05, Temporary Controls.
2. Section 02 41 00, Demolition.

1.2 SUBMITTALS

A. Action Submittals: Submit the following

1. Shop Drawings:
 - a. Plan for removing trees and other large vegetation not explicitly shown or indicated for removal in the Contract Documents.
 - b. Plan showing proposed limits of clearing and grubbing, if different from clearing and grubbing limits shown or indicated in the Contract Documents.

1.3 WARRANTY

- A. SUBCONTRACTOR shall warrant that Work performed under this Section will not permanently damage trees, shrubs, turf, and plants designated to remain, or other adjacent work, facilities, or property. If damage resulting from SUBCONTRACTOR's operations becomes evident during the correction period, SUBCONTRACTOR shall replace damaged items and property at no additional cost to ARCADIS.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

A. Protection:

1. Throughout the Project, protect existing site improvements, including streets, drives, and Underground Facilities to remain (if any), and adjacent property and structures. Repair damage caused by SUBCONTRACTOR to original condition or replace in kind, to satisfaction of ARCADIS, at no additional cost to ARCADIS.
2. Protect trees, shrubs, vegetation, and grassed areas to remain by providing temporary fencing, barricades, wrapping, or other methods shown, specified, or accepted by ARCADIS. Correct at SUBCONTRACTOR's expense damage caused by SUBCONTRACTOR outside the limits of clearing Work.
3. Do not remove trees without approval of ARCADIS, unless shown or indicated for removal.
4. Do not locate construction equipment, stored materials, or stockpiles within drip line of trees and vegetation to remain.

B. Site Preparation:

1. Obtain, pay costs associated with, and comply with applicable permits required for clearing and grubbing Work.
2. Delineation of Clearing and Grubbing Limits:
 - a. Locate and clearly flag trees and vegetation to remain, and other materials to remain in the clearing and grubbing limits. Locate and clearly flag salvable vegetation to be relocated.
 - b. Provide flagging to delineate limits of areas to be cleared or grubbed. Review at Site with ARCADIS before commencing removal of trees, vegetation, and other materials to be removed.
 - c. Replace flagging that is lost, removed, or destroyed, until clearing and grubbing Work is complete and ARCADIS allows removal of flagging.
3. Erosion and Sediment Controls:
 - a. Provide applicable erosion and sediment controls before commencing clearing and grubbing Work.
 - b. Comply with Section 01 41 26, Stormwater Pollution Prevention Plan and Permit
 - c. Comply with erosion and sediment control requirements of Section 01 57 05, Temporary Controls.
 - d. Continue providing erosion and sediment controls as clearing and grubbing Work progresses to previously uncleared, ungrubbed areas of the Site.

3.2 CLEARING AND GRUBBING

- A. Remove and dispose of all trees, shrubs, stumps, roots, brush, logs, rubbish, and debris within limits of clearing and grubbing shown or indicated in the Contract Documents, unless otherwise shown or indicated.
- B. Trees and Shrubs Improperly Destroyed or Damaged:
 - 1. For each tree or shrub to remain that is destroyed or damaged beyond repair by SUBCONTRACTOR, provide two replacements of the same species at locations to be designated by ARCADIS.
- C. Trees and shrubs to remain that have been damaged or require trimming shall be treated and repaired under the direction of a qualified arborist, or other professional with qualifications acceptable to ARCADIS. Trees and shrubs intended to remain, that are damaged beyond repair or that are removed, shall be replaced by SUBCONTRACTOR at no additional cost to ARCADIS.
- D. Disposal of Cleared and Grubbed Materials:
 - 1. Dispose at appropriate off-Site location trees, stumps, rubbish, debris, and other cleared and grubbed material. Cleared or grubbed materials may remain at the Site only when allowed in the Contract Documents or when approved by ARCADIS in writing. Do not use cleared or grubbed material as fill, backfill, or in embankments.
 - 2. Dispose of cleared and grubbed material in accordance with Laws and Regulations.
 - 3. Burning will not be allowed.
- E. Removal of Site Improvements: Comply with Section 02 41 00, Demolition.

3.3 TOPSOIL REMOVAL

- A. Existing topsoil to be removed is defined as friable, clay loam, surface soil present in depth of at least four inches. Topsoil shall be free of subsoil, clay lumps, stones, and other objects over two-inch diameter and other objectionable material.
- B. Stripping:
 - 1. Strip topsoil to depths encountered, in manner that prevents intermingling of topsoil with underlying subsoil or other objectionable material. Remove heavy growths of grass and vegetation from areas before stripping.
 - 2. Do not strip topsoil from within drip line of each tree to remain as part of the completed Project.
- C. Properly dispose of excess topsoil at a location other than the Site.

+ + END OF SECTION + +

PAGE LEFT BLANK INTENTIONALLY

SECTION 31 23 05

EXCAVATION AND FILL

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. SUBCONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform all excavating, filling, and grading, and disposing of earth materials as shown, specified, and required for construction of structures, Underground Facilities, roads, and other facilities required to complete the Work.
2. Preparation of subgrade for slabs and pavements is included under this Section.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM D422, Test Method for Particle-Size Analysis of Soils.
2. ASTM D448, Classification for Sizes of Aggregate for Road and Bridge Construction.
3. ASTM D698, Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600 kN-m/m³)).
4. ASTM D1557, Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
5. ASTM D2216, Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.
6. ASTM D4253, Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
7. ASTM D4254, Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
8. ASTM D4318, Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
9. ASTM D6938, Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
10. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.

1.3 TERMINOLOGY

A. The following words or terms are not defined but, when used in this Section, have the following meaning:

1. “Subgrade” is the uppermost surface of native soil material unmoved from cuts; the bottom of excavation.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Professional Engineer:
 - a. Engage a registered professional engineer legally qualified to practice in the same jurisdiction as the Site and experienced in providing engineering services of the kind indicated.
 - b. Responsibilities include but are not necessarily limited to:
 - 1) Reviewing system performance and requirements shown or indicated in the Contract Documents.
 - 2) Preparing written requests for clarifications or interpretations of performance and requirements for submittal to ARCADIS by SUBCONTRACTOR.
 - 3) Preparing or supervising the preparation of design calculations and related submittals verifying compliance of the system with the requirements of the Contract Documents.
 - 4) Signing and sealing all calculations, drawings, and submittals prepared by professional engineer.
 - 5) Certifying that:
 - a) it has performed the design of the system in accordance with the performance requirements stated in the Contract Documents, and
 - b) the said design conforms to Laws and Regulations, and to the prevailing standards of practice.
2. SUBCONTRACTOR's Testing Laboratory:
 - a. Retain the services of independent testing laboratory to perform testing and determine compliance with the Contract Documents of the materials specified in this Section.
 - b. Do not employ the same laboratory hired by DEPARTMENT for field quality control testing under the field quality control Article of this Section.
 - c. Testing laboratory shall comply with ASTM E329 and requirements of Section 01 45 29.13, Testing Laboratory Services Furnished by SUBCONTRACTOR.
 - d. Testing laboratory shall be experienced in the types of testing required.
 - e. Selection of testing laboratory is subject to ARCADIS' acceptance.

B. Quality Assurance Testing:

1. Quality assurance testing is in addition to field quality control testing required under Part 3 of this Section.
2. Materials used in the Work may require testing and retesting, as directed by ARCADIS, during the Project. Allow free access to material stockpiles and facilities at all times. Tests not specifically indicated to be performed at DEPARTMENT's expense, including retesting of rejected materials and installed Work, shall be performed at SUBCONTRACTOR's expense.
3. SUBCONTRACTOR's Testing Laboratory Scope:

- a. Collect samples and perform testing of proposed fill materials in the laboratory and in the field to demonstrate compliance of the Work with the Contract Documents.
 - b. Testing laboratory shall perform testing required to obtain data for selecting moisture content for placing and compacting fill materials.
 - c. Submit to ARCADIS and SUBCONTRACTOR written report results of each test.
- 4. Required Quality Assurance Material Testing by SUBCONTRACTOR's Testing Laboratory:
 - a. Gradation in accordance with ASTM D422. Perform one test for every 1,000 cubic yards of each of the following types of material incorporated into the Work: select fill, general fill, crushed stone, pea gravel, and topsoil.
 - b. Atterberg limits in accordance with ASTM D4318. Perform one test for every 1,000 cubic yards of the following types of materials incorporated into the Work: select fill, general fill, crushed stone, and pea gravel.
 - c. Moisture/density relations in accordance with ASTM D698, ASTM D1557, ASTM D4253, or ASTM D4254, as applicable. Perform one test for every 5,000 cubic yards of the following types of materials incorporated into the Work: select fill, general fill, crushed stone, pea gravel, and topsoil.
 - d. Moisture content of stockpiled or borrow material in accordance with ASTM D2216. Perform one test for every 1,000 cubic yards of the following types of material incorporated into the Work: select fill, general fill, crushed stone, pea gravel, and topsoil.
 - e. Requirement for trial batch may be waived by ARCADIS if sufficient field test data documenting compliance with specified material properties and performance properties is submitted to and accepted by ARCADIS. Tests shall have been made on concrete with identical mix design to mix design proposed for the Work, including sources of aggregate and manufacturers of cementitious materials and admixtures.
- 5. Required Environmental Testing by CONTRACTOR's NYS-certified ELAP Testing Laboratory:
 - a. Source testing of all materials to be imported, except rip rap, for VOCs using SW-846 8260B, SVOCs using SW-846 8270C, TAL metals using SW-846 6010B/7470A/7471A, pesticides using SW-846 608/8081A and PCBs using SW-846 8082 in accordance with the requirements of 6 NYCRR Part 375-6.7 (d). Frequency of 1 test for each 500 cubic yards of material imported; minimum of one test for each material.
 - b. Disposal characterization testing as required by the off-site receiving facility.
- C. Regulatory Requirements:
 - 1. Perform excavation work in compliance with requirements of authorities having jurisdiction and Laws and Regulations, including:
 - a. OSHA, 29 CFR Part 1926, Section .650 (Subpart P – Excavations).

2. Obtain required permits and approvals for excavation and fill Work, including work permits from right-of-way owners and permits from environmental authorities having jurisdiction over discharge of water from excavations.

1.5 SUBMITTALS

A. Action Submittals: Submit the following:

1. Samples:
 - a. Submit Sample of each aggregate and soil material required under this Section. Samples shall be of sufficient size to demonstrate the array of gradation and material types expected in the Work.

B. Informational Submittals: Submit the following:

1. Procedure Submittals:
 - a. Excavation Plan: Prior to starting excavation operations, submit written plan to demonstrate compliance with OSHA 29 CFR Part 1926.650. As a minimum, excavation plan shall include:
 - 1) Name of SUBCONTRACTOR's "competent person" in responsible charge of excavation and fill Work.
 - 2) Excavation method(s) and additional items to be included in the Work, as listed in Paragraph 1.5.B.2.a of this Section.
 - 3) Copies of "manufacturer's data" or other tabulated data if protective system(s) are designed on the basis of such data.
 - 4) Copies of required permits and approvals, from authorities having jurisdiction and affected utility owners, for excavation methods proposed.
 - b. Proposed compaction procedure and compaction equipment proposed for use. Where different procedures or equipment will be used for compacting different types of material or at different locations at the Site, indicate where each procedure and equipment item will be used.
2. Excavation Support Plan and Related Information Prepared by SUBCONTRACTOR's Professional Engineer:
 - a. SUBCONTRACTOR and SUBCONTRACTOR's professional engineer shall prepare the following for submittal:
 - 1) Sheet piling and bracing, or other protective system(s) required.
 - 2) Dewatering system.
 - 3) Underpinning.
 - b. Drawings shall be prepared by professional engineer qualified in the specialty involved. Do not submit calculations. ENGINEER's review and acceptance of submittal does not imply approval by ENGINEER of the associated Work. SUBCONTRACTOR shall be solely responsible for designing, installing, operating and maintaining the system(s) necessary to satisfactorily perform all sheet piling, bracing, protection, underpinning, and dewatering.
3. Delivery Tickets:
 - a. Copy of delivery ticket for each load of aggregate and borrow material delivered to the Site. Each delivery ticket shall indicate project and

contract by name and number, date, material type, department of transportation item number when applicable, and quantity delivered.

4. Quality Assurance Test Results Submittals:
 - a. Submit results of quality assurance testing performed by in accordance with Paragraph 1.4.B of this Section, unless included as part of another submittal under this Section. Submit results for the following quality assurance testing:
 - 1) Tests on borrow fill material.
 - 2) Optimum moisture – maximum dry density curve for each type of fill material.
5. Field Quality Control Submittals:
 - a. Submit results of testing and inspection performed in accordance with the field quality control Article in Part 3 of this Section, including:
 - 1) Field density testing.
6. Qualifications Statements:
 - a. Professional engineer.
 - b. Quality Assurance Testing laboratory. Submit name and qualifications of testing laboratory to be employed, and qualifications of testing laboratory's personnel that will perform quality assurance testing required in this Section.
 - c. Field Quality Control Testing Laboratory: Names and qualifications of testing laboratory employed, and qualifications of testing laboratory's personnel that will perform field quality control testing as required under this Section.

1.6 SITE CONDITIONS

- A. Subsurface Information: The Agreement indicates information available relative to subsurface conditions at the Site. Such information and data is not intended as a representation or warranty of continuity of conditions between soil borings or test pits, nor of groundwater levels at dates and times other than date and time when measured, nor that purpose of obtaining the information and data were appropriate for use by SUBCONTRACTOR. DEPARTMENT and ARCADIS will not be responsible for interpretations or conclusions drawn therefrom by SUBCONTRACTOR.
- B. Soil borings and other exploratory operations may be made by SUBCONTRACTOR, at no additional cost to DEPARTMENT and ARCADIS. Coordinate SUBCONTRACTOR-performed test borings and other exploratory operations with DEPARTMENT and utility owners as appropriate. Perform such explorations without disrupting or otherwise adversely affecting operations of DEPARTMENT or utility owners. Comply with Laws and Regulations relative to required notifications.
- C. Existing Structures:
 1. The Contract Documents show or indicate certain structures and Underground Facilities adjacent to the Work. Such information was obtained from existing records and is not guaranteed to be correct or

complete. SUBCONTRACTOR shall explore ahead of the excavation to determine the exact location of all existing structures and Underground Facilities. Existing structures and Underground Facilities shall be supported and protected from damage by SUBCONTRACTOR. Immediately repair and restore existing structures and Underground Facilities damaged by SUBCONTRACTOR without additional cost to DEPARTMENT.

2. Movement or operation of construction equipment over Underground Facilities shall be at SUBCONTRACTOR's sole risk and only after SUBCONTRACTOR has prepared and submitted to ARCADIS and utility owners (as applicable), and received acceptance therefrom, a plan describing SUBCONTRACTOR's analysis of the loads to be imparted and SUBCONTRACTOR's proposed measures to protect structures and Underground Facilities during the Project.
3. Coordinate with utility owners for shut-off of services in active piping and conduits. When required by utility owner, DEPARTMENT will assist SUBCONTRACTOR with utility owner notifications. Completely remove buried piping and conduits indicated for removal and not otherwise indicated as being abandoned or to remain in place.
4. In general, service lines and laterals to individual houses and businesses are not shown; however, SUBCONTRACTOR shall assume that a service exists for each utility owner to each house, business, and property.
5. Do not interrupt existing utilities serving facilities occupied and used by DEPARTMENT or others, except when such interruption is indicated in the Contract Documents or when allowed in writing by ARCADIS after acceptable temporary utility services are provided by SUBCONTRACTOR for the affected structure or property.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Select Fill:

1. Material shall be naturally- or artificially-graded mixture of natural or crushed gravel, crushed stone, or natural or crushed sand. Crushed slag is unacceptable. Material shall be Item 703-0202 Type 3 in accordance with NYSDOT.

B. General Fill:

1. Material shall be free of: rock and gravel larger than three inches in any dimension, debris, waste, contamination, frozen materials, organic material, and other deleterious matter.
2. Fill shall have a liquid limit not greater than 45, and plasticity index not greater than 25.
3. Previously-excavated materials complying with the Contract Documents requirements for general fill may be used for general fill.
4. When on-Site materials are found unsuitable for use as general fill, provide select fill or approved off-Site general fill materials. Prior to using off-Site

material as general fill, furnish submittal for and obtain ARCADIS' approval of the material proposed for use.

C. Crushed Stone:

1. Material shall be naturally- or artificially-graded mixture of natural or crushed gravel, crushed stone, or natural or crushed sand. Crushed slag is unacceptable. Material shall be Item 703-0203 Type 2 in accordance with NYSDOT.

D. Pea Gravel:

1. Material shall be naturally- or artificially-graded mixture of natural or crushed gravel, crushed stone, or natural or crushed sand. Crushed slag is unacceptable. Material shall be Item 703-0203 Type 1st in accordance with NYSDOT.

E. Topsoil:

1. Material shall be free of: rock and gravel larger than one-half inches in any dimension, debris, waste, contamination, frozen materials, and other deleterious matter.
2. Material shall have a minimum of 15 percent organic matter.
3. Fill shall have a liquid limit not greater than 45, and plasticity index not greater than 25.
4. Previously-excavated materials complying with the Contract Documents requirements for Topsoil may be used for Topsoil.
5. When on-Site materials are found unsuitable for use as Topsoil, provide approved off-Site Topsoil. Prior to using off-Site material as Topsoil, furnish submittal for and obtain ARCADIS' approval of the material proposed for use.

2.2 SOURCE QUALITY CONTROL

- A. Perform quality assurance testing, and submit results to ARCADIS, in accordance with the 'Quality Assurance' Article in Part 1 of this Section.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Provide ARCADIS with sufficient notice and with means to examine areas and conditions under which excavating, filling, and grading will be performed. ARCADIS will advise SUBCONTRACTOR in writing when ARCADIS is aware of conditions that may be detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.2 TEST PITS

- A. General:

1. In advance of the construction, excavate, make observations and measurements, and fill test pits to determine conditions or location of the existing Underground Facilities and structures. Perform all work required in connection with excavating, stockpiling, maintaining, sheeting, shoring, filling, and replacing pavement for test pits. SUBCONTRACTOR shall be responsible for the definite location of each existing Underground Facility involved within the area of excavation for the Work. Exercise care during such location work to avoid damaging and disrupting the affected Underground Facility or structure. SUBCONTRACTOR shall be responsible for repairing, at his expense, damage to Underground Facility or structure caused during the Work.

3.3 PREPARATION

A. Site Preparation:

1. Clear areas to be occupied by permanent construction of all trees, brush, roots, stumps, logs, wood and other materials and debris. Clean and strip vegetation, sod, topsoil, and organic matter from subgrades where fills will be placed, and from areas where structures will be constructed. Remove from the Site and properly dispose of all waste materials.
2. Burning is not allowed at the Site.

B. Use of Explosives:

1. Use of explosives is not allowed.

3.4 DEWATERING

A. Dewatering – General:

1. Provide and maintain adequate drainage and dewatering equipment to remove and dispose of all surface water and ground water entering excavations, or other parts of the Work and work areas. Keep each excavation dry during excavation, subgrade preparation, and continually thereafter until the structure to be built therein is acceptable to ARCADIS and backfilling operations are completed and acceptable to ARCADIS.
2. Keep all working areas at the Site free of surface water at all times. Provide temporary drainage ditches and temporary dikes, and provide required temporary pumping and other work necessary for diverting or removing rainfall and all other accumulations of surface water from excavations and fill areas. Perform diversion and removal of surface water in manner that prevents accumulation of water behind permanent or temporary structures and at any other locations in the construction area where such accumulations may be detrimental.
3. Water used for working or processing, resulting from dewatering operations, or containing oils or sediments that will reduce the quality of the surface water or groundwater downstream of the point of discharge, shall not be directly discharged. Divert such waters through temporary settling basin or filter before discharging to surface water, groundwater, or drainage routes.

4. SUBCONTRACTOR shall be responsible for condition of piping, conduits, and channels used for drainage and such piping, conduits, and channels shall be clean and free of sediment.
5. Remove water from excavations as fast as water collects.

B. Temporary Dewatering System:

1. SUBCONTRACTOR shall design, provide, and operate dewatering system to include sufficient trenches, sumps, pumps, hose, piping, well points, deep wells, and similar facilities, necessary to depress and maintain groundwater level 12 inches below the base of each excavation during all stages of construction operations.
2. Design and operate dewatering system to avoid settlement and damage to existing structures and Underground Facilities.
3. Groundwater table shall be lowered in advance of excavation for a sufficient period of time to allow dewatering of fine grain soils.
4. Maintain groundwater level at excavations two feet below lowest subgrade excavation until the structure has sufficient strength and weight to withstand horizontal and vertical soil and water pressures from natural groundwater.
5. Operate dewatering system continuously, 24 hours per day, seven days per week. Provide standby pumping facilities and personnel to maintain the continued effectiveness of the system. Do not discontinue dewatering operations without first obtaining ARCADIS' acceptance for such discontinuation.
6. If, in ARCADIS' opinion, the water levels are not being lowered or maintained as required, provide additional or alternate temporary dewatering devices as necessary, at no additional cost to DEPARTMENT.
7. Locate elements of temporary dewatering system to allow continuous dewatering operation without interfering with the Work to the extent practicable.
8. Where portions of dewatering system are located in the area of permanent construction, submit to and obtain ARCADIS' acceptance of details of proposed methods of constructing the Work at such location. Control of ground water shall continue until the permanent construction provides sufficient dead load to withstand hydrostatic uplift of the normal groundwater, until concrete has attained sufficient strength to withstand earth and hydrostatic loads, and until waterproofing Work is completed.
9. Perform pumping of water from excavations in a manner that prevents carrying away of unsolidified concrete materials, and that avoids damaging the subgrade.
10. Before discontinuing dewatering operations or permanently allowing rise of groundwater level, prepare computations to demonstrate that structures affected by the water level rise are protected by fill or other means to sustain uplift. Use a safety factor of 1.25 when preparing such calculations.

C. Disposal of Water Removed by Dewatering System:

1. SUBCONTRACTOR's dewatering system shall discharge to a suitable location acceptable to the DEPARTMENT, in accordance with Laws and Regulations.

2. Convey water from excavations in closed conduits. Do not use trench excavations as temporary drainage ditches.
3. Dispose of water removed from excavations in a manner that does not endanger health and safety, property, the Work, and other portions of the Project.
4. Dispose of water in manner that causes no inconvenience to DEPARTMENT, others involved in the Project, and adjacent and downstream properties.

3.5 EXCAVATION

- A. Perform all excavation required to complete the Work as shown, specified, and required. Excavations shall include removing and handling of earth, sand, clay, gravel, hardpan, soft, weathered or decomposed rock, pavements, rubbish, and other materials within the excavation limits.
- B. Excavation Protection:
 1. Provide excavation protection system(s) in accordance with Laws and Regulations to prevent injury to persons and property, including Underground Facilities.
 2. Excavation Less Than Five Feet Deep: Excavations in stable rock or in soil conditions where there is no potential for a cave-in may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded, or shored and braced.
 3. Excavations Greater Than Five Feet Deep: Excavations in stable rock may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded, or shored and braced.
 4. Provide and maintain excavation protection system(s) in accordance with submittals accepted by ARCADIS and required under Paragraph 1.5.B of this Section.
- C. Maintain excavations in dry condition in accordance with “Dewatering” Article in Part 3 of this Section.
- D. Elevation of bottom of footings shown is approximate. ARCADIS may direct such minor changes in dimensions and elevations as may be required to secure a satisfactory footing.
- E. When excavations are made below required grades without written order of ARCADIS, fill such excavations with compacted select fill material, as directed by ARCADIS, at SUBCONTRACTOR’s expense.
- F. Extend excavations sufficiently on each side of structures, footings, and similar construction to allow setting of forms, installation of shoring and bracing, and the safe sloping of banks, as necessary.
- G. Subgrades – General:

1. Subgrades shall be firm, dense, and thoroughly compacted and consolidated; shall be free from mud, muck, and other soft or unsuitable materials; and shall remain firm and intact under all construction operations. Subgrades that are otherwise solid but become soft or mucky on top due to construction operations shall be reinforced with Select Fill. Finished elevation of stabilized subgrades shall not be above subgrade elevations shown.
2. If, in ARCADIS' opinion, subgrade becomes softened or mucky because of construction delays, failure to dewater properly, or other cause within SUBCONTRACTOR's control, subgrade shall be excavated to firm material, trimmed, and backfilled with select fill material at SUBCONTRACTOR's expense.

H. Proofrolling Subgrades:

1. Prior to placing fill or constructing pavements or slabs, proofroll the subgrade surface with sufficient proofrolling apparatus. Before starting proofrolling, submit to and obtain acceptance from ARCADIS of proofrolling apparatus and procedure to be used.
2. Proofrolling operations shall be made in the presence of ARCADIS. Notify ARCADIS at least 24 hours in advance of start of proofrolling operations.
3. Subgrades displaying pronounced elasticity or deformation, deflection, cracking, or rutting shall be stabilized as directed by ARCADIS. Unsuitable materials shall be undercut to the depth directed by ARCADIS and replaced with select fill material. Other suitable stabilization methods may be directed by ARCADIS.

3.6 UNAUTHORIZED EXCAVATION

- A. All excavations outside lines and grades shown or indicated and that are not approved by ARCADIS, together with removing and disposing of the associated material, shall be at SUBCONTRACTOR's expense. Fill unauthorized excavations with properly-compacted select fill material at SUBCONTRACTOR's expense.

3.7 EROSION AND SEDIMENT CONTROLS

- A. Provide temporary erosion and sediment controls in accordance with Section 01 57 05, Temporary Controls. When applicable, also comply with requirements of the erosion and sediment control plan approved by authorities having jurisdiction.

3.8 SHEETING, SHORING, AND BRACING

A. General:

1. Design and provide sheeting, shoring, bracing, cofferdams, and similar excavation supports as shown, specified, and required for the Work.
2. Clearances and types of temporary sheeting, shoring, bracing, and similar excavation supports, insofar as they may affect the finished character of the Work and the design of sheeting to be left in place, will be subject to the

ARCADIS' approval; but SUBCONTRACTOR is responsible for adequacy of all sheeting, shoring, bracing, cofferdams, and similar excavation supports.

3. Materials:
 - a. Previously-used materials shall be in good condition, and shall not be damaged or excessively pitted. All steel or wood sheeting designated to remain in place shall be new. New or used sheeting may be used for temporary sheeting, shoring, and bracing.
 - b. All steel work for sheeting, shoring, bracing, cofferdams and other excavation supports, shall be in accordance with ANSI/AISC 360, except that field welding will be allowed.
 - c. Provide permanent steel sheet piling or pressure-creosoted timber sheet piling where subsequent removal of sheet piling might allow lateral movement of soil under adjacent structures
4. As excavation progresses, carry down shoring, bracing, cofferdams, and similar excavation supports to required elevation at bottom of excavation.
5. Comply with Laws and Regulations regarding sheeting, shoring, bracing, cofferdams, and similar excavation supports.
6. Maintain sheeting, shoring, bracing, bracing, and other excavation supports in excavations regardless of time period excavations will be open.
7. Unless otherwise shown, specified, or directed, remove materials used for temporary construction when the Work is completed. Perform such removal in manner not injurious to the structures and Underground Facility, their appearance, and adjacent construction.

B. Removal of Sheeting and Bracing:

1. Remove sheeting and bracing from excavations, unless otherwise directed by ARCADIS in writing. Perform removal to avoid damaging the Work and adjacent construction. Removal shall be equal on both sides of excavation to ensure no unequal loads on structures and Underground Facilities.
2. Defer removal of sheeting and bracing, where removal may cause soil to come into contact with concrete, until the following conditions are satisfied:
 - a. Concrete has cured for not less than seven days.
 - b. Wall and floor framing, up to and including grade level floors, is in place.

3.9 TRENCH SHIELDS

- A. Excavation of earth material below bottom of trench shield shall not exceed the limits established in Laws and Regulations.
- B. When using a shield for installing piping:
 1. Portions of trench shield extending below the mid-diameter of an installed, rigid pipe, such as prestressed concrete pipe and other types of rigid pipe, shall be raised above the pipe's mid-diameter elevation prior to moving the shield along the trench for further construction.

2. Bottom of shield shall not at any time extend below mid-diameter of installed pipe that is flexible or has flexing capability, such as steel, ductile iron, PVC, CPVC, polyethylene, and other pipe that has flexing capability.
- C. When using a shield for installing structures, bottom of the shield shall not extend below the top of the bedding for the structures.
- D. When removing the shield or moving the shield ahead, exercise extreme care to prevent moving piping, structures, and other Underground Facilities, and prevent disturbance of bedding material for piping, structures, and other Underground Facilities. When piping, structures, or Underground Facilities are disturbed, remove and reinstall the disturbed items in accordance with the Contract Documents.

3.10 FILL AND COMPACTION – GENERAL PROVISIONS

- A. Provide and compact all fill required for the finished grades as shown and as specified in this Section.
- B. Place fill in excavations as promptly as progress of the Work allows, but not until completing the following:
 1. ARCADIS' authorization after observation of construction below finish grade, including dampproofing, waterproofing, perimeter insulation, and similar Work.
 2. Inspection, testing, approval, and recording of locations of Underground Facilities.
 3. Removal of concrete formwork.
 4. Removal of shoring and bracing, and filling of voids with satisfactory materials.
 5. Removal of trash and debris.
 6. Permanent or temporary horizontal bracing is in place on horizontally-supported walls.
- C. Fill that includes organic materials or other unacceptable material shall be removed and replaced with approved fill material in accordance with the Contract Documents.
- D. Placement – General:
 1. Place fill to the grades shown or indicated. Bring up evenly on all sides fill around structures and Underground Facilities.
 2. Fill areas shall be undercut and proof-rolled as directed by ARCADIS.
 3. Place fill materials at moisture content and density as specified in Table 31 23 05-A of this Section and this Article's requirements on compaction density. Furnish and use equipment capable of adding measured amounts of water to the fill materials to bring fill materials to a condition within required moisture content range. Furnish and use equipment capable of discing, aerating, and mixing the fill materials to ensure reasonable uniformity of moisture content throughout the fill materials, and to reduce

moisture content of borrow materials by air drying, when necessary. When subgrade or lift of fill materials requires moisture-conditioning before compaction, fill material shall be sufficiently mixed or worked on the subgrade to ensure uniform moisture content throughout the lift of material to be compacted. Materials at moisture content in excess of specified limit shall be dried by aeration or stockpiled for drying.

4. Perform compaction with equipment suitable for the type of fill material placed. Select and use equipment capable of providing the minimum density required in the Contract Documents. Use light compaction equipment, with equipment gross weight not exceeding 7,000 pounds within horizontal distance of ten feet from the wall of completed, below-grade structures. Furnish and use equipment capable of compacting in restricted areas next to structures and around piping and Underground Facilities. Effectiveness of the equipment selected by SUBCONTRACTOR shall be tested at start of compacted fill Work by constructing a small section of fill within the area where fill will be placed. If tests on the test section of fill indicate that required compaction is not obtained, do one or more of the following: increase the amount of coverages, decrease the lift thicknesses, or use different compactor equipment.
 5. Place fill materials in horizontal, loose lifts, not exceeding specified uncompacted thickness. Place fill in a manner ensuring uniform lift thickness after placing. Mechanically compact each lift, by not less than two complete coverages of the compactor. One coverage is defined as the conditions reached when all portions of the fill lift have been subjected to the direct contact of compactor's compacting surface. Compaction of fill materials by inundation with water is unacceptable.
 6. Do not place fill materials when standing water is present on surface of the area where fill will be placed. Do not compact fill when standing water is present on the fill to be compacted. Do not place or compact fill in a frozen condition or on top of frozen material. Fill containing organic materials or other unacceptable material previously described shall be removed and replaced prior to compaction.
 7. If required densities are not obtained because of improper control of placement or compaction procedures, or because of inadequate or improperly-functioning compaction equipment, SUBCONTRACTOR shall perform all work required to provide the required densities. Such work shall include, at no additional cost to DEPARTMENT, complete removal of unacceptable fill areas and replacement and re-compaction until acceptable fill is provided.
 8. Repair, at SUBCONTRACTOR's expense, observed or measured settlement. Make repairs and replacements as required within 30 days after being so advised by ARCADIS.
- E. Compaction Density Requirements:
1. Compaction required for all types of fills shall be in accordance with Table 31 23 05-A of this Section. Moisten material or aerate the material as necessary to provide the moisture content that will facilitate obtaining the required compaction.

**TABLE 31 23 05-A
REQUIRED MINIMUM DENSITY**

Material	Percent Compaction (ASTM D698)	Uncompacted Lift (inches)
General Fill	90	12
Topsoil	80	12
Select Fill	85	12
Select Fill (under paved areas)	95	8

2. Fill shall be wetted and thoroughly mixed to achieve optimum moisture content plus-or-minus three percent, with the following exceptions:
 - a. On-site soils: Optimum to plus three percent.
3. Replace natural, undisturbed soils or compacted soil subsequently disturbed or removed by construction operations with materials compacted as indicated in Table 31 23 05-A of this Section.
4. Field quality control testing for density; to verify that specified density was obtained, will be performed during each day of compaction Work. Responsibility for field quality control testing is specified in the “Field Quality Control” Article in Part 3 of this Section.
5. When field quality control testing indicates unsatisfactory compaction, provide additional compaction necessary to obtain the specified compaction. Perform additional compaction Work at no additional cost to DEPARTMENT until specified compaction is obtained. Such work includes complete removal of unacceptable (as determined by ARCADIS) fill areas and replacement and re-compaction until acceptable fill is provided in accordance with the Contract Documents.

H. Replacement of Unacceptable Excavated Materials: In cases where over-excavation to replace unacceptable soil materials is required, backfill the excavation to required subgrade with select fill material and thoroughly compact in accordance with Table 31 23 05-A and the associated “Compaction Density Requirements” in this Article. Slope the sides of excavation in accordance with the maximum inclinations specified for each structure location.

3.11 GRADING

A. General:

1. Uniformly grade areas within limits of grading under this Section, including adjacent transition areas.
2. Smooth subgrade surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Compaction:

1. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

3.12 PAVEMENT SUBBASE COURSE

A. General:

1. Place subbase material, in layers of specified thickness, over ground surface to support pavement base course.
2. After completing filling and grading, shape and compact pavement subgrade to an even, firm foundation in accordance with this Section. Remove unsuitable subgrade materials, including soft materials, boulders, vegetation, and loose stones, and replace with compacted fill material as directed by ARCADIS.

B. Grade Control:

1. During construction, maintain lines and grades including crown and cross-slope of subbase course.

C. Placing of Pavement Subbase Course:

1. Place subbase course material on prepared subgrade in layers of uniform thickness, in accordance with indicated cross-section and thickness. Maintain optimum moisture content for compacting subbase material during placing operations.
2. Provide geotextile separation fabric over the prepared subgrade in accordance with Section 31 05 19, Geosynthetics for Earthwork.
3. After completing compaction, other than that necessary for bringing material for the next course, do not haul or drive over the compacted subbase.
4. Do not install pavement subbase in excess of 500 feet in length without compacting to prevent softening of the subgrade.
5. If subgrade material becomes churned up into or mixed with the subbase material, remove the mixed material and replace with clean, compacted subbase material.

3.13 DISPOSAL OF EXCAVATED MATERIALS

A. General:

1. SUBCONTRACTOR shall haul away material removed from excavations that does not comply with requirements for fill, or is in excess of the quantity required for fill.
2. Disposal of materials shall be in compliance with Laws and Regulations, at no additional cost to ARCADIS.

3.14 TEMPORARY BARRIERS

- A. Provide temporary barrier surrounding excavations and excavation work areas to provide temporary protection to persons and property. Barrier shall have openings only at vehicular, equipment, and worker access points.
- B. Minimum Material Requirements for Temporary Barriers:
 - 1. Temporary barrier shall not be less snow fence-type fencing, four feet high.
 - 2. Fence shall be constructed of vertical hardwood slats measuring not less than 1.5 inches by 1/4 inch interwoven with strands of horizontal wire, or shall be of equivalent plastic construction.
 - 3. Posts:
 - a. Posts shall be steel, either “U”-, “Y”-, “T”-shaped, or channel section.
 - b. Posts shall have a nominal weight of not less than 1/3-pound per linear foot, exclusive of the anchor.
 - c. Posts shall have tapered anchors weighing not less than 0.67 pounds, each firmly attached by means of welding, riveting or clamping.
 - d. Posts shall have corrugations, knobs, notches, or studs placed and constructed to engage a substantial number of fence line wire in the proper position.
 - e. Provide each post with sufficient quantity of galvanized wire fasteners or clamps, of not less than 0.120-inch diameter, for attaching fence wire to post.

3.15 FIELD QUALITY CONTROL

- A. Site Tests: DEPARTMENT will employ a testing laboratory to perform field quality control testing.
 - 1. Testing Laboratory Scope:
 - a. Perform field moisture content and density tests to ensure that the specified compaction of fill materials has been obtained.
 - b. Tests of actual unconfined compressive strength or bearing tests on each stratum.
 - c. Report results of each test to ARCADIS and SUBCONTRACTOR.
 - 2. Required Material Tests:
 - a. Compaction: Comply with ASTM D1556 and ASTM D6938, as applicable.
 - 3. Authority and Duties of Testing Laboratory:
 - a. Technicians representing the testing laboratory shall inspect the materials in the field, perform testing, and report findings to ARCADIS and SUBCONTRACTOR. When materials furnished or the Work performed does not comply with the Contract Documents, technician will direct attention of ARCADIS and SUBCONTRACTOR to such failure.
 - b. Technician will not act as foreman or perform other duties for SUBCONTRACTOR. Work will be checked as it progresses, but failure to detect defective Work or non-complying materials shall not in any way prevent later rejection when defect is discovered, nor shall

it obligate ARCADIS for Substantial Completion or final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release requirements of the Contract Documents, or to approve or accept any portion of the Work.

4. Responsibilities and Duties of SUBCONTRACTOR:
 - a. Use of testing laboratory shall in no way relieve SUBCONTRACTOR of the responsibility to provide materials and Work in full compliance with the Contract Documents.
 - b. To facilitate testing laboratory, SUBCONTRACTOR shall advise testing laboratory at least two days in advance of filling operations to allow for completion of field quality control testing and for assignment of personnel.
 - c. It shall be SUBCONTRACTOR's responsibility to accomplish the specified compaction for fill and other earthwork. SUBCONTRACTOR shall control construction operations by confirmation tests to verify and confirm that SUBCONTRACTOR has complied, and is complying at all times, with the Contract Documents relative to compaction, control.
 - d. SUBCONTRACTOR shall demonstrate adequacy of compaction equipment and procedures before exceeding one or more of the following quantities of earthwork. Each test location shall include tests for each layer, type, or class of fill to finish grade.
 - 1) 1000 cubic yards of select fill.
 - 2) 1000 cubic yards of general fill.
 - 3) 1000 cubic yards of topsoil.
5. Testing laboratory will inspect and indicate acceptable subgrades and fill layers before construction work is performed thereon. Testing of subgrades and fill layers shall be taken as follows:
 - a. For Select Fill: : One per 1,000 square feet on every compacted lift.
 - b. For General Fill: One per 1,000 square feet on every compacted lift.
 - c. For Topsoil: One per 1,000 square feet on every compacted lift.
6. Periodic compliance tests will be made by ARCADIS to verify that compaction is complying with the requirements specified, at no cost to SUBCONTRACTOR. SUBCONTRACTOR shall remove the overburden above the level at which ARCADIS wishes to test and shall fill and re-compact the excavation after testing is complete.
7. If testing laboratory reports or inspections indicate subgrade, fills, or bedding compaction below specified density, SUBCONTRACTOR shall remove unacceptable materials as necessary and replace with specified materials and provide additional compaction at SUBCONTRACTOR's expense until subgrades, bedding, and fill are acceptable. Costs for retesting of subgrade, fills, or bedding materials that did not originally comply with specified density shall be paid by SUBCONTRACTOR.

+ + END OF SECTION + +

SECTION 31 23 07

SITE RESTORATION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. SUBCONTRACTOR shall furnish all labor, materials, equipment, facilities and incidentals necessary to restore the Site and adjacent areas, as shown on the Drawings, as specified herein and as directed by ARCADIS.
- B. The Work includes, but is not necessarily limited to seeding for restoration of grass areas, removal of all temporary fencing, temporary facilities, trailers, temporary utilities, signs, decontamination pad, excess construction materials, waste, debris and any other foreign material as specified, shown on the Contract Drawings, and as directed by ARCADIS.
- C. SUBCONTRACTOR shall provide ARCADIS with, at a minimum, 7 calendar days' notice prior to initiating final site restoration activities. No equipment, facilities, materials, etc. shall be demobilized or removed from the Site without the approval of ARCADIS.
- D. The Work under this Section shall include, but not necessarily be limited to, the following:
 - 1. Removal and off-site disposal of all remaining waste and foreign material at the site.
 - 2. Addition of topsoil (loam) that has been mixed with additional organic and inorganic additives where vegetation is to be reestablished.
 - 3. Seeding for restoration of grass areas.
 - 4. Disconnection and removal of all temporary utilities.
 - 5. All equipment that has come into contact with contaminated material shall be decontaminated prior to removal from the Site as directed by ARCADIS.
 - 6. Removal of the Office Trailer, sanitary facilities, decontamination pad, and any other temporary Site facilities as directed by ARCADIS.
 - 7. Removal of all signs of temporary construction facilities, excess materials or any other vestiges of construction as directed by ARCADIS. After removal of equipment and materials, all disturbed areas shall be restored to the specified conditions and as directed by ARCADIS.

PART 2 – PRODUCTS

2.1 SEED

A. General:

1. Grass seed shall be fresh, recleaned seed of the latest crop. Material other than pure live seed shall comprise only nonviable seed, chaff, hulls, harmless inert matter and shall be free from noxious weeds. The mixture shall have less than one quarter (1/4) of one (1) percent weed content. Seed shall be mixed before delivery and shall consist of the mixture specified and in conformity with the following proportions by weight and meeting with the following standards of seed content. The percentage of purity shown on the label will be acceptable. The percentage of germination shall not be less than the minimum specified.
2. In addition, all on-Site soil that will be used as topsoil shall be provided with additional compost and peat moss amendments specified, whether or not testing indicates positive need for such amendments, for such material to be used as loam.

B. Seed Mixture:

<u>Seed Type</u>	<u>Percentage by Weight</u>
Timothy	30
Kentucky Bluegrass	25
Redtop	10
Perennial Rye Grass	30
Alsike Clover	4
Wild White Clover	1

C. Packaging:

1. All grass seed shall be delivered in unopened standard size bags of the vendor showing weight, analysis, and the name of vendor. It shall be stored in such a manner that its effectiveness will not be impaired.

2.1 Mulch

A. General:

1. Straw Mulch: Provide air-dry, clean, mildew- and certified seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
2. Peat Mulch: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
3. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch screen; soluble salt content of 5 to 10 decisiemens/meter; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

- a. Organic Matter Content: 50 to 60 percent of dry weight.
- b. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

PART 3 - EXECUTION

3.1 GRASS SEEDING

- A. Time of Seeding:
 - 1. Seeding shall be performed from March 1 to April 15 and from August 15 to October 15 unless otherwise approved. SUBCONTRACTOR shall notify ARCADIS at least 48 hours in advance of the time he/she intends to begin seeding and shall not proceed with such work until permission has been granted.
- B. Preparation of Areas:
 - 1. All weeds, roots, stumps, large stones, and debris shall be removed from the areas to be seeded. All washouts or other surface irregularities shall be repaired and additional topsoil shall be placed over the area as required.
- C. Sowing Seed:
 - 1. Sow seed using a spreader or seeding machine. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other and lightly raked into the top 1/4 inch of soil. After seeding and raking, the soil surface is to be rolled with an accepted roller weighing at least two hundred (200) pounds.
 - 2. Sow seed mixture at the rate of not less than eight-pounds for every 1000 square feet.
 - 3. Protect seeded areas, with slopes exceeding one on six, by providing erosion-control fiber mesh and where slopes exceed one on four, by providing erosion-control blankets. Install erosion-control materials according to manufacturer's written instructions and as follows:
 - 1) Vertically down slope without stretching fabric.
 - 2) Install hold down staples three per square yard minimum in center of fabric or as required to hold and shape the fabric to the contours of the slope. Install hold down staples along edges and overlaps of fabric at 9 inches on centers minimum, or as required to hold and shape the fabric to the contours of the slope.
 - 3) Lap fabric 4-inches minimum and turn edges of fabric into 8-inch deep by 16-inch wide earth trench and fill trench with earth.

++ END OF SECTION ++

PAGE LEFT BLANK INTENTIONALLY

SECTION 32 12 00

FLEXIBLE PAVEMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. SUBCONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install flexible, hot-mix, hot-laid, asphalt concrete pavement.
 - 2. The Work includes:
 - a. Preparation such as sawcutting, milling where shown or indicated, cleaning, and other preparation for installing flexible pavements.
 - b. Providing asphalt concrete paving materials.
 - c. Providing tack coat material.
 - d. Providing pavement markings where shown or indicated.
 - e. Providing quality controls and testing.
- B. Coordination:
 - 1. Review installation procedures under this and other Sections and coordinate installation of items to be installed with or before flexible paving Work.
- C. Related Sections:
 - 1. Section 31 23 05, Excavation and Fill.

1.2 REFERENCES

- A. Standards referenced in this Section are:
 - 1. AASHTO M320, Specification for Performance-Graded Asphalt Binder.
 - 2. AASHTO MP1a, Specification for Performance-Graded Asphalt Binder.
 - 3. AI MS-2, Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types.
 - 4. ASTM C1371, Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
 - 5. ASTM C1549, Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 6. ASTM D242/D242M, Specification for Mineral Filler For Bituminous Paving Mixtures.
 - 7. ASTM D692/D692M, Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
 - 8. ASTM D946/D946M, Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
 - 9. ASTM D977, Specification for Emulsified Asphalt.

10. ASTM D1073, Specification for Fine Aggregate for Bituminous Paving Mixtures.
11. ASTM D1188, Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples.
12. ASTM D2726, Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
13. ASTM D2950, Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
14. ASTM D3549, Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
15. ASTM D6690, Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
16. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
17. ASTM E408, Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
18. ASTM E1918, Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
19. ASTM E1980, Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
20. FS TT-P-115, Paint, Traffic, Highway, White and Yellow.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Asphalt Concrete Production Facility:
 - a. Production facility for asphalt concrete, tack coat materials, and other bitumastic materials shall be certified by the New York State Department of Transportation for furnishing such materials for New York State Department of Transportation highways.
2. SUBCONTRACTOR's Testing Laboratory:
 - a. Retain the services of independent testing laboratory to perform testing and determine compliance with the Contract Documents of the materials provided under this Section.
 - b. Do not employ the same laboratory hired by DEPARTMENT for field quality control testing under the "Field Quality Control" Article of this Section.
 - c. Testing laboratory shall comply with ASTM E329 and requirements of Section 01 45 29.13, Testing Laboratory Services Furnished by SUBCONTRACTOR.
 - d. Testing laboratory shall be experienced in the types of testing required.
 - e. Selection of testing laboratory is subject to ARCADIS' acceptance.

B. Regulatory Requirements:

1. Reference Specifications and Details:
 - a. Comply with applicable requirements of New York State Department of Transportation Standard Specifications and Standard Details.

2. Obtain required highway and street rights-of-way work permits.
 3. Jurisdiction:
 - a. Paved areas to be constructed are jurisdiction of DEPARTMENT.
- C. Quality Assurance Testing:
1. Quality assurance testing is in addition to source quality control testing, when required, and field quality control testing required under Article 3.4 of this Section.
 2. Materials used in the Work may require testing and retesting, as directed by ARCADIS, during the Project. Allow free access to material stockpiles and facilities at all times. Tests not specifically indicated to be performed at DEPARTMENT's expense, including retesting of rejected materials and installed Work, shall be performed at SUBCONTRACTOR's expense.
 3. SUBCONTRACTOR's Quality Assurance Testing Laboratory Scope:
 - a. Use of testing laboratory shall not relieve SUBCONTRACTOR of responsibility for providing materials and the Work in compliance with the Contract Documents.
 - b. Quality assurance testing laboratory shall perform the following, unless evidence of material compliance with reference specifications indicated in Paragraph 1.3.B of this Section, is submitted to ARCADIS by SUBCONTRACTOR and asphalt concrete production facility:
 - 1) Test in accordance with reference specifications indicated in Article 1.3 of this Section. In lieu of quality assurance testing, submit evidence and certification of material compliance with reference specifications. When evidence of conformance submitted is not acceptable to ARCADIS, perform quality assurance testing.
 - c. To facilitate testing services, SUBCONTRACTOR shall:
 - 1) Secure and deliver to testing laboratory and ARCADIS (when requested by ARCADIS) representative Samples of materials that SUBCONTRACTOR proposes to furnish and that are required to be tested.
 - 2) Furnish such labor as is necessary to obtain and handle Samples at the Site or at asphalt concrete production facility and other material sources.
 - 3) Advise testing laboratory and ARCADIS sufficiently in advance of operations to allow for completion of quality assurance tests and for the assignment of personnel.

1.4 SUBMITTALS

- A. Action Submittals: Submit the following:
1. Shop Drawings:
 - a. Submit the proposed asphalt concrete mix design for each asphalt concrete material, and other bituminous materials, required under this Section, providing complete data on materials, including location in the Work, source, material content and percentages, temperatures and all

other pertinent data. Indicate proportion of bituminous material from reclaimed asphalt pavement.

- b. Proposed gradation for each aggregate to be used in flexible paving. Submit gradation test results for the same material furnished on a previous project. Indicate the proportion of reclaimed asphalt pavement.

B. Informational Submittals: Submit the following:

1. Quality Assurance Test Data Submittals and Source Quality Control Submittals:
 - a. Submit for quality assurance tests and source quality control tests required.
2. Delivery Tickets:
 - a. Submit copy of delivery ticket for each load of asphalt concrete, tack coat materials, and other materials obtained from asphalt concrete production facility, signed by SUBCONTRACTOR
3. Field Quality Control Submittals:
 - a. Submit results of required field quality control testing.
4. Qualifications:
 - a. Asphalt concrete production facility, when required by ARCADIS.
 - b. SUBCONTRACTOR's testing laboratory, when required by ARCADIS.

1.5 SITE CONDITIONS

A. Weather Limitations:

1. Temperature:
 - a. For base course and binder course paving lifts equal to or greater than two inches thickness, atmospheric temperature shall be 40 degrees F and rising.
 - b. For surface course paving or other pavement courses in lifts less than two inches thick, temperature of surface on which pavement is to be placed shall be 50 degrees F or greater.
2. Prohibitions:
 - a. Do not place flexible paving materials when weather is foggy or during precipitation.
 - b. Do not place flexible paving materials when the base on which the material will be placed contains moisture in excess of optimum.
 - c. Place flexible paving materials only when ARCADIS concurs that weather conditions are suitable.

PART 2 – PRODUCTS

2.1 SYSTEM PERFORMANCE

A. System Description:

1. Provide Select Fill of the thickness shown or indicated, in accordance with Section 31 23 05, Excavation and Fill.
2. Flexible Pavement Courses:

- a. Provide the flexible pavement courses indicated below.
- b. All Pavement:
 - 1) Base Course: four (4) inches compacted thickness.

2.2 ASPHALT CONCRETE MIXES

- A. Asphalt Concrete Mixtures: Provide the following materials designed and manufactured in accordance with reference specifications indicated in Article 1.3 of this Section:
 - 1. Base Course: NYSDOT Item No. 403.118902, Asphalt Concrete – Type 1 Base Course.

2.3 BITUMINOUS MATERIALS

- A. Bituminous Materials for Asphalt Concrete:
 - 1. Bituminous materials for asphalt concrete shall comply with the reference specifications indicated in Article 1.3 of this Section, for the asphalt concrete mixes specified.
 - 2. Bituminous Materials from Reclaimed Asphalt Pavement (RAP): When use of RAP in bituminous materials is acceptable, comply with requirements for RAP in Article 2.4 of this Section.
- B. Not used.

2.4 AGGREGATES IN FLEXIBLE PAVEMENTS

- A. Aggregates for Asphalt Concrete – General:
 - 1. Aggregate materials used in flexible pavement shall be in accordance with the reference specifications indicated in Article 1.3 of this Section, for the asphalt concrete mix designs indicated.
- B. Reclaimed Asphalt Pavement (RAP):
 - 1. Processed material obtained by milling or full depth removal of existing asphalt concrete pavement may be used as aggregate in asphalt concrete base course and binder course.
 - 2. Maximum proportion of RAP in the asphalt concrete provided shall comply with requirements of the reference specifications indicated in Article 1.3 of this Section.
 - 3. When RAP is used, comply with Contract Documents requirements for the applicable asphalt concrete course mix design, bituminous materials, and aggregates.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine the subbase and base on which flexible paving will be installed. Notify ARCADIS in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.
- B. Do not place materials on subgrades, or subbase that is muddy or has water thereon.

3.2 PREPARATION

- A. Preparation: Before starting installation of flexible paving, perform the following:
 - 1. Grade Control: Establish and maintain throughout flexible paving installation the required lines and grades, including crown and cross-slope for each asphalt concrete course during construction operations.
 - 2. Prepare subgrade and provide subbase for flexible pavement in accordance with Section 31 23 05, Excavation and Fill. Before installing flexible pavement, obtain ARCADIS' concurrence that subgrade and subbase are suitable for installing flexible pavement.
 - 3. Coordinate placement of flexible pavement with Work including drainage structures, manholes, valve boxes, and similar items.
 - 4. Provide appropriate maintenance and protection of traffic measures during placement of pavement.
- B. Not used.
- C. Not used.

3.3 INSTALLATION OF FLEXIBLE PAVING

- A. General:
 - 1. Provide final pavement surfaces of uniform texture, at required grades and cross-sections.
 - 2. Construct roadways to the lines, grades, and typical sections shown or indicated.
- B. Installation of Asphalt Concrete:
 - 1. Asphalt concrete mixture shall be transported to the site of paving and placed as soon as possible after mixing.
 - 2. Placement of each asphalt concrete course shall be completed over the full width of the section under construction during each day's paving operations.
 - 3. Spread and finish asphalt concrete courses by means of self-propelled mechanical spreading and finishing equipment. Compacted thickness of layers placed shall not exceed 150 percent of specified thickness unless approved in writing by ARCADIS.

4. Compaction:
 - a. Rollers:
 - 1) Use sufficient rolling equipment to satisfactorily compact and finish the quantity of asphalt concrete placed. There shall be not less than two rollers on the Project at all times. When acceptable to ARCADIS, one of the rollers may be a pneumatic-tire roller.
 - 2) During rolling operations, roller speed shall not exceed three miles per hour. When sufficient number of rollers is not available, reduce the quantity of asphalt concrete placed to accommodate the available rollers' speed.
 - 3) Required rollers shall be at the Site, in acceptable operating condition, prior to placing of asphalt concrete.
 - 4) Use of vibratory rollers in lieu of steel-wheeled rollers is acceptable, however when thickness of asphalt concrete is one inch or less, rolling shall be in the static mode.
 - b. Rolling of initially-placed asphalt concrete material, or breakdown rolling, shall begin as soon as the asphalt concrete mixture will bear the roller without undue displacement.
 - c. Rolling shall be longitudinal, overlapping on successive trips by not less than one-half roller rear wheel width, and not more than three-quarters of roller rear wheel width. Alternate trips of the roller shall be of slightly different lengths.
 - d. At all times, roller motion shall be slow enough to avoid displacing the asphalt concrete.
 - e. Operate rollers continuously from breakdown of laid asphalt concrete through finish rolling.
 - f. Perform finish rolling using a steel-wheeled roller or a vibratory steel-wheel roller operating in the static mode.
 - g. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.
 - h. At each location not accessible to roller, thoroughly compact asphalt concrete with tampers and finish, where necessary, with a hot smoothing iron to provide uniform, smooth layer over the entire area so compacted.
5. Each compacted asphalt concrete course shall be within plus or minus 1/4 inch of the indicated thickness.
6. Placement of Adjacent Strips of New Asphalt Concrete:
 - a. When more than one width of asphalt concrete material will be placed, a six-inch wide strip of asphalt concrete adjacent to the area on which the future material is to be placed shall not be rolled until such future material is placed.
 - b. Do not leave the unrolled strip unrolled for more than two hours after placement, unless the six-inch unrolled strip is first heated with a joint heater.
 - c. After the first strip or width of asphalt concrete is compacted, place, finish, and compact the second width or strip as required for the first width, except that rolling shall be extended to include the six-inch strip of the first width not previously compacted.

C. Construction Joints:

1. Construction joints shall be made in such a manner as to ensure a neat junction, thorough compaction, and bond throughout.
2. Provide a transverse joint extending over the full width of the strip being laid and at right angles to its centerline at end of each workday and at other times when the placement of hot-mix asphalt concrete will be suspended for a period of time that will allow asphalt concrete mixture to chill.
3. Thoroughly compact by rolling the forward end of a freshly laid strip of asphalt concrete before the asphalt concrete mixture becomes chilled. When the Work is resumed, the end shall be cut vertically for the full depth of the layer.

D. Joining of Pavements:

1. When pavement is to join existing or previously-laid pavement, the existing or previously-laid pavement shall be neatly and carefully edged to allow for overlapping and feathering of the subsequent course of asphalt concrete material.
2. Where new pavement is to meet existing pavement, the existing pavement shall be sawcut and notched.
3. Where new pavement will meet existing asphalt pavement, remove existing pavement 12 inches onto undisturbed existing pavement course at edges where new pavement will meet existing pavement.
4. Tack Coat:
 - a. Provide tack coat material at the following locations:
 - 1) At edges where new pavement will connect to existing or previously-installed pavement.
 - 2) On surface of existing or previously-installed pavement course over which new pavement will be installed, prior to placement of the subsequent pavement course. Tack coat may be deleted when a succeeding layer of asphalt pavement is being applied over a freshly-placed asphalt pavement course that has been subjected to very little or no traffic, with approval of ARCADIS
 - 3) Where new pavement will abut curbing, concrete gutters, drainage structures and frames, manhole cover frames, valve boxes, and similar items.
 - b. Tack Coat Installation: Install tack coat immediately prior to installing pavement. Place pavement while tack coat is wet. Apply tack coat in accordance with reference specification indicated in Article 1.3 of this Section.

E. Curing:

1. Do not allow traffic onto pavement until directed by ARCADIS. Traffic will not be allowed on new asphalt concrete pavement until surface temperature is less than 140 degrees F.
2. Hold construction traffic on new pavement to a minimum as acceptable to ARCADIS.

- F. Asphalt Concrete Curbs: Provide extruded asphalt curbs of the height and profile indicated on the Drawings.
- G. Defective Pavement Work:
 - 1. When directed by ARCADIS, remove and replace defective flexible paving Work. Cut out such areas of defective pavement and fill with fresh asphalt concrete materials, compacted to required density.

3.4 FIELD QUALITY CONTROL

- A. Site Tests:
 - 1. Responsibility:
 - a. SUBCONTRACTOR's field quality control testing laboratory will:
 - 1) Perform field density tests to verify that required compaction of asphalt materials has been obtained.
 - 2) Test the proposed materials for compliance with the Contract Documents, as directed by ARCADIS.
 - 3) Submit reports of all test results to ARCADIS and DEPARTMENT.
 - b. Authority Field Quality Control Testing Laboratory:
 - 1) Technicians representing the testing laboratory will inspect materials at the Site and perform required testing. When the materials furnished or Work performed do not comply with the Contract Documents, field quality control testing laboratory technician shall direct the attention of ARCADIS and DEPARTMENT to such non-compliance.
 - 2) Testing laboratory personnel shall not act as foreman or perform other duties for SUBCONTRACTOR. The Work will be checked as it progresses, but failure to detect defective Work shall not in any way prevent the later rejection of such defective Work when defect is discovered. Failure to detect defective Work as it occurs does not obligate ARCADIS to final acceptance. Testing laboratory personnel are not authorized to revoke, alter, relax, enlarge, or release requirements of the Contract Documents, nor to approve or accept any portion of the Work.
 - 2. Asphalt Concrete Mix Temperature: Measure temperature at time of placement, record, and submit to ARCADIS.
 - 3. Surface Smoothness:
 - a. Test finished surface of each flexible paving course for smoothness, using a ten-foot straightedge applied parallel to and at right angles to centerline of paved areas.
 - b. Check surfaced areas at intervals as directed by ARCADIS.
 - c. Surfaces will be acceptable relative to smoothness when measurements are equal to or less than the following:
 - 1) Base Course: 3/8-inch vertical in ten feet horizontal.
 - 2) Binder Course: 3/8-inch vertical in ten feet horizontal.
 - 3) Surface Course (Wearing Course): 1/4-inch vertical in ten feet horizontal.

- d. Elevation: Finished surface of pavement shall be within plus or minus 1/2 inch of elevations shown or indicated.
- 4. Density:
 - a. Test Method: ASTM D2950 nuclear method; test one sample every 1,000 square yards of pavement. Test for each asphalt concrete course installed.
 - b. In addition, when directed by ARCADIS, compare density of in-place flexible paving materials against laboratory specimen or certificates on same asphalt pavement mixture, using nuclear density device.
 - c. Criteria for Acceptance: Density of in-place asphalt pavement material shall be not less than 90 percent of the recorded laboratory specimen or certificate density. Density shall be not greater than 98 percent.
- 5. Repair holes from test specimens in accordance with this Section's requirements for repairing defective Work.

3.5 ADJUSTING

- A. Not used.
- B. Not used.

3.6 CLEANING

- A. Cleaning: After completing the paving operations, clean surfaces of excess or spilled bituminous materials, excess asphalt concrete, and foreign matter.

3.7 PROTECTION

- A. Protect finished pavement until pavement has become properly hardened and cool.
- B. Cover openings of drainage structures, manholes, valve boxes, and similar items in the paved area until permanent coverings are provided.

+ + END OF SECTION + +

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. In most cases the payment or provision of supplements is for each hour worked (noted in the schedule as 'Per hour worked'). Some classifications require the payment or provision of supplements for each hour paid (noted in the schedule as 'Per hour paid'), which require supplements to be paid or provided at a premium rate for premium hours worked. Some classifications may also require the payment or provision of supplements for paid holidays on which no work is performed.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3

Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Albany County General Construction

Boilermaker

10/01/2015

JOB DESCRIPTION Boilermaker

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

WAGES

Per hour

07/01/2015

01/01/2016
Additional

01/01/2017
Additional

Boilermaker

\$ 32.29

\$1.15

\$1.15

SUPPLEMENTAL BENEFITS

Per hour worked

Journeymen

\$ 23.88*
+ 1.24

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour worked

All Apprentices get same benefits as Journeyman.

1-197

Carpenter - Building

10/01/2015

JOB DESCRIPTION Carpenter - Building

DISTRICT 2

ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

WAGES

Per hour:

07/01/2015

Carpenter	\$ 30.00
Floor Coverer	30.00
Carpet Layer	30.00
Dry-Wall	30.00
Lather	30.00
Piledriver	30.25
Diver-Wet Day	61.25
Diver -Dry Day	31.00
Diver Tender	31.00

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work

- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive:
 - 0' to 80' no additional fee
 - 81'to 100' additional \$.50 per foot
 - 101'to 150' additional \$0.75 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 19.32

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

* Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's base wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour worked:

1st year term	\$ 10.16
2nd year term	10.16
3rd year term	12.76
4th year term	12.76

2-291B-Alb

Carpenter - Building / Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing east to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour:

07/01/2015

Carpenter - ONLY for	
Artificial Turf/Synthetic	
Sport Surface Installer	\$ 28.99

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour worked plus paid holidays:

Journeyman \$ 19.34

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (2, 17) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

	07/01/2015
1st year term	\$ 10.25
2nd year term	10.25
3rd year term	12.85
4th year term	12.85

2-42AtSS

Carpenter - Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Clinton, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2015

Carpenter	\$ 29.05
Millwright	30.55
Piledriver	29.05
Diver-Wet Day	54.05
Diver-Dry Day	30.05
Diver-Tender	30.05

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.
- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- Depth pay for Divers based upon deepest depth on the day of the dive:
 - 0' to 50' no additional fee
 - 51'to 100' additional \$.50 per foot
 - 101'to 150' additional \$.75 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked plus paid holidays:

Journeyman \$ 19.28

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (2, 17) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour worked plus paid holidays:

1st year terms	\$ 10.12
2nd year terms	10.12
3rd year terms	12.72
4th year terms	12.72

2-291HH-Alb

Electrician

10/01/2015

JOB DESCRIPTION Electrician

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Greene: All of the city of Catskill and that portion of the county that lies north of Route 23A.

Otsego: Only the Towns of Decatur and Worcester

WAGES

Per hour

	07/01/2015	06/01/2016 Additional	06/01/2017 Additional
Electrician	\$36.00	\$2.00	\$2.05
Audio/Sound	36.00		
Video	36.00		
Tele-Data	36.00		

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead(Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.37
+3% of wage

OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 12:30 AM	REGULAR RATE PLUS 10%
3rd Shift	12:30 AM to 8:00 AM	REGULAR RATE PLUS 15%

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyman's wage.

6mo	1st yr	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

1st term	\$ 10.46*
2nd term	10.46*
All others	22.37*

*Plus additional 3% of wage

1-236

Elevator Constructor

10/01/2015

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Madison: Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield and Stockbridge.

Oneida: Entire county except the towns of: Camden, Florence, and Brookfield.

WAGES

Per hour

	07/01/2015	01/01/2016 Additional	01/01/2017 Additional
Mechanic	\$ 41.51	\$ 1.93	\$ 2.49
Helper	70% of Mechanic Wage Rate		

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

	07/01/2015
Journeyman/Helper	\$ 28.385*

(*)Plus 6% of gross wages if less than 5 years service

(*)Plus 8% of gross wages if more than 5 years service

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

0-6 mo*

50%

*No supplemental benefits

6-12 mo	2nd yr	3rd yr	4th yr
55 %	65 %	70 %	80 %

Supplemental Benefits per hour worked

Same as Journeyman/Helper

1-35

Glazier

10/01/2015

JOB DESCRIPTION Glazier

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

	07/01/2015	05/01/2016 Additional \$1.50	05/01/2017 Additional \$1.50
Glazier base wage	\$ 26.55		
	+ additional \$1.50 per hour for all hours worked		
*High Work Base Wage	29.50	\$1.25	\$1.25
	+ additional \$3.50 per hour for all hours worked		

(*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 17.03
Journeyman	
High Work	22.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier One Half Year (750 hr) terms at the following percentage of Journeyman's base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
-----	-----	-----	-----	-----	-----	-----	-----

35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$1.50 per hour for all hours worked for all terms							

Apprentice Glazier Hi-Work One Half Year (750 hr) terms at the following percentage of Journeyman's Hi-Work base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$3.50 per hour for all hours worked for all terms							

Supplemental Benefits per hour worked

For apprentices indentured after 07/01/2009 the following supplemental benefit applies:

Apprentice	
1st-4th term	\$ 14.51
5th-8th term	17.03
Apprentice High Work	
1st-4th term	\$ 17.08
5th-8th term	22.38

For apprentices indentured prior to and including 07/01/2009, the following supplemental benefit applies:

Apprentice	\$ 17.03
Apprentice High Work	22.38

1-201

Insulator - Heat & Frost

10/01/2015

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour 07/01/2015

Asbestos Worker*	\$ 32.52
Insulator*	32.52
Firestopping Worker*	27.65

(*)On Mechanical Systems only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.57
------------	----------

OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices	\$ 20.57
-------------	----------

1-40

Ironworker

10/01/2015

JOB DESCRIPTION Ironworker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otsego, Oneonta, Laurens, Millford, Maryland and Worchester.

WAGES

Wages	07/01/2015	05/01/2016 Additional	05/01/2017 Additional
Per hour			
Ornamental	\$ 29.50	\$1.25	\$1.25
Reinforcing	29.50		
Rodman	29.50		
Structural & Precast	29.50		
Mover/Rigger	29.50		
Fence Erector	29.50		
Stone Derrickman	29.50		
Sheeter	29.75		
Curtain Wall Installer	29.50		
Metal Window Installer	29.50		

SUPPLEMENTAL BENEFITS

Per hour worked

JOURNEYMAN \$ 25.86

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2015
1st year	\$ 16.50
2nd year	18.50
3rd year	20.50
4th year	22.50
Supplemental Benefits per hour worked	
1st year	\$ 10.25
2nd year	20.01
3rd year	21.41
4th year	22.81

1-12

Laborer - Building

10/01/2015

JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater and Waterford

WAGES

Per hour	07/01/2015	07/01/2016 Additional	07/01/2017 Additional
Group #1:			
All Classifications	\$ 25.46	\$ 1.70	\$ 1.70

except as noted in
Groups 2 & 3

Group #2:

Blaster, Drilling Equipment
Only Where a Separate Air
Compressor Unit Supplies
Power, Metal Formsetter
sidewalk), Well Pointing
& Laser Operator 25.96

Group #3:

Handling of Asbestos
or Toxic Materials 26.81

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190

Laborer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

GROUP # A:

Basic, Drill Helper, Flagman, Outboard and Hand Boats

GROUP # B:

Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators(1-1/2" and Single Diaphragm) Nozzle (Asphalt, Guniting, Seeding and Sand Blasting), Laborers on Chain Link Fence. Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C:

Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Acetylene Torch Operators, Asphalt Raker and Powderman.

GROUP # D:

Blasters, Metal Form Setters(sidewalk), Stone or Granite Curb Setters.

GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour

07/01/2015

Group # A	\$ 28.29
Group # B	28.49
Group # C	28.69
Group # D	28.89
Group # E	30.29

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$2.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices	\$ 20.05
-------------	----------

1-190 h/h

Laborer - Tunnel

10/01/2015

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

Class A: Mole nipper, powder handler, changehouse attendant and top laborer, Air spade, jackhammer, pavement breaker, Top bell, Bottom bell, side or roofbelt driller, maintenance men, burners, block layers, rodmen, caulkers, miners helper, trackmen, nippers, derailmen, electrical cablemen, hosemen, groutmen, gravelmen, form workers, movers and shaftmen, conveyor men.

Class B: Powder monkey, Blasters, ironmen and cement worker, miner, welder, heading driller, steel erectors, piledriver, rigger

Wages per hr.	07/01/2015
---------------	------------

Class #A	\$31.99 + Additional \$1.50
Class #B	32.99 + Additional \$1.50

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE
Note: If the holiday falls on a Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices \$ 19.05

1-190

Lineman Electrician

10/01/2015

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

	07/01/2015	05/02/2016
		Additional
Lineman, Technician	\$ 46.90	\$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Welder, Cable Splicer	46.90	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Groundman, Truck Driver	37.52	2.50
Mechanic 1st Class	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

		Additional
Lineman, Technician	\$ 46.90	\$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Cable Splicer-Pipe Type Cable	51.59	2.50
Cert. Welder-Pipe Type Cable	49.25	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Mechanic 1st Class	37.52	2.50
Groundman, Truck Driver	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

		Additional
Lineman, Technician, Welder	\$ 48.20	\$ 2.50
Crane, Crawler Backhoe	48.20	2.50
Digging Machine Operator	43.38	2.50

Tractor Trailer Driver	40.97	2.50
Groundman, Truck Driver	38.56	2.50
Mechanic 1st Class	38.56	2.50
Flagman	28.92	2.50
Cert. Welder-Pipe Type Cable	50.61	2.50
Cable Splicer-Pipe Type Cable	53.02	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

Lineman, Technician, Welder	\$ 49.41	Additional \$ 2.50
Crane, Crawler Backhoe	49.41	2.50
Cable Splicer	49.41	2.50
Digging Machine Operator	44.47	2.50
Tractor Trailer Driver	42.00	2.50
Groundman, Truck Driver	39.53	2.50
Mechanic 1st Class	39.53	2.50
Flagman	29.65	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.
*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

Journeyman	\$ 20.50
	*plus 7% of hourly wage

*The 7% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

HOLIDAY

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: 1000 hour terms at the following percentage of the Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS: Same as Journeyman

Lineman Electrician - Teledata

10/01/2015

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

FOR OUTSIDE WORK.

	07/01/2015	01/01/2016	01/01/2017
Cable Splicer	\$ 29.70	\$ 30.29	\$ 30.90
Installer, Repairman	28.19	28.75	29.33
Teledata Lineman	28.19	28.75	29.33
Technician, Equipment Operator	28.19	28.75	29.33
Groundman	14.95	15.25	15.56

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 4.43	\$ 4.43	\$ 4.43
	*plus 3% of wage paid	*plus 3% of wage paid	*plus 3% of wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal Lighting

10/01/2015

JOB DESCRIPTION Lineman Electrician - Traffic Signal Lighting

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Groundman Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chain saws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/groundman truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

(Ref #14.01.01)

Per hour:

07/01/2015

05/02/2016

		Additional
Lineman, Technician	\$ 41.04	\$ 2.00
Crane, Crawler Backhoe	41.04	2.00
Certified Welder	43.09	2.00
Digging Machine	36.94	2.00
Tractor Trailer Driver	34.88	2.00
Groundman, Truck Driver	32.83	2.00
Mechanic 1st Class	32.83	2.00
Flagman	24.62	2.00

Above rates applicable on all Lighting and Traffic Signal Systems with the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 20.50
	*plus 7.0% of hourly wage

*The 7% is based on the hourly wage paid, straight time rate or premium rate.

Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: Per hour. 1000 hour terms.

1st	2nd	3rd	4th	5th	6th	7th
\$ 24.62	\$ 26.68	\$ 28.73	\$ 30.78	\$ 32.83	\$ 34.88	\$ 36.94

SUPPLEMENTAL BENEFITS: Same as Journeyman

6-1249a-LT

Lineman Electrician - Tree Trimmer

10/01/2015

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2015

Tree Trimmer	\$ 22.80
Equipment Operator	20.11
Equipment Mechanic	20.11
Truck Driver	17.00
Groundman	13.94
Flag person	9.93

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 9.14
	*plus 3% of hourly wage

* The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.

All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

Mason - Building

10/01/2015

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Lake George, Lake Luzerne, Queensbury, Stony Creek, Thurman & Warrensburg.

WAGES

Per hour	07/01/2015
Bricklayer	\$ 32.80
Cement Mason(Bldg)	32.80
Plasterer/Fireproofing*	32.80
Pointer/Caulker/Cleaner	32.80
Stone Mason	32.80
Acid Brick	33.30

(*)Fireproofing of Structural only.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.57
------------	----------

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0-500 Hours	\$ 11.32
All others	\$ 19.57

12-2b.1

Mason - Building**10/01/2015**

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour 07/01/2015

Tile/Marble/Terazzo

Setter	\$ 31.67
Finisher	24.92

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter	\$ 18.67
Journeyman Finisher	15.97

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:	
1st term 0-500 hrs	60%
2nd term 501-1500 hrs	70%
3rd term 1501-2500 hrs	80%
4th term 2501-3500 hrs	85%
5th term 3501-4500 hrs	90%
6th term 4501-6000 hrs	95%

Finisher:	
1st term 0-500 hrs	70%
2nd term 501-1500 hrs	80%
3rd term 1501-2500 hrs	90%
4th term 2501-3700 hrs	95%

Supplemental Benefits per hour worked

07/01/2015

Setter:	
1st term 0-500 hrs	\$ 10.77
2nd term 501-1500 hrs	10.77
3rd term 1501-2500 hrs	14.72
4th term 2501-3500 hrs	14.72

5th term 3501-4500 hrs	16.70
6th term 4501-6000 hrs	18.67

Finisher:

1st term 0-500 hrs	\$ 10.27
2nd term 501-1500 hrs	10.27
3rd term 1501-2500 hrs	13.12
4th term 2501-3700 hrs	13.012

12-2TS.1

Mason - Heavy&Highway

10/01/2015

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

WAGES

Per hour

07/01/2015

Mason & \$34.01
Bricklayer

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 18.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

REGISTERED APPRENTICES

Wages per hour

750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

\$ 18.38

12-2hh.1

Millwright - Building

10/01/2015

JOB DESCRIPTION Millwright - Building

DISTRICT 2

ENTIRE COUNTIES

Albany, Chenango, Delaware, Fulton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie

WAGES

Per hour:	07/01/2015	07/01/2016	07/01/2017
		Additional	Additional
Millwright*	\$ 30.06	\$ 1.80	\$ 1.80

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- Certified Welders shall receive \$1.25 per hour in addition to the current Millwright's rate provided he/she is directed to perform certified welding.
- If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.25 premium per hour.

- An employee performing the work of a machinist shall receive \$1.25 per hour in addition to the current Millwright's rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

*Regarding treatment plants water or sewer, the Millwright Building rate is applicable for millwrights only performing maintenance and upkeep of existing equipment.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 19.73

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

(1)year terms at the following percentage of journeyman's rate.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hours worked:

Apprentices:

1st term	\$ 9.13
2nd term	16.55
3rd term	17.61
4th term	18.67

2-1163.1

Operating Engineer - Building

10/01/2015

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks,whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps.

* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour	07/01/2015	07/01/2016	07/01/2017
Class # A1	\$ 39.46	\$41.08	\$42.66
Class # A	39.01	40.61	42.18
Class # B	38.07	39.65	41.18
Class # C	35.42	36.92	38.37

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.00 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.00 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.00 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.17	\$ 24.47	\$ 24.87
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

Employees who work a Saturday holiday shall be paid double time plus the holiday pay.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017
All terms	\$ 19.60	\$ 19.90	\$ 20.30

1-158 Alb

Operating Engineer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoharie, Tioga, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), oiler (used in conjunction with production), Bituminous Heater (self-propelled), oat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunite Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro -Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinius Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2015	07/01/2016	07/01/2017
Master Mechanic	\$ 40.52	\$ 42.07	\$ 43.79
Class A*	38.91	40.46	42.18
Class B	38.00	39.55	41.27
Class C	35.43	36.98	38.70

Additional \$2.00 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.
- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.
- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.45	\$ 24.80	\$ 25.20
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017	
All Terms	\$ 19.85	\$ 20.20	\$ 20.60	1-158H/H Alb

Operating Engineer - Marine Construction	10/01/2015
---	-------------------

JOB DESCRIPTION Operating Engineer - Marine Construction

DISTRICT 4

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per Hour:

DREDGING OPERATIONS 07/01/2015

CLASS A

Operator, Leverman, \$ 35.63
Lead Dredgeman

CLASS A1

Dozer, Front Loader
Operator To conform to Operating Engineer
Prevailing Wage in locality where work
is being performed including benefits.

CLASS B

Spider/Spill Barge Operator, \$ 30.81
Tug Operator(over1000hp),
OperatorII, Fill Placer,
Derrick Operator, Engineer,
Chief Mate, Electrician,
Chief Welder,
Maintenance Engineer

Certified Welder, \$ 29.01
Boat Operator(licensed)

CLASS C

Drag Barge Operator, \$ 28.22
Steward, Mate,
Assistant Fill Placer,

Welder (please add)\$ 0.06

Boat Operator \$ 27.30

CLASS D

Shoreman, Deckhand, \$ 22.68
Rodman, Scowman, Cook,
Messman, Porter/Janitor

Oiler(please add)\$ 0.09

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

	07/01/2015
All Classes A & B	\$ 9.99 plus 8% of straight time wage, Overtime hours

add \$ 0.63

All Class C \$ 9.69 plus 8%
of straight time
wage, Overtime hours
add \$ 0.48

All Class D \$ 9.39 plus 8%
of straight time
wage, Overtime hours
add \$ 0.33

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Survey Crew

10/01/2015

JOB DESCRIPTION Operating Engineer - Survey Crew

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to Building and Heavy Highway.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 23.75
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms for Instrument & Rod Persons at the following rates:

07/01/2015

0-1000 Hrs	\$ 14.68
1001-2000 Hrs	17.12
2001-3000 Hrs	19.57

SUPPLEMENTAL BENEFITS per hour worked:

All Terms \$ 23.75

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer**10/01/2015**

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 23.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-158-545 DCE

Operating Engineer - Tunnel**10/01/2015**

JOB DESCRIPTION Operating Engineer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess to the northern boundary line of the City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Rte. 343 then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to Connecticut.

Genesee: Only that portion of the county that lies east of a linedrawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

Crane 1: All cranes, including self erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all other cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton nad below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor-mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (Automated); Cableway; Caisson Auger; Central Mix Concrete Plant (Automated); Concrete Curb Machine (Self-propelled slipform) Concrete Pump (8" or over); Dredge; Dual Drum Paver; Any Mechanical Shaft Drill; Excavator (all purpose-hydraulic-Gradall or Similar); Fork Lift (factory rated 15 ft and over); Front End Loader (4 c.y. & over); Gradall; Head Tower (Sauerman or Equal), Hoist Shaft; Hoist (two or three Drum); Mine Hoist; Maintenance Engineer (Shaft and Tunnel) ; Mine Hoist; Mucking Machine or Mole, Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Mach.; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, he shall be an Oiler); Tractor Drawn Belt Type Loader; Tripper/Maintenance Eng.(Shaft & Tunnel); Truck or Trailer Mounted Log Chipper (self-feeding); Tug Operator (Manned rented equip. excluded); Tunnel Shovel; Mining Machine(Mole and Similar Types).

CLASS B: Automated Central Mix Concrete Plant; Backhoe Trac-Mtd, Rubber Tired); Backhoe (topside); Bitum. Spred. & Mixer, Blacktop Plant non-automated); Blast or Rotary Drill (Truck or Tractor Mounted); Boring Machine; Cage Hoist; Central Mix Plant(NonAutomated) and All Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (Tractor Mounted); Front End Loader (under 4 c.y.); Grayco Epoxy Machine; Hoist (One Drum); Hoist 2 or 3 Drum (Topside); Kolman Plant Loader & Similar Type Loaders (if Employer requires another person to clean the screen or to maintain the equipment, he shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maint. Eng. (Topside); Grease Man; Welder; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Eng.; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Mach.; Shovel (Topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Winch and Winch Cat.

CLASS C: A Frame Truck; Ballast Regulator (ride-on); Compressors (4 under 2,000 cfm combined capacity; or 3 or less with more than 1200 cfm. but not to exceed 2,000 cfm); Compressors (any size but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-4 of any type or combination); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill well; Elec Pump Used in Conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; ForkLift (under 15 ft); Grout Pump (over (5) cu. ft.; Guniting Machine; Hammers (hydraulic- self propel.); Hydra-Spiker-Ride on; Hydra-Blaster; Hydra Blaster (water); Motorized Form Carrier; Post Hole Digger & Post Driver; Power Sweep; Roller grade & fill); Scarifer (Ride on); Span-Saw (Ride-on); Submersible Electric Pump (when used in lieu of well point system); Tamper (Ride-on); Tie-Extractor, Tie Handler, Tie Insertter, Tie Spacer and Track Liner (Ride-on); Tractor (with towed accessories); Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors(3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors(any size, but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-3 or less-any type or combination); Concrete Saw (self propelled); Fireman; Form Tamper; Hydraulic Pump (jacking system); Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broome towed; Power Heaterman; Revinus Widener; Shell Winder; Steam Cleaner and Tractor; Greaseman; Junior Engineer.

Per hour: 07/01/2015

Crane 1	\$ 44.56
Crane 2	43.56
Crane 3	42.56
Master Mechanic	42.75
CLASS A	40.56
CLASS B	39.34
CLASS C	36.55
CLASS D	33.54

On hazardous waste work bid, on a state or federally designated hazardous waste site, where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection, the Operating Engineer shall receive the hourly wage plus \$5.00 per hour. Fringe benefits will be paid at the contractual hourly wage.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 25.60

OVERTIME PAY

See (B, B2, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1000) hours terms at the following percentages.

1st term	60% of Class B
2nd term	65% of Class B
3rd term	70% of Class B
4th term	75% of Class B

Supplemental Benefits per hour paid:

\$ 25.60

7-158-832TL.

Painter	10/01/2015
----------------	-------------------

JOB DESCRIPTION Painter

DISTRICT 1

ENTIRE COUNTIES

Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie

WAGES

Per hour

	07/01/2015	05/01/2016 Additional	05/01/2017 Additional
Painter\Wallcover	\$ 28.24	\$ 1.40	\$ 1.40
Drywall Finishers	28.24	1.40	1.40
Spray Rate	28.24	1.40	1.40
Structural Steel*	29.24	1.40	1.40
Lead Abatement	29.24	1.40	1.40
Lead Abatement on Structural Steel	30.24	1.40	1.40

(*)Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

Bridge Painter

See Bridge Painter rates for the following work:

All Bridges and Tanks

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$11.97

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th	5th	6th
45%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

All Terms \$11.97

1-466-Z1

Painter - Bridge & Structural Steel	10/01/2015
--	-------------------

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour Worked:

STEEL:

Bridge Painting: 07/01/2015 10/01/2015

From May 1st to Nov. 15th -

	\$ 48.00	\$ 49.00
	+ 5.63*	+ 6.13*
From Nov. 16th to April 30th -		
	\$ 48.00	\$ 49.00
	+ 5.63*	+ 6.13*

*Not subject to overtime and limited to first 40 hours

NOTE: All premium wages are to be calculated on \$48.00 or \$49.00 per hour only.

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

Power Tool/Spray is an additional \$6.00 per hour above hourly rate, whether straight time or overtime

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

Per Hour Worked:

Journeyworker:	07/01/2015	10/01/2015
From May 1st to Nov. 15th -		
Hourly Rate up to 40 hours	\$ 28.95	\$ 29.95
Hourly Rate after 40 hours	7.50	7.50
From Nov. 16th to April 30th -		
Hourly Rate up to 50 hours	28.95	29.70
Hourly Rate after 50 hours	7.50	7.50

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(Wage per hour Worked):

Apprentices: (1) year terms	07/01/2015	10/01/2015
1st 90 days	\$ 21.45	\$ 22.05
1st year after 90 days	21.45	22.05
2nd year	32.18	33.08
3rd year	42.90	44.10

Supplemental Benefits per hour worked:

	07/01/2015	10/01/2015
1st 90 days	\$ 8.83	\$ 9.23
1st year after 90 days	11.58	11.98
2nd year	17.37	17.97
3rd year	23.16	23.96

8-DC-9/806/155-BrSS

Painter - Line Striping	10/01/2015
--------------------------------	-------------------

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2015
-----------------------------	------------

Striping-Machine Operator*	\$ 27.11
Linerman Thermoplastic	\$ 32.37

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

Four (4), ten (10) hour days may be worked at straight time during a week.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid: 07/01/2015
Journeyworker:

Striping-Machine operator	\$ 14.18
Linerman Thermoplastic	\$ 14.55

OVERTIME PAY

See (B, E, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

8-1456-LS

Painter - Metal Polisher

10/01/2015

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2015	06/01/2016	06/01/2017
Metal Polisher	\$ 28.07	\$ 28.88	\$ 29.73
Metal Polisher**	29.02	29.83	30.68
Metal Polisher***	31.57	32.38	33.23

**Note: Applies on New Construction & complete renovation

*** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2015	06/01/2016	06/01/2017
Journeyworker:			
All classification	\$ 9.12	\$ 9.26	\$ 9.41

OVERTIME PAY

See (B, E, E2, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2015	06/01/2016
1st year	\$ 11.75	\$ 11.75
2nd year	13.00	13.00
3rd year	15.75	15.75

Supplemental benefits:

Per hour paid:

1st year	\$ 6.26	\$6.26
2nd year	6.37	6.37
3rd year	6.51	6.51

8-8A/28A-MP

Plumber	10/01/2015
----------------	-------------------

JOB DESCRIPTION Plumber

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

PARTIAL COUNTIES

Hamilton: Only the Towns of Arietta, Benson, Hope, Inlet, Lake Pleasant, Morehouse and Wells.

Saratoga: Only the Towns of Charlton, Clifton Park, Galway, Halfmoon, Milton, Stillwater and Waterford and the city of Mechanicville.

WAGES

Per hour:

07/01/2015

Plumber:

Pipefitter, Steamfitter \$ 38.27

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 24.46

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Whenever a Holiday falls on Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th
45 %	55 %	65 %	75 %	90 %

Supplemental Benefits per hour worked:

07/01/2015

Apprentices \$ 24.46

1-7-SF

Roofer	10/01/2015
---------------	-------------------

JOB DESCRIPTION Roofer

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

WAGES

Per hour

	07/01/2015	06/01/2016	06/01/2017
		Additional	Additional
Roofer/Waterproofer	\$ 28.45	\$1.75	\$1.50
Asphalt Cold Process	28.95		
Pitch & Asbestos	30.45		

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 16.07

OVERTIME PAY

See (B, E*, Q) on OVERTIME PAGE.

* Saturday may be used as a make up day at straight time if employee misses 8 hrs or more during that week due to inclement weather.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages.

1st yr 1st half	50%
1st yr 2nd half	58%
2nd yr 1st half	66%
2nd yr 2nd half	74%
3rd yr 1st half	82%
3rd yr 2nd half	90%

Supplemental Benefits per hour worked

1st yr 1st half	\$ 14.30
1st yr 2nd half	14.49
2nd yr 1st half	14.72
2nd yr 2nd half	14.92
3rd yr 1st half	15.20
3rd yr 2nd half	15.40

1-241

Sheetmetal Worker

10/01/2015

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2015

Sheetmetal Worker \$ 31.84

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 28.22

OVERTIME PAY

See (B,E*,Q,) on OVERTIME PAGE

* Time and one half 1st 8 hours on Saturday. Double the hourly rate all additional Saturday hours.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

1st term	\$ 17.31
2nd term	18.76
3rd term	19.49
4th term	20.22

5th term	19.55
6th term	20.52
7th term	22.14
8th term	23.75
9th term	25.37
10th term	26.99

Supplemental Benefits per hour worked

1st term	\$ 17.22
2nd term	17.95
3rd term	18.21
4th term	18.46
5th term	23.41
6th term	23.79
7th term	24.43
8th term	25.05
9th term	25.69
10th term	26.33

1-83

Sprinkler Fitter

10/01/2015

JOB DESCRIPTION Sprinkler Fitter

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Saratoga, Schenectady, Warren

WAGES

Per hour 07/01/2015

Sprinkler \$ 32.18
Fitter

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 21.02

OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED PRIOR TO 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
50%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.15	\$ 8.15	\$ 15.12	\$ 15.12	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.56	\$ 8.60	\$ 15.37	\$ 15.41	\$ 15.96	\$ 16.00	\$ 16.05	\$ 16.09	\$ 16.14	\$ 16.18

For Apprentices HIRED ON OR AFTER 04/01/2013:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 7.90	\$ 7.90	\$ 15.12	\$ 15.12	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37

1-669-3

Teamster - Building	10/01/2015
----------------------------	-------------------

JOB DESCRIPTION Teamster - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

	07/01/2015	07/01/2016
Group A	\$ 26.29	\$ 26.73
Group B	26.59	27.03

SUPPLEMENTAL BENEFITS

Per hour worked

	07/01/2015	07/01/2016
Journeyman	\$ 19.04	\$ 20.10

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

1-294

Teamster - Heavy&Highway	10/01/2015
-------------------------------------	-------------------

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell, and Queensbury.

WAGES

GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks,
Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour 07/01/2015

Group #1	\$26.92
Group #2	26.97
Group #3	27.06
Group #4	27.17
Group #5	27.32

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$1.50 per hour.

For work bid on or after April 1, 1995, there shall be a 12 month carryover of the negotiated rate in effect at the time of the bid.

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid:

\$ 20.90
+\$1.00 per
hour worked

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

Welder

10/01/2015

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2015

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Albany County Residential

Laborer - Residential

10/01/2015

JOB DESCRIPTION Laborer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

IMPORTANT NOTE: This shall apply to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

Laborer \$ 19.09

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, *H) on OVERTIME PAGE

* Double time on Labor Day

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's building wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190r

Mason - Residential

10/01/2015

JOB DESCRIPTION Mason - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, this article shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

Bricklayer	\$ 26.49
Cement Mason	26.49
Plasterer	26.49
Point/Caulk/Clean	26.49
Acid Brick	26.99

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 17.83

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

* Work performed on Labor Day will be paid at double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-2r.z1

Mason - Tile Setter & Finisher - Residential

10/01/2015

JOB DESCRIPTION Mason - Tile Setter & Finisher - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to the construction of one family, two family row housing, townhouses, apartments, condominiums and garden type projects or a combination thereof, together with related service buildings and facilities which construction work may be performed wholly on-site or may consist of the assembly of off-site produced modules or components but any of which living units are in the finished form no more than two (2) stories high and are to be utilized solely as dwellings.

Per hour 07/01/2015

Tile/Marble/Terazzo

Setter \$ 23.80

Finisher 19.08

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter \$ 8.15

Journeyman Finisher 8.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-2TSFr

Operating Engineer - Residential

10/01/2015

JOB DESCRIPTION Operating Engineer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 then north along Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Route 44 and along Route 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one family, two family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

07/01/2016

Journeyman

All Clasifications \$ 35.42

\$ 36.92

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman
All classifications \$ 18.16 \$ 18.39

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

*If Labor Day is worked, the rate of pay shall be at double time rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

1-158r Alb

Sprinkler Fitter - Residential

10/01/2015

JOB DESCRIPTION Sprinkler Fitter - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Saratoga, Schenectady, Warren

WAGES

IMPORTANT NOTE: "Residential fire protection work" is applicable to one or two family dwellings, all multiple family dwelling units which are permitted to have a single exterior up to and including four stories, townhouses with units stacked vertically up to and including four stories and group residential care facilities and protective care homes (sheltered housing), not to include nursing homes or ambulatory care facilities.

Per hour
07/01/2015

Sprinkler \$ 24.14
Fitter

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 21.02

OVERTIME PAY

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

1-669-3r

Teamster - Residential

10/01/2015

JOB DESCRIPTION Teamster - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

Wages per hour
07/01/2015 07/01/2016

Group # A \$ 19.72 \$ 20.05

Group # B	19.94	20.27
-----------	-------	-------

SUPPLEMENTAL BENEFITS

Per hour worked

07/01/2015	07/01/2016
\$ 19.04	\$ 20.10

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (*5, 6) on HOLIDAY PAGE

* Labor Day, if worked, will be paid at double time rate.

1-294r

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays, if worked

-
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
 - (T) Triple the hourly rate for Holidays, if worked
 - (U) Four times the hourly rate for Holidays, if worked
 - (V) Including benefits at SAME PREMIUM as shown for overtime
 - (W) Time and one half for benefits on all overtime hours.

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. In most cases the payment or provision of supplements is for each hour worked (noted in the schedule as 'Per hour worked'). Some classifications require the payment or provision of supplements for each hour paid (noted in the schedule as 'Per hour paid'), which require supplements to be paid or provided at a premium rate for premium hours worked. Some classifications may also require the payment or provision of supplements for paid holidays on which no work is performed.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3

Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Columbia County General Construction

Boilermaker

10/01/2015

JOB DESCRIPTION Boilermaker

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Tioga, Warren, Washington

WAGES

Per hour

07/01/2015

01/01/2016
Additional

01/01/2017
Additional

Boilermaker

\$ 32.29

\$1.15

\$1.15

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 23.88*
+ 1.24

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour worked

All Apprentices get same benefits as Journeyman.

1-197

Carpenter - Building / Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Sullivan, Ulster

WAGES

WAGES:(per hour)

07/01/2015

Carpenter

\$ 34.92

Carpenter-Floor Coverer*

34.92

Dockbuilder/Piledriver

34.92

Diver Tender

34.92

Diver(WET)

50.00

Diver(DRY)

30.00

SHIFT DIFFERENTIAL: When mandated by a Government Agency irregular or off shift can be worked. The Carpenter shall receive an additional fifteen (15) percent of wage plus applicable benefits.

* Note: Rate DOES NOT apply in Orange or Dutchess County.

On projects for removal and/or abatement of asbestos or any toxic or hazardous material and it is required by the employer or mandated by NYS or Federal Regulation to wear protective equipment an additional two (2) hours pay per day including benefits on all classifications including apprentices. For work on smokestacks, silos, or steeples more than fifty (50) feet high, an additional \$2.00 per hour, payable from the ground up.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker \$ 25.60

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

BUILDING:

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE.

HEAVY/HIGHWAY:

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE including benefits.

Overtime: See (5*, 6*, 16**, 25**) on HOLIDAY PAGE.

* NOTE: For Holidays 5 and 6 code T applies, with benefits at straight time rate.

** NOTE: For Holidays 16 and 25 code Q applies, with benefits at straight time rate.

REGISTERED APPRENTICES

1 Year terms at the following wage rates.

1st	2nd	3rd	4th
\$17.57	\$20.57	\$23.58	\$26.58

Supplemental Benefits per hour paid:

Apprentices

All terms \$ 15.45

11-279.2B/H&H

Carpenter - Building / Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing east to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour:

07/01/2015

Carpenter - ONLY for

Artificial Turf/Synthetic

Sport Surface Installer \$ 28.99

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour worked plus paid holidays:

Journeyman \$ 19.34

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (2, 17) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

	07/01/2015
1st year term	\$ 10.25
2nd year term	10.25
3rd year term	12.85
4th year term	12.85

2-42AtSS

Electrician

10/01/2015

JOB DESCRIPTION Electrician

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Greene: All of the city of Catskill and that portion of the county that lies north of Route 23A.

Otsego: Only the Towns of Decatur and Worcester

WAGES

Per hour

	07/01/2015	06/01/2016	06/01/2017
		Additional	Additional
Electrician	\$36.00	\$2.00	\$2.05
Audio/Sound	36.00		
Video	36.00		
Tele-Data	36.00		

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead(Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 22.37
	+3% of wage

OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 12:30 AM	REGULAR RATE PLUS 10%
3rd Shift	12:30 AM to 8:00 AM	REGULAR RATE PLUS 15%

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyman's wage.

6mo	1st yr	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

1st term	\$ 10.46*
2nd term	10.46*
All others	22.37*

*Plus additional 3% of wage

1-236

Elevator Constructor**10/01/2015**

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Putnam, Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Towns of Andes, Bovina, Colchester, Davenport, Delhi, Harpersfield, Hemdon, Kortright, Meredith, Middletown, Roxbury, Hancock & Stamford

Rockland: Only the Township of Stony Point.

Westchester: Only the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per Hour	07/01/2015	01/01/2016
		Additional
Mechanic	\$ 52.51	\$2.80
Helper	70% of Mechanic Wage Rate	

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

07/01/2015

Journeyman/Helper

\$ 28.385*

(*)Plus 6% of gross wages if less than 5 years service

(*)Plus 8% of gross wages if more than 5 years service

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour:

0-6 mo*	6-12 mo	2nd yr	3rd yr	4th yr
50 %	55 %	65 %	70 %	80 %

*No supplemental benefits

Supplemental Benefits per hour worked:

Same as Journeyman/Helper

1-138

Glazier

10/01/2015

JOB DESCRIPTION Glazier

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

	07/01/2015	05/01/2016 Additional \$1.50	05/01/2017 Additional \$1.50
Glazier base wage	\$ 26.55		
+ additional \$1.50 per hour for all hours worked			
*High Work Base Wage	29.50	\$1.25	\$1.25
+ additional \$3.50 per hour for all hours worked			

(*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 17.03
Journeyman High Work	22.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier One Half Year (750 hr) terms at the following percentage of Journeyman's base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$1.50 per hour for all hours worked for all terms							

Apprentice Glazier Hi-Work One Half Year (750 hr) terms at the following percentage of Journeyman's Hi-Work base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$3.50 per hour for all hours worked for all terms							

Supplemental Benefits per hour worked

For apprentices indentured after 07/01/2009 the following supplemental benefit applies:

Apprentice	
1st-4th term	\$ 14.51
5th-8th term	17.03
Apprentice High Work	
1st-4th term	\$ 17.08
5th-8th term	22.38

For apprentices indentured prior to and including 07/01/2009, the following supplemental benefit applies:

Apprentice	\$ 17.03
Apprentice High Work	22.38

1-201

Insulator - Heat & Frost**10/01/2015**

JOB DESCRIPTION Insulator - Heat & Frost**DISTRICT 1****ENTIRE COUNTIES**

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour 07/01/2015

Asbestos Worker*	\$ 32.52
Insulator*	32.52
Firestopping Worker*	27.65

(*)On Mechanical Systems only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.57

OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices \$ 20.57

1-40

Ironworker**10/01/2015**

JOB DESCRIPTION Ironworker**DISTRICT 1****ENTIRE COUNTIES**

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worchester.

WAGES

Wages	07/01/2015	05/01/2016	05/01/2017
Per hour		Additional	Additional
Ornamental	\$ 29.50	\$1.25	\$1.25
Reinforcing	29.50		
Rodman	29.50		
Structural & Precast	29.50		
Mover/Rigger	29.50		
Fence Erector	29.50		
Stone Derrickman	29.50		

Sheeter	29.75
Curtain Wall Installer	29.50
Metal Window Installer	29.50

SUPPLEMENTAL BENEFITS

Per hour worked

JOURNEYMAN \$ 25.86

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2015
1st year	\$ 16.50
2nd year	18.50
3rd year	20.50
4th year	22.50
Supplemental Benefits per hour worked	
1st year	\$ 10.25
2nd year	20.01
3rd year	21.41
4th year	22.81

1-12

Laborer - Building

10/01/2015

JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater and Waterford

WAGES

Per hour

	07/01/2015	07/01/2016 Additional	07/01/2017 Additional
Group #1:			
All Classifications	\$ 25.46	\$ 1.70	\$ 1.70
except as noted in			
Groups 2 & 3			
Group #2:			
Blaster, Drilling Equipment			
Only Where a Separate Air			
Compressor Unit Supplies			
Power, Metal Formsetter			
sidewalk),Well Pointing			
& Laser Operator	25.96		
Group #3:			
Handling of Asbestos			
or Toxic Materials	26.81		

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190

Laborer - Building

10/01/2015

JOB DESCRIPTION Laborer - Building

DISTRICT 8

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake, Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

GROUP # 1:

All Laborers except those listed in Group 2

GROUP # 2:

Blaster, Laser Beam Oper., Asphalt Rakers, & Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power

WAGES per hour

07/01/2015

GROUP # 1 \$ 29.90

GROUP # 2 32.25

Note: Any job requiring Hazwopper Certification will pay \$1.00 above job classification wage rate.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 24.20

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Whenever a holidays falls on Sunday, it will be observed on the following Monday.

REGISTERED APPRENTICES

Wages per hour

07/01/2015

1000 Hour terms

1st term \$ 18.60

2nd term 21.25

3rd term 23.90

4th term 27.05

Note: Any job requiring Hazwopper Certification will pay \$1.00 above job classification wage rate.

Supplemental Benefits per hour worked

\$ 13.20

8-235

Laborer - Building**10/01/2015**

JOB DESCRIPTION Laborer - Building**DISTRICT** 11**ENTIRE COUNTIES**

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Greenport, Claverack, Philmont, Clermont, Germantown, Livingston, Hillsdale, Gallatin, Copake, Ancram, Taghkanic and the City of Hudson.

WAGES

ALL WORK RELATED WITH TOXIC OR ANY ASBESTOS OR HAZARDOUS MATERIAL

WAGES: (per hour)

07/01/2015

06/01/2016

additional

Premium

\$ 37.20

\$ 1.60

Shift Differential: On all Governmental mandated irregular or off shift work, an additional 25% of wage and benefits are required. The 25% shift differential will be paid on public works contract for shifts or irregular workdays outside the normal working hours for 2nd and 3rd shifts or irregular work day or when mandated or required by state, federal, county, local or other governmental agency contracts.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman

\$ 25.35

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Double time paid after the eighth hour on Saturday

HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6) on HOLIDAY PAGE

11-17tox B

Laborer - Heavy&Highway**10/01/2015**

JOB DESCRIPTION Laborer - Heavy&Highway**DISTRICT** 1**ENTIRE COUNTIES**

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

GROUP # A:

Basic, Drill Helper, Flagman, Outboard and Hand Boats

GROUP # B:

Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators(1-1/2" and Single Diaphragm) Nozzle (Asphalt, Gunite, Seeding and Sand Blasting), Laborers on Chain Link Fence. Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C:

Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Acetylene Torch Operators, Asphalt Raker and Powderman.

GROUP # D:

Blasters, Metal Form Setters(sidewalk), Stone or Granite Curb Setters.

GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour

07/01/2015

Group # A	\$ 28.29
Group # B	28.49
Group # C	28.69
Group # D	28.89
Group # E	30.29

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$2.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices	\$ 20.05
-------------	----------

1-190 h/h

Laborer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Greenport, Philmont, Germantown, Livingston, Hillsdale, Taghkanic, Gallatin, Copake, Ancram, City of Hudson.

WAGES

ALL WORK RELATED WITH TOXIC OR ANY ASBESTOS OR HAZARDOUS MATERIAL, BIO REMEDIATION AND PHYTO REMEDIATION(Five feet or more outside of building foundation line)

WAGES:(per hour)

07/01/2015

Protective Gear Not Required (Class 2)

\$ 35.05

Protective Gear Required (Class 3)

\$ 39.15

SHIFT DIFFERENTIAL: On all NYS D.O.T. or other Governmental mandated irregular or off shift work, an additional 15% of wage on straight time pay.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman

\$ 24.80

SHIFT DIFFERENTIAL: \$ 27.62 for irregular or off shift work

OVERTIME PAY

See (B, E, Q, *S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 13, 15, 25) on HOLIDAY PAGE

Overtime: See (*1) on HOLIDAY PAGE

*NOTE: If Saturday Holiday is worked, Code S applies.

REGISTERED APPRENTICES

Wages per hour

1000 hour 1 year terms

1st term	\$ 17.95
2nd term	21.22
3rd term	24.49
4th term	27.75

Supplemental Benefits per hour paid:

Apprentice	\$ 19.40
------------	----------

11-17tox HH

Laborer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake, Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

GROUP # 1:

Flagperson, Placing & maintenance of all flares, cones, lights, signs, barricades, traffic patterns and all reflective type materials for traffic control, custodial work, traffic directors, temporary heat or light tenders, tool room.

GROUP # 2:

All Other Classifications not listed in Group # 1 or Group # 3

GROUP # 3:

Asphalt Raker, Asphalt Screedman, Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Laser Beam Operator, Metal Form Setters/Aligners (sidewalk), Blaster,

WAGES per hour

07/01/2015

Group # 1	\$ 27.35
Group # 2	31.11
Group # 3	32.11

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 25.10
------------	----------

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

Note: Whenever a holidays falls on Sunday, it will be observed on the following Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour year terms

1st Term	\$ 16.55
2nd Term	19.25
3rd Term	22.00
4th Term	25.20

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

Supplemental Benefits per hour worked & paid Holidays

\$ 14.15

8-235h

Laborer - Tunnel**10/01/2015**

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 8

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake, Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

Class 1: All support laborers/ sandhogs working above the shaft or tunnel.

Class 2: All laborers/sandhogs working in the shaft or tunnel.

Class 4: Safety miners

WAGES:(per hour)	07/01/2015	07/01/2016	07/01/2017
Class 1	\$ 44.00	\$ 45.50	\$ 46.80
Class 2	\$ 46.00	\$ 47.50	\$ 48.85
Class 4	\$ 52.00	\$ 53.50	\$ 55.05

When mandated by the contracting agency, 2nd and 3rd shifts, and irregular shift work shall be paid at time and one half the above hourly rates. Irregular shift work shall be considered overtime.

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker:

Straight time:	\$ 25.90	\$ 26.90	\$ 28.15
Premium time:	\$ 38.85	\$ 40.35	\$ 42.23
Shift work			
Irregular shifts			
Saturday, Sunday			
Holidays			

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, *16, 25) on HOLIDAY PAGE

* Double rate and benefits if worked

Note: Whenever a holidays falls on Sunday, it will be observed on the following Monday.

8-235TW

Laborer - Tunnel**10/01/2015**

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Orange, Otsego, Sullivan, Ulster

PARTIAL COUNTIES

Chenango: Townships of Columbus, Sherburne and New Berlin.

Columbia: Townships of Ancram, Claverack, Claremont, Copake, Galatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

Delaware: Townships of Andes, Bovina, Middletown, Roxbury, Franklin, Hamden, Stamford, Delhi, Kortright, Harpersfield, Merideth and Davenport.

Greene: Township of Catskill

WAGES

Class 1: All support laborers/ sandhogs working above the shaft or tunnel.

Class 2: All laborers/sandhogs working in the shaft or tunnel.

Class 4: Safety Miners

WAGES: (per hour)

	07/01/2015
Class 1	\$44.00
Class 2	\$46.00
Class 4	\$52.00

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

SHIFT DIFFERENTIAL: 2nd and 3rd shift or an irregular shift shall be paid at time and one half the regular rate Monday through Friday.
Saturday shall be paid at 1.65 times the regular rate.
Sunday shall be paid at 2.15 times the regular rate.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 26.15 on straight hours
	\$ 39.10 on shift work, overtime, irregular work, Saturday, Sunday and Holiday hours.

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 15, *16, 25) on HOLIDAY PAGE

* Double rate and benefits if worked

11-17Tun

Laborer - Tunnel	10/01/2015
-------------------------	-------------------

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz
Greene: Entire county except the Township of Catskill.
Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

Class A: Mole nipper, powder handler, changehouse attendant and top laborer, Air spade, jackhammer, pavement breaker, Top bell, Bottom bell, side or roofbelt driller, maintenance men, burners, block layers, rodmen, caulkers, miners helper, trackmen, nippers, derailmen, electrical cablemen, hosemen, groutmen, gravelmen, form workers, movers and shaftmen, conveyor men.

Class B: Powder monkey, Blasters, ironmen and cement worker, miner, welder, heading driller, steel erectors, piledriver, rigger

Wages per hr.	07/01/2015
Class #A	\$31.99 + Additional \$1.50
Class #B	32.99 + Additional \$1.50

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on a Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices \$ 19.05

1-190

Lineman Electrician

10/01/2015

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

	07/01/2015	05/02/2016
Lineman, Technician	\$ 46.90	Additional \$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Welder, Cable Splicer	46.90	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Groundman, Truck Driver	37.52	2.50
Mechanic 1st Class	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

		Additional
Lineman, Technician	\$ 46.90	\$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Cable Splicer-Pipe Type Cable	51.59	2.50
Cert. Welder-Pipe Type Cable	49.25	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Mechanic 1st Class	37.52	2.50
Groundman, Truck Driver	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

		Additional
Lineman, Technician, Welder	\$ 48.20	\$ 2.50
Crane, Crawler Backhoe	48.20	2.50
Digging Machine Operator	43.38	2.50
Tractor Trailer Driver	40.97	2.50
Groundman, Truck Driver	38.56	2.50

Mechanic 1st Class	38.56	2.50
Flagman	28.92	2.50
Cert. Welder-Pipe Type Cable	50.61	2.50
Cable Splicer-Pipe Type Cable	53.02	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

		Additional
Lineman, Technician, Welder	\$ 49.41	\$ 2.50
Crane, Crawler Backhoe	49.41	2.50
Cable Splicer	49.41	2.50
Digging Machine Operator	44.47	2.50
Tractor Trailer Driver	42.00	2.50
Groundman, Truck Driver	39.53	2.50
Mechanic 1st Class	39.53	2.50
Flagman	29.65	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

Journeyman	\$ 20.50
	*plus 7% of hourly wage

*The 7% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

HOLIDAY

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: 1000 hour terms at the following percentage of the Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS: Same as Journeyman

Lineman Electrician - Teledata**10/01/2015****JOB DESCRIPTION** Lineman Electrician - Teledata**DISTRICT 6****ENTIRE COUNTIES**

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

FOR OUTSIDE WORK.

	07/01/2015	01/01/2016	01/01/2017
Cable Splicer	\$ 29.70	\$ 30.29	\$ 30.90
Installer, Repairman	28.19	28.75	29.33
Teledata Lineman	28.19	28.75	29.33
Technician, Equipment Operator	28.19	28.75	29.33
Groundman	14.95	15.25	15.56

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 4.43	\$ 4.43	\$ 4.43
	*plus 3% of wage paid	*plus 3% of wage paid	*plus 3% of wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal Lighting**10/01/2015****JOB DESCRIPTION** Lineman Electrician - Traffic Signal Lighting**DISTRICT 6****ENTIRE COUNTIES**

Columbia, Dutchess, Orange, Putnam, Rockland, Ulster

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Groundman Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chain saws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a ground man/truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

(Ref #14.01.02)

Per hour:

	07/01/2015	05/02/2016
Lineman, Technician	\$ 42.32	Additional \$ 2.00
Crane, Crawler Backhoe	42.32	2.00

Certified Welder	44.44	2.00
Digging Machine	38.09	2.00
Tractor Trailer Driver	35.97	2.00
Groundman, Truck Driver	33.86	2.00
Mechanic 1st Class	33.86	2.00
Flagman	25.39	2.00

Above rates applicable on all Lighting and Traffic Signal Systems and the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM REGULAR RATE PLUS 31.4%

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 20.50
	*plus 7% of hourly wage

* The 7% is based on the hourly wage paid, straight time rate or premium rate.

Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Governor of NYS Election Day.

Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: Per hour. 1000 hour terms.

1st	2nd	3rd	4th	5th	6th	7th
\$ 25.39	\$ 27.51	\$ 29.62	\$ 31.74	\$ 33.86	\$ 35.97	\$ 38.09

SUPPLEMENTAL BENEFITS: Same as Journeyman

6-1249aReg8LT

Lineman Electrician - Tree Trimmer

10/01/2015

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2015

Tree Trimmer	\$ 22.80
Equipment Operator	20.11
Equipment Mechanic	20.11
Truck Driver	17.00
Groundman	13.94
Flag person	9.93

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 9.14
	*plus 3% of hourly wage

* The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.

All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

Mason - Building

10/01/2015

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Lake George, Lake Luzerne, Queensbury, Stony Creek, Thurman & Warrensburg.

WAGES

Per hour 07/01/2015

Bricklayer	\$ 32.80
Cement Mason(Bldg)	32.80
Plasterer/Fireproofing*	32.80
Pointer/Caulker/Cleaner	32.80
Stone Mason	32.80
Acid Brick	33.30

(*)Fireproofing of Structural only.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.57
------------	----------

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
-----	-----	-----	-----	-----	-----	-----	-----

55% 60% 65% 70% 75% 80% 85% 90%

Supplemental Benefits per hour worked

0-500 Hours \$ 11.32
All others \$ 19.57

12-2b.1

Mason - Building

10/01/2015

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour 07/01/2015

Tile/Marble/Terazzo

Setter \$ 31.67
Finisher 24.92

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter \$ 18.67
Journeyman Finisher 15.97

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:
1st term 0-500 hrs 60%
2nd term 501-1500 hrs 70%
3rd term 1501-2500 hrs 80%
4th term 2501-3500 hrs 85%
5th term 3501-4500 hrs 90%
6th term 4501-6000 hrs 95%

Finisher:
1st term 0-500 hrs 70%
2nd term 501-1500 hrs 80%
3rd term 1501-2500 hrs 90%
4th term 2501-3700 hrs 95%

Supplemental Benefits per hour worked

07/01/2015

Setter:
1st term 0-500 hrs \$ 10.77
2nd term 501-1500 hrs 10.77
3rd term 1501-2500 hrs 14.72
4th term 2501-3500 hrs 14.72
5th term 3501-4500 hrs 16.70
6th term 4501-6000 hrs 18.67

Finisher:

1st term 0-500 hrs	\$ 10.27
2nd term 501-1500 hrs	10.27
3rd term 1501-2500 hrs	13.12
4th term 2501-3700 hrs	13.012

12-2TS.1

Mason - Heavy&Highway**10/01/2015**

JOB DESCRIPTION Mason - Heavy&Highway**DISTRICT** 12**ENTIRE COUNTIES**

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

WAGES

Per hour

07/01/2015

Mason & \$34.01

Bricklayer

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 18.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

REGISTERED APPRENTICES

Wages per hour

750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

\$ 18.38

12-2hh.1

Millwright - Building**10/01/2015**

JOB DESCRIPTION Millwright - Building**DISTRICT** 2**ENTIRE COUNTIES**

Columbia, Greene, Sullivan, Ulster

WAGES

Per hour:

07/01/2015

07/01/2016

07/01/2017

Additional

Additional

Millwright* \$ 32.77

\$ 1.40

\$ 1.40

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- Certified Welders shall receive \$1.25 per hour in addition to the current Millwright's rate provided he/she is directed to perform certified welding.
- If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.25 premium per hour.
- An employee performing the work of a machinist shall receive \$1.25 per hour in addition to the current Millwright's rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

*Regarding treatment plants water or sewer, the Millwright Building rate is applicable for millwrights only performing maintenance and upkeep of existing equipment.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 25.20

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

(1)year terms at the following percentage of journeyman's rate.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hours worked:

Apprentices:

1st term	\$ 10.90
2nd term	20.91
3rd term	22.34
4th term	23.77

2-1163.4

Operating Engineer - Building

10/01/2015

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks,whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps.

* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour	07/01/2015	07/01/2016	07/01/2017
Class # A1	\$ 39.46	\$41.08	\$42.66
Class # A	39.01	40.61	42.18
Class # B	38.07	39.65	41.18
Class # C	35.42	36.92	38.37

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.00 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.00 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.00 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.17	\$ 24.47	\$ 24.87
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

Employees who work a Saturday holiday shall be paid double time plus the holiday pay.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017
All terms	\$ 19.60	\$ 19.90	\$ 20.30

1-158 Alb

Operating Engineer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Tioga, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), oiler (used in conjunction with production), Bituminous Heater (self-propelled), oat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Guniting Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Insertor (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2015	07/01/2016	07/01/2017
Master Mechanic	\$ 40.52	\$ 42.07	\$ 43.79
Class A*	38.91	40.46	42.18
Class B	38.00	39.55	41.27
Class C	35.43	36.98	38.70

Additional \$2.00 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.
- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.
- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.45	\$ 24.80	\$ 25.20
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017
All Terms	\$ 19.85	\$ 20.20	\$ 20.60

Operating Engineer - Marine Construction

10/01/2015

JOB DESCRIPTION Operating Engineer - Marine Construction

DISTRICT 4

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuylers, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per Hour:

DREDGING OPERATIONS 07/01/2015

CLASS A

Operator, Leverman, \$ 35.63
Lead Dredgeman

CLASS A1

Dozer, Front Loader To conform to Operating Engineer
Operator Prevailing Wage in locality where work
is being performed including benefits.

CLASS B

Spider/Spill Barge Operator, \$ 30.81
Tug Operator(over1000hp),
OperatorII, Fill Placer,
Derrick Operator, Engineer,
Chief Mate, Electrician,
Chief Welder,
Maintenance Engineer

Certified Welder, \$ 29.01
Boat Operator(licensed)

CLASS C

Drag Barge Operator, \$ 28.22
Steward, Mate,
Assistant Fill Placer,

Welder (please add)\$ 0.06

Boat Operator \$ 27.30

CLASS D

Shoreman, Deckhand, \$ 22.68
Rodman, Scowman, Cook,
Messman, Porter/Janitor

Oiler(please add)\$ 0.09

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B 07/01/2015
\$ 9.99 plus 8%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C \$ 9.69 plus 8%
of straight time
wage, Overtime hours
add \$ 0.48

All Class D \$ 9.39 plus 8%
of straight time
wage, Overtime hours
add \$ 0.33

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Survey Crew

10/01/2015

JOB DESCRIPTION Operating Engineer - Survey Crew

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to Building and Heavy Highway.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 23.75
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms for Instrument & Rod Persons at the following rates:

07/01/2015

0-1000 Hrs	\$ 14.68
1001-2000 Hrs	17.12
2001-3000 Hrs	19.57

SUPPLEMENTAL BENEFITS per hour worked:

All Terms	\$ 23.75
-----------	----------

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer

10/01/2015

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 23.75
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-158-545 DCE

Operating Engineer - Tunnel

10/01/2015

JOB DESCRIPTION Operating Engineer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess to the northern boundary line of the City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Rte. 343 then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to Connecticut.

Genesee: Only that portion of the county that lies east of a linedrawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

Crane 1: All cranes, including self erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all other cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton nad below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor-mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (Automated); Cableway; Caisson Auger; Central Mix Concrete Plant (Automated); Concrete Curb Machine (Self-propelled slipform) Concrete Pump (8" or over); Dredge; Dual Drum Paver; Any Mechanical Shaft Drill; Excavator (all purpose-hydraulic-Gradall or Similar); Fork Lift (factory rated 15 ft and over); Front End Loader (4 c.y. & over); Gradall; Head Tower (Sauerman or Equal), Hoist Shaft; Hoist (two or three Drum); Mine Hoist; Maintenance Engineer (Shaft and Tunnel) ; Mine Hoist; Mucking Machine or Mole, Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Mach.; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, he shall be an Oiler); Tractor Drawn Belt Type Loader; Tripper/Maintenance Eng.(Shaft & Tunnel); Truck or Trailer Mounted Log Chipper (self-feeding); Tug Operator (Manned rented equip. excluded); Tunnel Shovel; Mining Machine(Mole and Similar Types).

CLASS B: Automated Central Mix Concrete Plant; Backhoe Trac-Mtd, Rubber Tired); Backhoe (topside); Bitum. Spred. & Mixer, Blacktop Plant non-automated); Blast or Rotary Drill (Truck or Tractor Mounted); Boring Machine; Cage Hoist; Central Mix Plant(NonAutomated) and All Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (Tractor Mounted); Front End Loader (under 4 c.y.); Grayco Epoxy Machine; Hoist (One Drum); Hoist 2 or 3 Drum (Topside); Kolman Plant Loader & Similar Type Loaders (if Employer requires another person to clean the screen or to maintain the equipment, he shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maint. Eng. (Topside); Grease Man; Welder; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Eng.; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Mach.; Shovel (Topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Winch and Winch Cat.

CLASS C: A Frame Truck; Ballast Regulator (ride-on); Compressors (4 under 2,000 cfm combined capacity; or 3 or less with more than 1200 cfm. but not to exceed 2,000 cfm); Compressors (any size but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-4 of any type or combination); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill well; Elec Pump Used in Conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; ForkLift (under 15 ft); Grout Pump (over (5) cu. ft.; Gunit Machine; Hammers (hydraulic- self propel.); Hydra-Spiker-Ride on; Hydra-Blaster; Hydra Blaster (water); Motorized Form Carrier; Post Hole Digger & Post Driver; Power Sweep; Roller grade & fill); Scarifer (Ride on); Span-Saw (Ride-on); Submersible Electric Pump (when used in lieu of well point system); Tamper (Ride-on); Tie-Extractor, Tie Handler, Tie Inserter, Tie Spacer and Track Liner (Ride-on); Tractor (with towed accessories); Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors(3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors any size, but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-3 or less-any type or combination); Concrete Saw (self propelled); Fireman; Form Tamper; Hydraulic Pump (jacking system); Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broome towed; Power Heaterman; Revinius Widener; Shell Winder; Steam Cleaner and Tractor; Greaseman; Junior Engineer.

Per hour: 07/01/2015

Crane 1	\$ 44.56
Crane 2	43.56
Crane 3	42.56

Master Mechanic	42.75
-----------------	-------

CLASS A	40.56
CLASS B	39.34
CLASS C	36.55
CLASS D	33.54

On hazardous waste work bid, on a state or federally designated hazardous waste site, where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection, the Operating Engineer shall receive the hourly wage plus \$5.00 per hour. Fringe benefits will be paid at the contractual hourly wage.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 25.60
------------	----------

OVERTIME PAY

See (B, B2, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1000) hours terms at the following percentages.

1st term	60% of Class B
2nd term	65% of Class B
3rd term	70% of Class B
4th term	75% of Class B

Supplemental Benefits per hour paid:

\$ 25.60

7-158-832TL.

Painter

10/01/2015

JOB DESCRIPTION Painter

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Sullivan, Ulster

WAGES

Per hour

	07/01/2015	05/01/2016 Additional	05/01/2017 Additional
Brush/Paper Hanger	\$ 30.44	\$1.65	\$1.65
Dry Wall Finisher	30.44		
Lead Abatement	30.44		
Sandblaster-Painter	30.44		
Spray Rate	31.44		

See Bridge Painting rates for the following work:

Structural Steel , all work performed on tanks, ALL BRIDGES, towers, smoke stacks, flag poles. Rate shall apply to all of said areas from the ground up.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.49

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Six (6) month terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th
40%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

1st term	\$ 9.39
All others	20.49

1-155

Painter - Bridge & Structural Steel

10/01/2015

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour Worked:

STEEL:

Bridge Painting:	07/01/2015	10/01/2015
From May 1st to Nov. 15th -	\$ 48.00 + 5.63*	\$ 49.00 + 6.13*
From Nov. 16th to April 30th -	\$ 48.00 + 5.63*	\$ 49.00 + 6.13*

*Not subject to overtime and limited to first 40 hours

NOTE: All premium wages are to be calculated on \$48.00 or \$49.00 per hour only.

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

Power Tool/Spray is an additional \$6.00 per hour above hourly rate, whether straight time or overtime

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

Per Hour Worked:

Journeyworker:	07/01/2015	10/01/2015
From May 1st to Nov. 15th -		
Hourly Rate up to 40 hours	\$ 28.95	\$ 29.95
Hourly Rate after 40 hours	7.50	7.50
From Nov. 16th to April 30th -		
Hourly Rate up to 50 hours	28.95	29.70
Hourly Rate after 50 hours	7.50	7.50

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(Wage per hour Worked):

Apprentices: (1) year terms	07/01/2015	10/01/2015
1st 90 days	\$ 21.45	\$ 22.05
1st year after 90 days	21.45	22.05
2nd year	32.18	33.08
3rd year	42.90	44.10

Supplemental Benefits per hour worked:

	07/01/2015	10/01/2015
1st 90 days	\$ 8.83	\$ 9.23
1st year after 90 days	11.58	11.98
2nd year	17.37	17.97
3rd year	23.16	23.96

8-DC-9/806/155-BrSS

Painter - Line Striping

10/01/2015

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2015
Striping-Machine Operator*	\$ 27.11
Linerman Thermoplastic	\$ 32.37

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

Four (4), ten (10) hour days may be worked at straight time during a week.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid: 07/01/2015
Journeyworker:

Striping-Machine operator	\$ 14.18
---------------------------	----------

Linerman Thermoplastic \$ 14.55

OVERTIME PAY

See (B, E, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE

Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

8-1456-LS

Painter - Metal Polisher

10/01/2015

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2015	06/01/2016	06/01/2017
Metal Polisher	\$ 28.07	\$ 28.88	\$ 29.73
Metal Polisher**	29.02	29.83	30.68
Metal Polisher***	31.57	32.38	33.23

**Note: Applies on New Construction & complete renovation

*** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2015	06/01/2016	06/01/2017
Journeyworker:			
All classification	\$ 9.12	\$ 9.26	\$ 9.41

OVERTIME PAY

See (B, E, E2, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2015	06/01/2016
1st year	\$ 11.75	\$ 11.75
2nd year	13.00	13.00
3rd year	15.75	15.75

Supplemental benefits:

Per hour paid:

1st year	\$ 6.26	\$6.26
2nd year	6.37	6.37
3rd year	6.51	6.51

8-8A/28A-MP

Plumber

10/01/2015

JOB DESCRIPTION Plumber

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

PARTIAL COUNTIES

Hamilton: Only the Towns of Arietta, Benson, Hope, Inlet, Lake Pleasant, Morehouse and Wells.

Saratoga: Only the Towns of Charlton, Clifton Park, Galway, Halfmoon, Milton, Stillwater and Waterford and the city of Mechanicville.

WAGES

Per hour:

07/01/2015

Plumber:
Pipefitter, Steamfitter \$ 38.27

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 24.46

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Whenever a Holiday falls on Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th
45 %	55 %	65 %	75 %	90 %

Supplemental Benefits per hour worked:

07/01/2015

Apprentices \$ 24.46

1-7-SF

Roofer

10/01/2015

JOB DESCRIPTION Roofer

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

WAGES

Per hour

	07/01/2015	06/01/2016	06/01/2017
		Additional	Additional
Roofer/Waterproofer	\$ 28.45	\$1.75	\$1.50
Asphalt Cold Process	28.95		
Pitch & Asbestos	30.45		

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 16.07

OVERTIME PAY

See (B, E*, Q) on OVERTIME PAGE.

* Saturday may be used as a make up day at straight time if employee misses 8 hrs or more during that week due to inclement weather.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages.

1st yr 1st half	50%
-----------------	-----

1st yr 2nd half	58%
2nd yr 1st half	66%
2nd yr 2nd half	74%
3rd yr 1st half	82%
3rd yr 2nd half	90%

Supplemental Benefits per hour worked

1st yr 1st half	\$ 14.30
1st yr 2nd half	14.49
2nd yr 1st half	14.72
2nd yr 2nd half	14.92
3rd yr 1st half	15.20
3rd yr 2nd half	15.40

1-241

Sheetmetal Worker

10/01/2015

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2015

Sheetmetal Worker \$ 31.84

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 28.22

OVERTIME PAY

See (B,E*,Q,) on OVERTIME PAGE

* Time and one half 1st 8 hours on Saturday. Double the hourly rate all additional Saturday hours.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

1st term	\$ 17.31
2nd term	18.76
3rd term	19.49
4th term	20.22
5th term	19.55
6th term	20.52
7th term	22.14
8th term	23.75
9th term	25.37
10th term	26.99

Supplemental Benefits per hour worked

1st term	\$ 17.22
2nd term	17.95
3rd term	18.21
4th term	18.46
5th term	23.41
6th term	23.79
7th term	24.43
8th term	25.05

9th term	25.69
10th term	26.33

1-83

Sprinkler Fitter

10/01/2015

JOB DESCRIPTION Sprinkler Fitter

DISTRICT 1

ENTIRE COUNTIES

Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Washington, Wayne, Wyoming, Yates

WAGES

Per hour	07/01/2015
Sprinkler	\$ 31.66
Fitter	

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 21.02
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED PRIOR TO 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
50%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.15	\$ 8.15	\$ 15.12	\$ 15.12	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.56	\$ 8.60	\$ 15.37	\$ 15.41	\$ 15.96	\$ 16.00	\$ 16.05	\$ 16.09	\$ 16.14	\$ 16.18

For Apprentices HIRED ON OR AFTER 04/01/2013:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 7.90	\$ 7.90	\$ 15.12	\$ 15.12	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37

1-669

Teamster - Building

10/01/2015

JOB DESCRIPTION Teamster - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

07/01/2015

07/01/2016

Group A \$ 26.29

\$ 26.73

Group B 26.59

27.03

SUPPLEMENTAL BENEFITS

Per hour worked

07/01/2015

07/01/2016

Journeyman \$ 19.04

\$ 20.10

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

1-294

Teamster - Heavy&Highway

10/01/2015

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell, and Queensbury.

WAGES

GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks,
Dumpsters, Material Checkers and Receivers, Greasers, Truck Tirmen, Mechanics Helpers and Parts Chasers.

GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour 07/01/2015

Group #1	\$26.92
Group #2	26.97
Group #3	27.06
Group #4	27.17
Group #5	27.32

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$1.50 per hour.

For work bid on or after April 1, 1995, there shall be a 12 month carryover of the negotiated rate in effect at the time of the bid.

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid:

\$ 20.90
+\$1.00 per
hour worked

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

Welder

10/01/2015

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2015

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Columbia County Residential

Carpenter - Residential

10/01/2015

JOB DESCRIPTION Carpenter - Residential

DISTRICT 11

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Sullivan, Ulster

WAGES

Carpenter 07/01/2015
\$ 27.95

On projects for removal and/or abatement of asbestos or any toxic or hazardous material and it is required by the employer or mandated by NYS or Federal Regulation to wear protective equipment an additional \$2.00 per hour above their appropriate rate for all classifications including apprentices.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 20.48

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1)year terms at the following rates:

1st	2nd	3rd	4th
\$ 14.07	\$ 16.47	\$ 18.87	\$ 21.28

Supplemental Benefits per hour paid:

Apprentices all terms \$ 12.36

11-279.2r

Laborer - Residential

10/01/2015

JOB DESCRIPTION Laborer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

IMPORTANT NOTE: This shall apply to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour 07/01/2015

Laborer \$ 19.09

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, *H) on OVERTIME PAGE

* Double time on Labor Day

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's building wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190r

Mason - Residential

10/01/2015

JOB DESCRIPTION Mason - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, this article shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

Bricklayer	\$ 26.49
Cement Mason	26.49
Plasterer	26.49
Point/Caulk/Clean	26.49
Acid Brick	26.99

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 17.83

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

* Work performed on Labor Day will be paid at double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

12-2r.z1

Mason - Tile Setter & Finisher - Residential

10/01/2015

JOB DESCRIPTION Mason - Tile Setter & Finisher - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to the construction of one family, two family row housing, townhouses, apartments, condominiums and garden type projects or a combination thereof, together with related service buildings and facilities which construction work may be performed wholly on-site or may consist of the assembly of off-site produced modules or components but any of which living units are in the finished form no more than two (2) stories high and are to be utilized solely as dwellings.

Per hour

07/01/2015

Tile/Marble/Terazzo

Setter	\$ 23.80
Finisher	19.08

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter	\$ 8.15
Journeyman Finisher	8.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

12-2TSFr

Operating Engineer - Residential

10/01/2015

JOB DESCRIPTION Operating Engineer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 then north along Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Route 44 and along Route 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one family, two family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

	07/01/2015	07/01/2016
--	------------	------------

Journeyman		
All Clasifications	\$ 35.42	\$ 36.92

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman		
All classifications	\$ 18.16	\$ 18.39

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

*If Labor Day is worked, the rate of pay shall be at double time rate.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

1-158r Alb

Sprinkler Fitter - Residential

10/01/2015

JOB DESCRIPTION Sprinkler Fitter - Residential

DISTRICT 1

ENTIRE COUNTIES

Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Washington, Wayne, Wyoming, Yates

WAGES

IMPORTANT NOTE: "Residential fire protection work" is applicable to one or two family dwellings, all multiple family dwelling units which are permitted to have a single exterior up to and including four stories, townhouses with units stacked vertically up to and including four stories and group residential care facilities and protective care homes (sheltered housing), not to include nursing homes or ambulatory care facilities.

Per hour

	07/01/2015
--	------------

Sprinkler	\$ 23.75
Fitter	

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 21.02

OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

1-669r

Teamster - Residential

10/01/2015

JOB DESCRIPTION Teamster - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers, dump trucks, pick-ups, panel, water trucks, fuel trucks on the site (including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

Wages per hour

	07/01/2015	07/01/2016
--	------------	------------

Group # A	\$ 19.72	\$ 20.05
-----------	----------	----------

Group # B	19.94	20.27
-----------	-------	-------

SUPPLEMENTAL BENEFITS

Per hour worked

	07/01/2015	07/01/2016
	\$ 19.04	\$ 20.10

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (*5, 6) on HOLIDAY PAGE

* Labor Day, if worked, will be paid at double time rate.

1-294r

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays, if worked

-
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
 - (T) Triple the hourly rate for Holidays, if worked
 - (U) Four times the hourly rate for Holidays, if worked
 - (V) Including benefits at SAME PREMIUM as shown for overtime
 - (W) Time and one half for benefits on all overtime hours.

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. In most cases the payment or provision of supplements is for each hour worked (noted in the schedule as 'Per hour worked'). Some classifications require the payment or provision of supplements for each hour paid (noted in the schedule as 'Per hour paid'), which require supplements to be paid or provided at a premium rate for premium hours worked. Some classifications may also require the payment or provision of supplements for paid holidays on which no work is performed.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3

Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Rensselaer County General Construction

Boilermaker

10/01/2015

JOB DESCRIPTION Boilermaker

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

WAGES

Per hour

07/01/2015

01/01/2016
Additional

01/01/2017
Additional

Boilermaker

\$ 32.29

\$1.15

\$1.15

SUPPLEMENTAL BENEFITS

Per hour worked

Journeymen

\$ 23.88*
+ 1.24

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour worked

All Apprentices get same benefits as Journeyman.

1-197

Carpenter - Building

10/01/2015

JOB DESCRIPTION Carpenter - Building

DISTRICT 2

ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

WAGES

Per hour:

07/01/2015

Carpenter	\$ 30.00
Floor Coverer	30.00
Carpet Layer	30.00
Dry-Wall	30.00
Lather	30.00
Piledriver	30.25
Diver-Wet Day	61.25
Diver -Dry Day	31.00
Diver Tender	31.00

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work

- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive:
 - 0' to 80' no additional fee
 - 81'to 100' additional \$.50 per foot
 - 101'to 150' additional \$0.75 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 19.32

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

* Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's base wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour worked:

1st year term	\$ 10.16
2nd year term	10.16
3rd year term	12.76
4th year term	12.76

2-291B-Alb

Carpenter - Building / Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing east to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour:

07/01/2015

Carpenter - ONLY for
Artificial Turf/Synthetic
Sport Surface Installer \$ 28.99

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour worked plus paid holidays:

Journeyman \$ 19.34

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (2, 17) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

	07/01/2015
1st year term	\$ 10.25
2nd year term	10.25
3rd year term	12.85
4th year term	12.85

2-42AtSS

Carpenter - Heavy&Highway

10/01/2015

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Clinton, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2015

Carpenter	\$ 29.05
Millwright	30.55
Piledriver	29.05
Diver-Wet Day	54.05
Diver-Dry Day	30.05
Diver-Tender	30.05

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.
- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- Depth pay for Divers based upon deepest depth on the day of the dive:
 - 0' to 50' no additional fee
 - 51'to 100' additional \$.50 per foot
 - 101'to 150' additional \$0.75 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked plus paid holidays:

Journeyman \$ 19.28

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (2, 17) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour worked plus paid holidays:

1st year terms	\$ 10.12
2nd year terms	10.12
3rd year terms	12.72
4th year terms	12.72

2-291HH-Alb

Electrician

10/01/2015

JOB DESCRIPTION Electrician

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Greene: All of the city of Catskill and that portion of the county that lies north of Route 23A.

Otsego: Only the Towns of Decatur and Worcester

WAGES

Per hour

	07/01/2015	06/01/2016 Additional	06/01/2017 Additional
Electrician	\$36.00	\$2.00	\$2.05
Audio/Sound	36.00		
Video	36.00		
Tele-Data	36.00		

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead(Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.37
+3% of wage

OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 12:30 AM	REGULAR RATE PLUS 10%
3rd Shift	12:30 AM to 8:00 AM	REGULAR RATE PLUS 15%

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyman's wage.

6mo	1st yr	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

1st term	\$ 10.46*
2nd term	10.46*
All others	22.37*

*Plus additional 3% of wage

1-236

Elevator Constructor

10/01/2015

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Madison: Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield and Stockbridge.

Oneida: Entire county except the towns of: Camden, Florence, and Brookfield.

WAGES

Per hour

	07/01/2015	01/01/2016 Additional	01/01/2017 Additional
Mechanic	\$ 41.51	\$ 1.93	\$ 2.49
Helper	70% of Mechanic Wage Rate		

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

	07/01/2015
Journeyman/Helper	\$ 28.385*

(*)Plus 6% of gross wages if less than 5 years service

(*)Plus 8% of gross wages if more than 5 years service

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

0-6 mo*

50%

*No supplemental benefits

6-12 mo	2nd yr	3rd yr	4th yr
55 %	65 %	70 %	80 %

Supplemental Benefits per hour worked

Same as Journeyman/Helper

1-35

Glazier

10/01/2015

JOB DESCRIPTION Glazier

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

	07/01/2015	05/01/2016 Additional \$1.50	05/01/2017 Additional \$1.50
Glazier base wage	\$ 26.55		
	+ additional \$1.50 per hour for all hours worked		
*High Work Base Wage	29.50	\$1.25	\$1.25
	+ additional \$3.50 per hour for all hours worked		

(*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 17.03
Journeyman	
High Work	22.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier One Half Year (750 hr) terms at the following percentage of Journeyman's base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
-----	-----	-----	-----	-----	-----	-----	-----

35%	45%	55%	65%	75%	85%	90%	95%
-----	-----	-----	-----	-----	-----	-----	-----

+ additional \$1.50 per hour for all hours worked for all terms

Apprentice Glazier Hi-Work One Half Year (750 hr) terms at the following percentage of Journeyman's Hi-Work base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%

+ additional \$3.50 per hour for all hours worked for all terms

Supplemental Benefits per hour worked

For apprentices indentured after 07/01/2009 the following supplemental benefit applies:

Apprentice	
1st-4th term	\$ 14.51
5th-8th term	17.03
Apprentice High Work	
1st-4th term	\$ 17.08
5th-8th term	22.38

For apprentices indentured prior to and including 07/01/2009, the following supplemental benefit applies:

Apprentice	\$ 17.03
Apprentice High Work	22.38

1-201

Insulator - Heat & Frost

10/01/2015

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour 07/01/2015

Asbestos Worker*	\$ 32.52
Insulator*	32.52
Firestopping Worker*	27.65

(*)On Mechanical Systems only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.57
------------	----------

OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices	\$ 20.57
-------------	----------

1-40

Ironworker

10/01/2015

JOB DESCRIPTION Ironworker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otsego, Oneonta, Laurens, Millford, Maryland and Worchester.

WAGES

Wages	07/01/2015	05/01/2016 Additional	05/01/2017 Additional
Per hour			
Ornamental	\$ 29.50	\$1.25	\$1.25
Reinforcing	29.50		
Rodman	29.50		
Structural & Precast	29.50		
Mover/Rigger	29.50		
Fence Erector	29.50		
Stone Derrickman	29.50		
Sheeter	29.75		
Curtain Wall Installer	29.50		
Metal Window Installer	29.50		

SUPPLEMENTAL BENEFITS

Per hour worked

JOURNEYMAN \$ 25.86

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2015
1st year	\$ 16.50
2nd year	18.50
3rd year	20.50
4th year	22.50
Supplemental Benefits per hour worked	
1st year	\$ 10.25
2nd year	20.01
3rd year	21.41
4th year	22.81

1-12

Laborer - Building

10/01/2015

JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater and Waterford

WAGES

Per hour	07/01/2015	07/01/2016 Additional	07/01/2017 Additional
Group #1:			
All Classifications	\$ 25.46	\$ 1.70	\$ 1.70

except as noted in
Groups 2 & 3

Group #2:

Blaster, Drilling Equipment
Only Where a Separate Air
Compressor Unit Supplies
Power, Metal Formsetter
sidewalk), Well Pointing
& Laser Operator 25.96

Group #3:

Handling of Asbestos
or Toxic Materials 26.81

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190

Laborer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

GROUP # A:

Basic, Drill Helper, Flagman, Outboard and Hand Boats

GROUP # B:

Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators(1-1/2" and Single Diaphragm) Nozzle (Asphalt, Guniting, Seeding and Sand Blasting), Laborers on Chain Link Fence. Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C:

Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Acetylene Torch Operators, Asphalt Raker and Powderman.

GROUP # D:

Blasters, Metal Form Setters(sidewalk), Stone or Granite Curb Setters.

GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour

07/01/2015

Group # A	\$ 28.29
Group # B	28.49
Group # C	28.69
Group # D	28.89
Group # E	30.29

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$2.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices	\$ 20.05
-------------	----------

1-190 h/h

Laborer - Tunnel

10/01/2015

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

Class A: Mole nipper, powder handler, changehouse attendant and top laborer, Air spade, jackhammer, pavement breaker, Top bell, Bottom bell, side or roofbelt driller, maintenance men, burners, block layers, rodmen, caulkers, miners helper, trackmen, nippers, derailmen, electrical cablemen, hosemen, groutmen, gravelmen, form workers, movers and shaftmen, conveyor men.

Class B: Powder monkey, Blasters, ironmen and cement worker, miner, welder, heading driller, steel erectors, piledriver, rigger

Wages per hr.	07/01/2015
---------------	------------

Class #A	\$31.99 + Additional \$1.50
Class #B	32.99 + Additional \$1.50

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.05
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE
Note: If the holiday falls on a Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices \$ 19.05

1-190

Lineman Electrician

10/01/2015

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

	07/01/2015	05/02/2016
		Additional
Lineman, Technician	\$ 46.90	\$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Welder, Cable Splicer	46.90	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Groundman, Truck Driver	37.52	2.50
Mechanic 1st Class	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

		Additional
Lineman, Technician	\$ 46.90	\$ 2.50
Crane, Crawler Backhoe	46.90	2.50
Cable Splicer-Pipe Type Cable	51.59	2.50
Cert. Welder-Pipe Type Cable	49.25	2.50
Digging Machine Operator	42.21	2.50
Tractor Trailer Driver	39.87	2.50
Mechanic 1st Class	37.52	2.50
Groundman, Truck Driver	37.52	2.50
Flagman	28.14	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

		Additional
Lineman, Technician, Welder	\$ 48.20	\$ 2.50
Crane, Crawler Backhoe	48.20	2.50
Digging Machine Operator	43.38	2.50

Tractor Trailer Driver	40.97	2.50
Groundman, Truck Driver	38.56	2.50
Mechanic 1st Class	38.56	2.50
Flagman	28.92	2.50
Cert. Welder-Pipe Type Cable	50.61	2.50
Cable Splicer-Pipe Type Cable	53.02	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

Lineman, Technician, Welder	\$ 49.41	Additional \$ 2.50
Crane, Crawler Backhoe	49.41	2.50
Cable Splicer	49.41	2.50
Digging Machine Operator	44.47	2.50
Tractor Trailer Driver	42.00	2.50
Groundman, Truck Driver	39.53	2.50
Mechanic 1st Class	39.53	2.50
Flagman	29.65	2.50

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.
*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

Journeyman	\$ 20.50
	*plus 7% of hourly wage

*The 7% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

HOLIDAY

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: 1000 hour terms at the following percentage of the Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS: Same as Journeyman

Lineman Electrician - Teledata

10/01/2015

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

FOR OUTSIDE WORK.

	07/01/2015	01/01/2016	01/01/2017
Cable Splicer	\$ 29.70	\$ 30.29	\$ 30.90
Installer, Repairman	28.19	28.75	29.33
Teledata Lineman	28.19	28.75	29.33
Technician, Equipment Operator	28.19	28.75	29.33
Groundman	14.95	15.25	15.56

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 4.43	\$ 4.43	\$ 4.43
	*plus 3% of wage paid	*plus 3% of wage paid	*plus 3% of wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal Lighting

10/01/2015

JOB DESCRIPTION Lineman Electrician - Traffic Signal Lighting

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Groundman Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chain saws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/groundman truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

(Ref #14.01.01)

Per hour:

07/01/2015

05/02/2016

		Additional
Lineman, Technician	\$ 41.04	\$ 2.00
Crane, Crawler Backhoe	41.04	2.00
Certified Welder	43.09	2.00
Digging Machine	36.94	2.00
Tractor Trailer Driver	34.88	2.00
Groundman, Truck Driver	32.83	2.00
Mechanic 1st Class	32.83	2.00
Flagman	24.62	2.00

Above rates applicable on all Lighting and Traffic Signal Systems with the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

**** IMPORTANT NOTICE ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

*Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 20.50
	*plus 7.0% of hourly wage

*The 7% is based on the hourly wage paid, straight time rate or premium rate.

Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: Per hour. 1000 hour terms.

1st	2nd	3rd	4th	5th	6th	7th
\$ 24.62	\$ 26.68	\$ 28.73	\$ 30.78	\$ 32.83	\$ 34.88	\$ 36.94

SUPPLEMENTAL BENEFITS: Same as Journeyman

6-1249a-LT

Lineman Electrician - Tree Trimmer

10/01/2015

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2015

Tree Trimmer	\$ 22.80
Equipment Operator	20.11
Equipment Mechanic	20.11
Truck Driver	17.00
Groundman	13.94
Flag person	9.93

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 9.14
	*plus 3% of hourly wage

* The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.

All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

Mason - Building

10/01/2015

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Lake George, Lake Luzerne, Queensbury, Stony Creek, Thurman & Warrensburg.

WAGES

Per hour	07/01/2015
Bricklayer	\$ 32.80
Cement Mason(Bldg)	32.80
Plasterer/Fireproofing*	32.80
Pointer/Caulker/Cleaner	32.80
Stone Mason	32.80
Acid Brick	33.30

(*)Fireproofing of Structural only.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 19.57
------------	----------

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0-500 Hours	\$ 11.32
All others	\$ 19.57

12-2b.1

Mason - Building**10/01/2015**

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour 07/01/2015

Tile/Marble/Terazzo

Setter	\$ 31.67
Finisher	24.92

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter	\$ 18.67
Journeyman Finisher	15.97

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:	
1st term 0-500 hrs	60%
2nd term 501-1500 hrs	70%
3rd term 1501-2500 hrs	80%
4th term 2501-3500 hrs	85%
5th term 3501-4500 hrs	90%
6th term 4501-6000 hrs	95%

Finisher:	
1st term 0-500 hrs	70%
2nd term 501-1500 hrs	80%
3rd term 1501-2500 hrs	90%
4th term 2501-3700 hrs	95%

Supplemental Benefits per hour worked

07/01/2015

Setter:	
1st term 0-500 hrs	\$ 10.77
2nd term 501-1500 hrs	10.77
3rd term 1501-2500 hrs	14.72
4th term 2501-3500 hrs	14.72

5th term 3501-4500 hrs	16.70
6th term 4501-6000 hrs	18.67

Finisher:

1st term 0-500 hrs	\$ 10.27
2nd term 501-1500 hrs	10.27
3rd term 1501-2500 hrs	13.12
4th term 2501-3700 hrs	13.012

12-2TS.1

Mason - Heavy&Highway

10/01/2015

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

WAGES

Per hour

	07/01/2015
Mason &	\$34.01
Bricklayer	

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 18.38

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

REGISTERED APPRENTICES

Wages per hour

750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

\$ 18.38

12-2hh.1

Millwright - Building

10/01/2015

JOB DESCRIPTION Millwright - Building

DISTRICT 2

ENTIRE COUNTIES

Albany, Chenango, Delaware, Fulton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie

WAGES

Per hour:	07/01/2015	07/01/2016	07/01/2017
		Additional	Additional
Millwright*	\$ 30.06	\$ 1.80	\$ 1.80

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW:

- Certified Welders shall receive \$1.25 per hour in addition to the current Millwright's rate provided he/she is directed to perform certified welding.
- If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.25 premium per hour.

- An employee performing the work of a machinist shall receive \$1.25 per hour in addition to the current Millwright's rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

*Regarding treatment plants water or sewer, the Millwright Building rate is applicable for millwrights only performing maintenance and upkeep of existing equipment.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 19.73

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

(1)year terms at the following percentage of journeyman's rate.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hours worked:

Apprentices:

1st term	\$ 9.13
2nd term	16.55
3rd term	17.61
4th term	18.67

2-1163.1

Operating Engineer - Building

10/01/2015

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks,whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps.

* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour	07/01/2015	07/01/2016	07/01/2017
Class # A1	\$ 39.46	\$41.08	\$42.66
Class # A	39.01	40.61	42.18
Class # B	38.07	39.65	41.18
Class # C	35.42	36.92	38.37

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.00 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.00 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.00 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.17	\$ 24.47	\$ 24.87
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

Employees who work a Saturday holiday shall be paid double time plus the holiday pay.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017
All terms	\$ 19.60	\$ 19.90	\$ 20.30

1-158 Alb

Operating Engineer - Heavy&Highway

10/01/2015

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoharie, Tioga, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), oiler (used in conjunction with production), Bituminous Heater (self-propelled), oat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunite Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro -Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinius Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Insertter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2015	07/01/2016	07/01/2017
Master Mechanic	\$ 40.52	\$ 42.07	\$ 43.79
Class A*	38.91	40.46	42.18
Class B	38.00	39.55	41.27
Class C	35.43	36.98	38.70

Additional \$2.00 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.

- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.

- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 24.45	\$ 24.80	\$ 25.20
------------	----------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2015	07/01/2016	07/01/2017	
All Terms	\$ 19.85	\$ 20.20	\$ 20.60	1-158H/H Alb

Operating Engineer - Marine Construction	10/01/2015
---	-------------------

JOB DESCRIPTION Operating Engineer - Marine Construction

DISTRICT 4

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per Hour:

DREDGING OPERATIONS 07/01/2015

CLASS A

Operator, Leverman, \$ 35.63
Lead Dredgeman

CLASS A1

Dozer, Front Loader
Operator To conform to Operating Engineer
Prevailing Wage in locality where work
is being performed including benefits.

CLASS B

Spider/Spill Barge Operator, \$ 30.81
Tug Operator(over1000hp),
OperatorII, Fill Placer,
Derrick Operator, Engineer,
Chief Mate, Electrician,
Chief Welder,
Maintenance Engineer

Certified Welder, \$ 29.01
Boat Operator(licensed)

CLASS C

Drag Barge Operator, \$ 28.22
Steward, Mate,
Assistant Fill Placer,

Welder (please add)\$ 0.06

Boat Operator \$ 27.30

CLASS D

Shoreman, Deckhand, \$ 22.68
Rodman, Scowman, Cook,
Messman, Porter/Janitor

Oiler(please add)\$ 0.09

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

	07/01/2015
All Classes A & B	\$ 9.99 plus 8% of straight time wage, Overtime hours

add \$ 0.63

All Class C \$ 9.69 plus 8%
 of straight time
 wage, Overtime hours
 add \$ 0.48

All Class D \$ 9.39 plus 8%
 of straight time
 wage, Overtime hours
 add \$ 0.33

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Survey Crew

10/01/2015

JOB DESCRIPTION Operating Engineer - Survey Crew

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to Building and Heavy Highway.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 23.75
------------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms for Instrument & Rod Persons at the following rates:

07/01/2015

0-1000 Hrs	\$ 14.68
1001-2000 Hrs	17.12
2001-3000 Hrs	19.57

SUPPLEMENTAL BENEFITS per hour worked:

All Terms \$ 23.75

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer**10/01/2015**

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who runs the instrument and assists the Party Chief.

Rod Person - One who holds the rods and, in general, assists the Survey Party.

07/01/2015

Party Chief	\$ 36.53
Instrument Person	33.46
Rod Person	24.46

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 23.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-158-545 DCE

Operating Engineer - Tunnel**10/01/2015**

JOB DESCRIPTION Operating Engineer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess to the northern boundary line of the City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Rte. 343 then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to Connecticut.

Genesee: Only that portion of the county that lies east of a linedrawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

Crane 1: All cranes, including self erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all other cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton nad below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor-mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (Automated); Cableway; Caisson Auger; Central Mix Concrete Plant (Automated); Concrete Curb Machine (Self-propelled slipform) Concrete Pump (8" or over); Dredge; Dual Drum Paver; Any Mechanical Shaft Drill; Excavator (all purpose-hydraulic-Gradall or Similar); Fork Lift (factory rated 15 ft and over); Front End Loader (4 c.y. & over); Gradall; Head Tower (Sauerman or Equal), Hoist Shaft; Hoist (two or three Drum); Mine Hoist; Maintenance Engineer (Shaft and Tunnel) ; Mine Hoist; Mucking Machine or Mole, Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Mach.; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, he shall be an Oiler); Tractor Drawn Belt Type Loader; Tripper/Maintenance Eng.(Shaft & Tunnel); Truck or Trailer Mounted Log Chipper (self-feeding); Tug Operator (Manned rented equip. excluded); Tunnel Shovel; Mining Machine(Mole and Similar Types).

CLASS B: Automated Central Mix Concrete Plant; Backhoe Trac-Mtd, Rubber Tired); Backhoe (topside); Bitum. Spred. & Mixer, Blacktop Plant non-automated); Blast or Rotary Drill (Truck or Tractor Mounted); Boring Machine; Cage Hoist; Central Mix Plant(NonAutomated) and All Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (Tractor Mounted); Front End Loader (under 4 c.y.); Grayco Epoxy Machine; Hoist (One Drum); Hoist 2 or 3 Drum (Topside); Kolman Plant Loader & Similar Type Loaders (if Employer requires another person to clean the screen or to maintain the equipment, he shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maint. Eng. (Topside); Grease Man; Welder; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Eng.; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Mach.; Shovel (Topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Winch and Winch Cat.

CLASS C: A Frame Truck; Ballast Regulator (ride-on); Compressors (4 under 2,000 cfm combined capacity; or 3 or less with more than 1200 cfm. but not to exceed 2,000 cfm); Compressors (any size but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-4 of any type or combination); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill well; Elec Pump Used in Conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; ForkLift (under 15 ft); Grout Pump (over (5) cu. ft.; Guniting Machine; Hammers (hydraulic- self propel.); Hydra-Spiker-Ride on; Hydra-Blaster; Hydra Blaster (water); Motorized Form Carrier; Post Hole Digger & Post Driver; Power Sweep; Roller grade & fill); Scarifer (Ride on); Span-Saw (Ride-on); Submersible Electric Pump (when used in lieu of well point system); Tamper (Ride-on); Tie-Extractor, Tie Handler, Tie Insertter, Tie Spacer and Track Liner (Ride-on); Tractor (with towed accessories); Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors(3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors(any size, but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-3 or less-any type or combination); Concrete Saw (self propelled); Fireman; Form Tamper; Hydraulic Pump (jacking system); Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broome towed; Power Heaterman; Revinus Widener; Shell Winder; Steam Cleaner and Tractor; Greaseman; Junior Engineer.

Per hour: 07/01/2015

Crane 1	\$ 44.56
Crane 2	43.56
Crane 3	42.56
Master Mechanic	42.75
CLASS A	40.56
CLASS B	39.34
CLASS C	36.55
CLASS D	33.54

On hazardous waste work bid, on a state or federally designated hazardous waste site, where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection, the Operating Engineer shall receive the hourly wage plus \$5.00 per hour. Fringe benefits will be paid at the contractual hourly wage.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 25.60

OVERTIME PAY

See (B, B2, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1000) hours terms at the following percentages.

1st term	60% of Class B
2nd term	65% of Class B
3rd term	70% of Class B
4th term	75% of Class B

Supplemental Benefits per hour paid:

\$ 25.60

7-158-832TL.

Painter	10/01/2015
----------------	-------------------

JOB DESCRIPTION Painter **DISTRICT 1**

ENTIRE COUNTIES

Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie

WAGES

Per hour

	07/01/2015	05/01/2016 Additional	05/01/2017 Additional
Painter\Wallcover	\$ 28.24	\$ 1.40	\$ 1.40
Drywall Finishers	28.24	1.40	1.40
Spray Rate	28.24	1.40	1.40
Structural Steel*	29.24	1.40	1.40
Lead Abatement	29.24	1.40	1.40
Lead Abatement on Structural Steel	30.24	1.40	1.40

(*)Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

Bridge Painter

See Bridge Painter rates for the following work:

All Bridges and Tanks

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$11.97

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th	5th	6th
45%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

All Terms \$11.97

1-466-Z1

Painter - Bridge & Structural Steel	10/01/2015
--	-------------------

JOB DESCRIPTION Painter - Bridge & Structural Steel **DISTRICT 8**

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour Worked:

STEEL:

Bridge Painting: 07/01/2015 10/01/2015

From May 1st to Nov. 15th -

	\$ 48.00	\$ 49.00
	+ 5.63*	+ 6.13*
From Nov. 16th to April 30th -		
	\$ 48.00	\$ 49.00
	+ 5.63*	+ 6.13*

*Not subject to overtime and limited to first 40 hours

NOTE: All premium wages are to be calculated on \$48.00 or \$49.00 per hour only.

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

Power Tool/Spray is an additional \$6.00 per hour above hourly rate, whether straight time or overtime

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

Per Hour Worked:

Journeyworker:	07/01/2015	10/01/2015
From May 1st to Nov. 15th -		
Hourly Rate up to 40 hours	\$ 28.95	\$ 29.95
Hourly Rate after 40 hours	7.50	7.50
From Nov. 16th to April 30th -		
Hourly Rate up to 50 hours	28.95	29.70
Hourly Rate after 50 hours	7.50	7.50

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(Wage per hour Worked):

Apprentices: (1) year terms	07/01/2015	10/01/2015
1st 90 days	\$ 21.45	\$ 22.05
1st year after 90 days	21.45	22.05
2nd year	32.18	33.08
3rd year	42.90	44.10

Supplemental Benefits per hour worked:

	07/01/2015	10/01/2015
1st 90 days	\$ 8.83	\$ 9.23
1st year after 90 days	11.58	11.98
2nd year	17.37	17.97
3rd year	23.16	23.96

8-DC-9/806/155-BrSS

Painter - Line Striping

10/01/2015

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2015
-----------------------------	------------

Striping-Machine Operator*	\$ 27.11
Linerman Thermoplastic	\$ 32.37

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

Four (4), ten (10) hour days may be worked at straight time during a week.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid: 07/01/2015
Journeyworker:

Striping-Machine operator	\$ 14.18
Linerman Thermoplastic	\$ 14.55

OVERTIME PAY

See (B, E, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

8-1456-LS

Painter - Metal Polisher

10/01/2015

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2015	06/01/2016	06/01/2017
Metal Polisher	\$ 28.07	\$ 28.88	\$ 29.73
Metal Polisher**	29.02	29.83	30.68
Metal Polisher***	31.57	32.38	33.23

**Note: Applies on New Construction & complete renovation

*** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2015	06/01/2016	06/01/2017
Journeyworker:			
All classification	\$ 9.12	\$ 9.26	\$ 9.41

OVERTIME PAY

See (B, E, E2, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2015	06/01/2016
1st year	\$ 11.75	\$ 11.75
2nd year	13.00	13.00
3rd year	15.75	15.75

Supplemental benefits:

Per hour paid:

1st year	\$ 6.26	\$6.26
2nd year	6.37	6.37
3rd year	6.51	6.51

8-8A/28A-MP

Plumber

10/01/2015

JOB DESCRIPTION Plumber

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

PARTIAL COUNTIES

Hamilton: Only the Towns of Arietta, Benson, Hope, Inlet, Lake Pleasant, Morehouse and Wells.

Saratoga: Only the Towns of Charlton, Clifton Park, Galway, Halfmoon, Milton, Stillwater and Waterford and the city of Mechanicville.

WAGES

Per hour:

07/01/2015

Plumber:

Pipefitter, Steamfitter \$ 38.27

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 24.46

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Whenever a Holiday falls on Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th
45 %	55 %	65 %	75 %	90 %

Supplemental Benefits per hour worked:

07/01/2015

Apprentices \$ 24.46

1-7-SF

Roofer

10/01/2015

JOB DESCRIPTION Roofer

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

WAGES

Per hour

	07/01/2015	06/01/2016	06/01/2017
		Additional	Additional
Roofer/Waterproofer	\$ 28.45	\$1.75	\$1.50
Asphalt Cold Process	28.95		
Pitch & Asbestos	30.45		

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 16.07

OVERTIME PAY

See (B, E*, Q) on OVERTIME PAGE.

* Saturday may be used as a make up day at straight time if employee misses 8 hrs or more during that week due to inclement weather.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages.

1st yr 1st half	50%
1st yr 2nd half	58%
2nd yr 1st half	66%
2nd yr 2nd half	74%
3rd yr 1st half	82%
3rd yr 2nd half	90%

Supplemental Benefits per hour worked

1st yr 1st half	\$ 14.30
1st yr 2nd half	14.49
2nd yr 1st half	14.72
2nd yr 2nd half	14.92
3rd yr 1st half	15.20
3rd yr 2nd half	15.40

1-241

Sheetmetal Worker

10/01/2015

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2015

Sheetmetal Worker \$ 31.84

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 28.22

OVERTIME PAY

See (B,E*,Q,) on OVERTIME PAGE

* Time and one half 1st 8 hours on Saturday. Double the hourly rate all additional Saturday hours.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

1st term	\$ 17.31
2nd term	18.76
3rd term	19.49
4th term	20.22

5th term	19.55
6th term	20.52
7th term	22.14
8th term	23.75
9th term	25.37
10th term	26.99

Supplemental Benefits per hour worked

1st term	\$ 17.22
2nd term	17.95
3rd term	18.21
4th term	18.46
5th term	23.41
6th term	23.79
7th term	24.43
8th term	25.05
9th term	25.69
10th term	26.33

1-83

Sprinkler Fitter

10/01/2015

JOB DESCRIPTION Sprinkler Fitter

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Saratoga, Schenectady, Warren

WAGES

Per hour 07/01/2015

Sprinkler \$ 32.18
Fitter

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 21.02

OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED PRIOR TO 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
50%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.15	\$ 8.15	\$ 15.12	\$ 15.12	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02	\$21.02

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.56	\$ 8.60	\$ 15.37	\$ 15.41	\$ 15.96	\$ 16.00	\$ 16.05	\$ 16.09	\$ 16.14	\$ 16.18

For Apprentices HIRED ON OR AFTER 04/01/2013:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 7.90	\$ 7.90	\$ 15.12	\$ 15.12	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37	\$ 15.37

1-669-3

Teamster - Building	10/01/2015
----------------------------	-------------------

JOB DESCRIPTION Teamster - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

	07/01/2015	07/01/2016
Group A	\$ 26.29	\$ 26.73
Group B	26.59	27.03

SUPPLEMENTAL BENEFITS

Per hour worked

	07/01/2015	07/01/2016
Journeyman	\$ 19.04	\$ 20.10

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

1-294

Teamster - Heavy&Highway	10/01/2015
-------------------------------------	-------------------

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell, and Queensbury.

WAGES

GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks,
Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour 07/01/2015

Group #1	\$26.92
Group #2	26.97
Group #3	27.06
Group #4	27.17
Group #5	27.32

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$1.50 per hour.

For work bid on or after April 1, 1995, there shall be a 12 month carryover of the negotiated rate in effect at the time of the bid.

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour paid:

\$ 20.90
+\$1.00 per
hour worked

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

Welder

10/01/2015

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2015

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Rensselaer County Residential

Laborer - Residential

10/01/2015

JOB DESCRIPTION Laborer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES

Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.

Greene: Entire county except the Township of Catskill.

Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, and Waterford.

WAGES

IMPORTANT NOTE: This shall apply to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

Laborer \$ 19.09

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 20.14

OVERTIME PAY

See (B, *H) on OVERTIME PAGE

* Double time on Labor Day

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

1000 Hour terms at the following percentage of Journeyman's building wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

07/01/2015

Apprentices \$ 20.14

1-190r

Mason - Residential

10/01/2015

JOB DESCRIPTION Mason - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, this article shall be applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

Bricklayer	\$ 26.49
Cement Mason	26.49
Plasterer	26.49
Point/Caulk/Clean	26.49
Acid Brick	26.99

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 17.83

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

* Work performed on Labor Day will be paid at double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-2r.z1

Mason - Tile Setter & Finisher - Residential

10/01/2015

JOB DESCRIPTION Mason - Tile Setter & Finisher - Residential

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

IMPORTANT NOTE: Applies to the construction of one family, two family row housing, townhouses, apartments, condominiums and garden type projects or a combination thereof, together with related service buildings and facilities which construction work may be performed wholly on-site or may consist of the assembly of off-site produced modules or components but any of which living units are in the finished form no more than two (2) stories high and are to be utilized solely as dwellings.

Per hour 07/01/2015

Tile/Marble/Terazzo

Setter \$ 23.80

Finisher 19.08

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter \$ 8.15

Journeyman Finisher 8.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

12-2TSFr

Operating Engineer - Residential

10/01/2015

JOB DESCRIPTION Operating Engineer - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 then north along Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Route 44 and along Route 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one family, two family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

Per hour

07/01/2015

07/01/2016

Journeyman

All Clasifications \$ 35.42

\$ 36.92

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman
All classifications \$ 18.16 \$ 18.39

OVERTIME PAY

See (B, E2, *H) on OVERTIME PAGE

*If Labor Day is worked, the rate of pay shall be at double time rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

1-158r Alb

Sprinkler Fitter - Residential

10/01/2015

JOB DESCRIPTION Sprinkler Fitter - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Saratoga, Schenectady, Warren

WAGES

IMPORTANT NOTE: "Residential fire protection work" is applicable to one or two family dwellings, all multiple family dwelling units which are permitted to have a single exterior up to and including four stories, townhouses with units stacked vertically up to and including four stories and group residential care facilities and protective care homes (sheltered housing), not to include nursing homes or ambulatory care facilities.

Per hour
07/01/2015

Sprinkler \$ 24.14
Fitter

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 21.02

OVERTIME PAY

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

1-669-3r

Teamster - Residential

10/01/2015

JOB DESCRIPTION Teamster - Residential

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

IMPORTANT NOTE: Applies to all rehabilitation work on residential structures. "Rehabilitation" shall be defined to include all work, including demolition, repair and alteration on any existing structure which is intended for residential use. On new housing, applicable only to site construction of all new work done by the Employer on one (1) family, two (2) family, row housing and garden type homes or apartments which are not more than four (4) stories above ground level and are used as dwellings.

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

Wages per hour
07/01/2015 07/01/2016

Group # A \$ 19.72 \$ 20.05

Group # B	19.94	20.27
-----------	-------	-------

SUPPLEMENTAL BENEFITS

Per hour worked

07/01/2015	07/01/2016
\$ 19.04	\$ 20.10

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (*5, 6) on HOLIDAY PAGE

* Labor Day, if worked, will be paid at double time rate.

1-294r

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays, if worked

-
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
 - (T) Triple the hourly rate for Holidays, if worked
 - (U) Four times the hourly rate for Holidays, if worked
 - (V) Including benefits at SAME PREMIUM as shown for overtime
 - (W) Time and one half for benefits on all overtime hours.

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day



Department of
Environmental
Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE SITE NO. E410050

TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

FORMER SCOLITE SITE

SITE NO. E442037

CITY OF TROY, RENSSELAER COUNTY, NEW YORK

FORMER HETTLING FARM SITE

SITE NO. E411015

TOWN OF CLERMONT, COLUMBIA COUNTY, NEW YORK

REMEDIAL CONSTRUCTION PROJECT

NOVEMBER 2015

LEGAL ENTITY: ARCADIS CE, INC.



NOTE:
SCALES SHOWN HEREIN ARE FOR FULL SIZE PLOTS.
CONTRACTOR SHALL BE RESPONSIBLE FOR CONVERTING
SCALES ON REDUCED OR ENLARGED PLOTS.

User:HAUSMANN Spec:AUS-NCSMOD File G:\ACAD\PROJ\00266425\0000\SHEETS\GENERAL\G-01.DWG Scale:1:1 SavedDate:11/13/2015 Time:09:10 Plot Date: Hausmann, Steve; 11/13/2015; 09:44 ; Layout:501

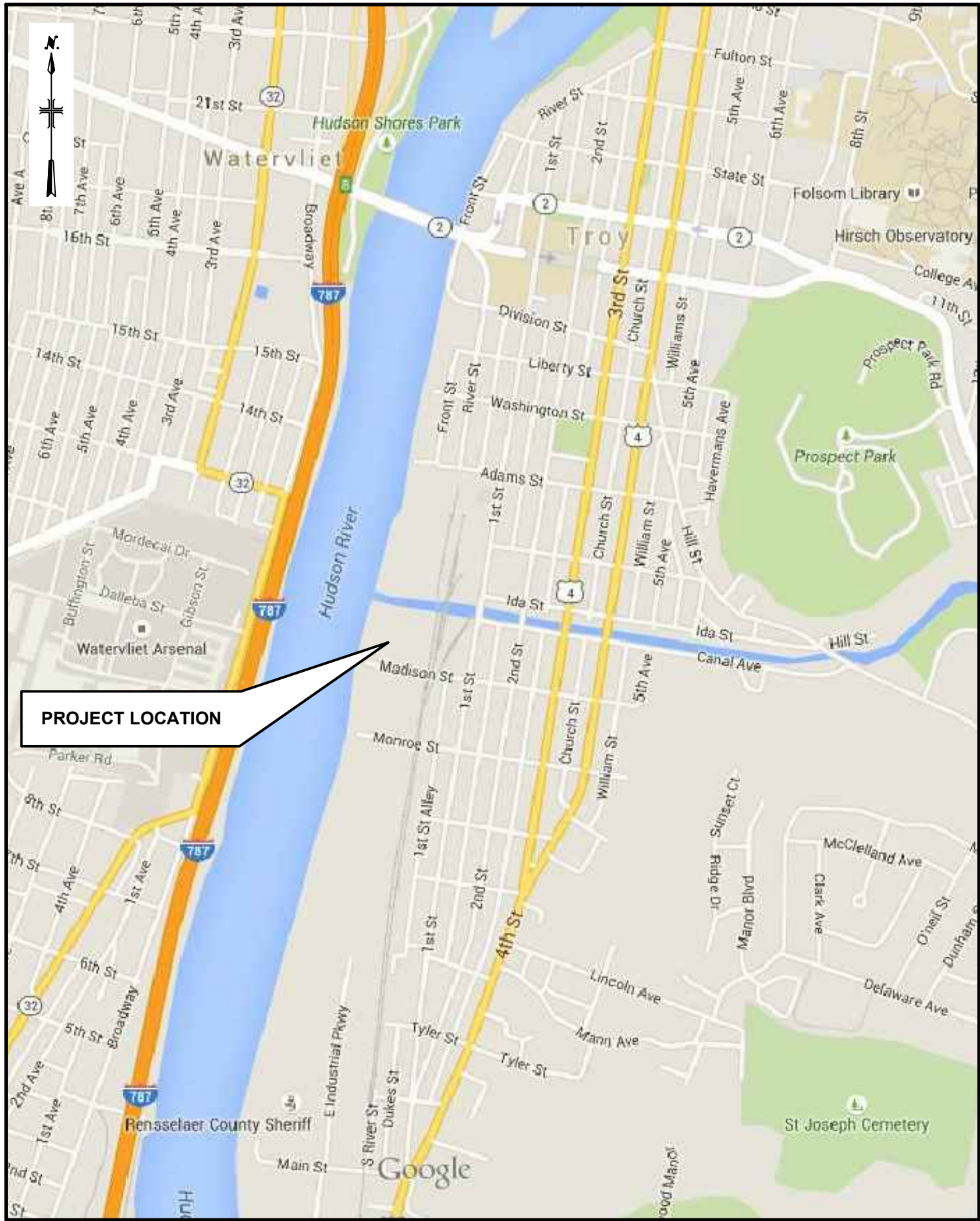
E

D

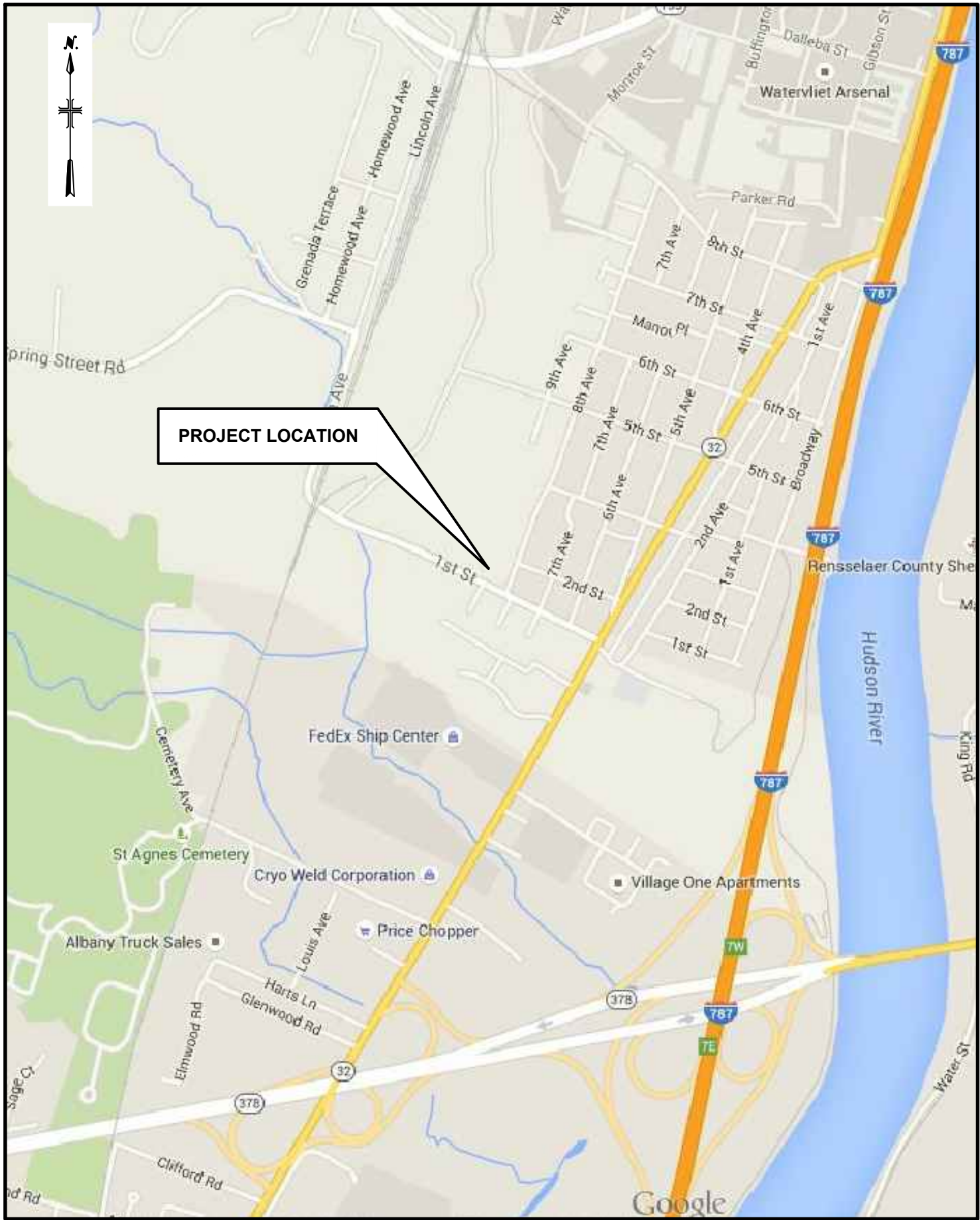
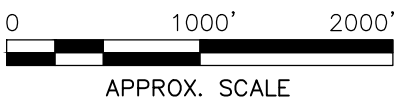
C

B

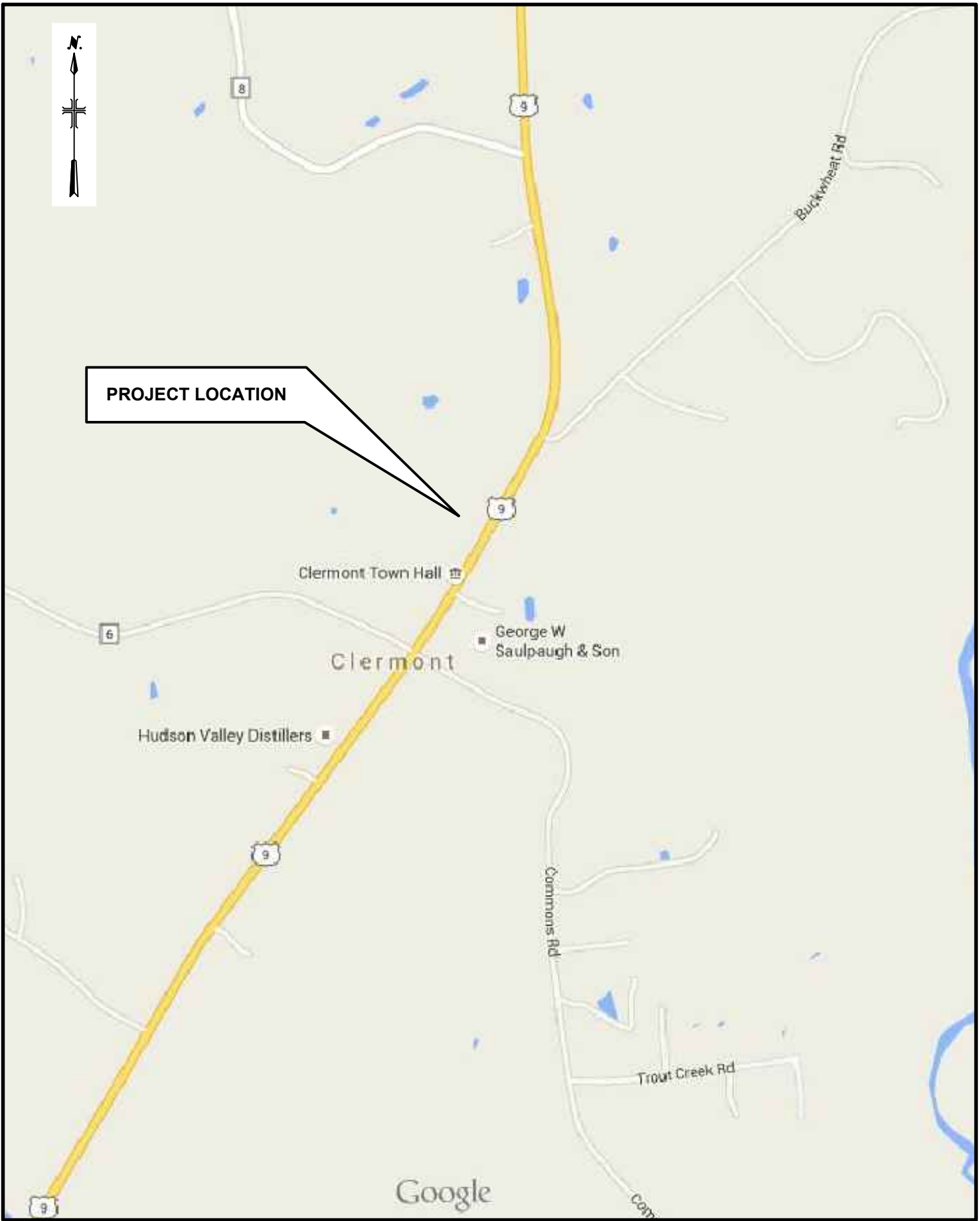
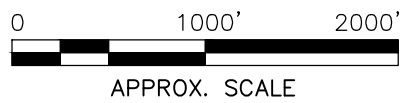
A



FORMER SCOLITE SITE
PROJECT LOCATION MAP



SCHUYLER HEIGHTS FIRE DISTRICT
STATION HOUSE SITE
PROJECT LOCATION MAP



FORMER HETTLING FARM SITE
PROJECT LOCATION MAP



INDEX TO DRAWINGS	
GENERAL	
SHEET NO.	TITLE
G-00	COVER SHEET
G-01	SITE LOCATION MAPS AND DRAWING INDEX
G-02	ABBREVIATIONS AND SYMBOLS
G-03	GENERAL NOTES AND SEQUENCE OF CONSTRUCTION
CIVIL	
C-01	FORMER HETTLING SITE - EXISTING CONDITIONS
C-02	FORMER HETTLING SITE - EROSION AND STORMWATER CONTROL PLAN
C-03	FORMER HETTLING SITE - INTERIM GRADING PLAN
C-04	FORMER HETTLING SITE - FINAL GRADING PLAN
C-05	FORMER SCOLITE SITE - EXISTING CONDITIONS
C-06	FORMER SCOLITE SITE - EROSION AND STORMWATER CONTROL PLAN
C-07	FORMER SCOLITE SITE - INTERIM GRADING PLAN
C-08	FORMER SCOLITE SITE - FINAL GRADING PLAN
C-09	SCHUYLER HEIGHTS FD SITE - EXISTING CONDITIONS
C-10	SCHUYLER HEIGHTS FD SITE - EROSION AND STORMWATER CONTROL PLAN
C-11	SCHUYLER HEIGHTS FD SITE - INTERIM GRADING PLAN
C-12	SCHUYLER HEIGHTS FD SITE - FINAL GRADING PLAN
C-13	SITE DETAILS 1
C-14	SITE DETAILS 2



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT

00266425

NO.	DATE	ISSUED FOR	BY
-----	------	------------	----

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: G-01

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

SITE LOCATION MAPS
AND DRAWING INDEX

SCALE: AS SHOWN

G-01

SHEET 1 OF 3



User:HAUSMANN Spec:AUS-NCSMOD File G:\ACAD\PROJECTS\00266425\0000\SHEETS\GENERAL\G-03.DWG Scale:1:1 SavedDate:11/13/2015 Time:09:11 Plot Date: Hausmann, Steve; 11/13/2015; 09:44 ; Layout:63

E

D

C

B

A

GENERAL NOTES

1. THE "NYSDEC" SHALL BE DEFINED AS THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
2. THE DEPARTMENT OR OWNER SHALL BE DEFINED AS THE NYSDEC.
3. THE SUBCONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, SUPPLIES, FACILITIES, POWER AND INCIDENTALS NECESSARY TO FULLY COMPLETE THE WORK AS SHOWN, AS SPECIFIED AND AS DIRECTED BY ARCADIS. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK DESCRIBED IN THE CONTRACT DOCUMENTS, INCLUDING ITEMS NOT SPECIFICALLY IDENTIFIED, AS REQUIRED TO COMPLETE THE WORK.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS, AND THE SUBCONTRACTOR'S APPROVED SUBMITTALS. IF ANY LAW, REGULATION AND/OR CONTRACT DOCUMENTS HAVE CONTRADICTING REQUIREMENTS, THEN THE MOST STRINGENT REQUIREMENT SHALL APPLY, AS DETERMINED BY ARCADIS. LOCAL LAWS SHALL INCLUDE ANY CITY OR OTHER LOCAL REGULATORY AUTHORITY HAVING JURISDICTION.
5. THE SUBCONTRACTOR IS RESTRICTED FROM PERFORMING ANY OPERATIONS OUTSIDE THE DEFINED CONTRACT LIMITS UNLESS OTHERWISE APPROVED BY ARCADIS AND THE OWNER.
6. THE SUBCONTRACTOR SHALL IDENTIFY, APPLY FOR AND OBTAIN, PAY ALL FEES FOR, AND COMPLY WITH ALL REQUIREMENTS OF ALL ISSUED LICENSES, PERMITS, APPROVALS AND INSURANCE REQUIRED FROM FEDERAL, STATE AND LOCAL GOVERNMENT AND PUBLIC AGENCIES AND AUTHORITIES NECESSARY TO PERFORM THE WORK. THE SUBCONTRACTOR SHALL PROVIDE INDEMNIFICATIONS TO PUBLIC AND PRIVATE AGENCIES AND AUTHORITIES AS NECESSARY TO PERFORM THE WORK.
7. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS THAT ARE REQUIRED PRIOR TO COMMENCING CONSTRUCTION, EXCEPT AS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
8. SUBCONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE COMMENCING WORK. EXISTING DIMENSIONS AND ELEVATIONS INFORMATION PRESENTED ON THESE DRAWINGS SHALL BE VERIFIED BY THE SUBCONTRACTOR BY ACTUAL FIELD MEASUREMENTS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO ARCADIS AND THE OWNER IN A TIMELY MANNER. FAILURE TO PROSPECT IN ADVANCE OF WORK OR VERIFY DIMENSIONS SHALL NOT BE CAUSE FOR ADDITIONAL COSTS TO THE OWNER.
9. EXISTING UTILITIES AND BURIED PIPING LOCATIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE INTENDED ONLY TO INDICATE THE EXISTENCE OF SUCH UTILITIES AND PIPING IN AREA SHOWN. THE EXISTENCE AND LOCATION OF ANY UTILITIES INDICATED ON THE PLANS ARE NOT GUARANTEED AND SHALL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE SUBCONTRACTOR BEFORE STARTING WORK. BEFORE PROCEEDING WITH WORK, THE SUBCONTRACTOR SHALL VERIFY UTILITIES AND PIPING LOCATIONS IN THE FIELD AND NOTIFY ARCADIS OF ANY DISCREPANCIES. PUBLIC AND PRIVATE UTILITIES SHALL BE LOCATED BY THE SUBCONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER OR ARCADIS. THE SUBCONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY NO LATER THAN 48 HOURS PRIOR TO ANY EXCAVATION THAT MAY AFFECT THAT UTILITY. EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES SHALL BE DUG BY HAND. THE SUBCONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.
10. ALL UTILITIES AND BURIED PIPING SHALL BE PROTECTED FROM ANY DAMAGE AS A RESULT OF THE WORK INCLUDED IN THESE CONTRACTS. IT SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR TO REPAIR AND/OR REPLACE TO THE SATISFACTION OF THE OWNER ALL DAMAGE TO ANY UTILITIES AND PIPING. ALL AREAS DISTURBED BY THE SUBCONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE CONTRACT DRAWINGS.
11. THE SUBCONTRACTOR SHALL NOTIFY THE OWNER AND ARCADIS A MINIMUM OF FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. IN ADDITION, IF WORK SHOULD BE STOPPED AND RESTARTED FOR ANY REASON, THE SUBCONTRACTOR SHALL GIVE THE CITY OF A MINIMUM FIVE (5) DAYS NOTICE.
12. THE SUBCONTRACTOR SHALL PERFORM DAILY CLEANUP OPERATIONS WHICH INCLUDE REMOVAL OF DEBRIS (CUPS, PAPER BAGS, CANS, ETC.), REMOVAL OF EXCESS CONSTRUCTION MATERIALS, ALL TO THE SATISFACTION OF THE OWNER AND ARCADIS THROUGHOUT THE CONTRACT DURATION.
13. DURING CONSTRUCTION, THE SUBCONTRACTOR SHALL MAINTAIN TRAFFIC ON ALL ROADWAYS ADJACENT TO OR WHERE WORK IS IN PROGRESS. ALL ROADWAYS SHALL REMAIN OPEN AND ACCESSIBLE TO ALL, EXCEPT AS OTHERWISE SPECIFIED OR APPROVED. NO ROAD CLOSURES SHALL BE ALLOWED AS PART OF THE CONTRACT. AS A MINIMUM, ONE LANE ALTERNATING TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. ROADWAYS SHALL BE RESTORED TO FULL TRAFFIC PATTERN FLOWS AT THE END OF EACH WORK DAY.
14. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL STATUTES AND U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS (O.S.H.A.) COPIES OF O.S.H.A.'S STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. THE SUBCONTRACTOR ALONE WILL BE RESPONSIBLE FOR THE EXECUTION OF THE WORK IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REQUIREMENTS.
15. SUBCONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, GUIDERAILS, WALKS, CURBS, FENCES, AND OTHER PHYSICAL FEATURES TO A CONDITION AT LEAST AS GOOD AS THEY WERE BEFORE BEING DISTURBED. ALL STRUCTURES SHALL BE PROTECTED OR REMOVED AND REPLACED EXACTLY AS THEY WERE BEFORE BEING DISTURBED. DAMAGED ITEMS SHALL BE REPLACED AT THE SUBCONTRACTORS EXPENSE.
16. PRIOR TO SUBMITTING A RESPONSIBLE BID, THE SUBCONTRACTOR SHALL VISIT THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.
17. SCALES SHOWN HEREIN ARE FOR FULL SIZE PLOTS ON 22"x34" INCH SHEETS. THE SUBCONTRACTOR IS RESPONSIBLE FOR CONVERTING SCALES ON REDUCED OR ENLARGED PLOTS.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION IS A GENERAL OVERVIEW OF THE PHASING AND SHALL BE ADHERED TO. IT DOES NOT RELIEVE THE SUBCONTRACTOR OF PROVIDING A DETAILED CONSTRUCTION SCHEDULE TO ARCADIS FOR APPROVAL, AS REQUIRED BY THE SPECIFICATIONS. IT ALSO DOES NOT RELIEVE THE SUBCONTRACTOR OF PERFORMING ALL THE WORK AS SHOWN ON THE PLANS AND INCLUDED IN THE SPECIFICATIONS.

SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH ALL CONDITIONS AND NOTIFICATION REQUIREMENTS OF ISSUED PERMITS AND PERMITS OBTAINED BY THE OWNER FOR COMPLETION OF THE WORK.

GENERAL

1. PERFORM UNDERGROUND UTILITY MARK-OUT SURVEY IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN THE CONTRACT DOCUMENTS.
2. PERFORM INITIAL SITE SURVEY IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN THE CONTRACT DOCUMENTS.
3. PERFORM ALL PRE-CONSTRUCTION PHOTOGRAPHY AND VIDEO RECORDING AS REQUIRED BY THE SPECIFICATIONS.
4. PROTECT EXISTING ABOVEGROUND STRUCTURES, UNDERGROUND UTILITIES AND STRUCTURES LOCATED OUTSIDE THE LIMITS OF EXCAVATION.
5. SEDIMENT, EROSION AND STORM WATER CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE SUBCONTRACTOR-APPROVED STORM WATER MANAGEMENT PLAN.
6. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SPECIFIED.
7. INSTALL TEMPORARY VEHICLE DECONTAMINATION AREA AS SPECIFIED.
8. INSTALL TEMPORARY SILT FENCING AS SPECIFIED.
9. INSTALL TRAILER, TEMPORARY ELECTRIC, UTILITIES, ACCESS ROADS AND PARKING.
10. CONSOLIDATE DEBRIS, NOT RELATED TO CLEARING AND GRUBBING, OR GRADING WORK.
11. CATEGORIZE CONSOLIDATED DEBRIS.
12. DISPOSE OF CONSOLIDATED DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AND REQUIREMENTS.
13. TRANSPORT AND DISPOSE OF DEBRIS OFF-SITE IN ACCORDANCE WITH THE SPECIFICATIONS.
14. FELL TREES AND GRUB STUMPS AND ROOTS A MINIMUM OF 1 INCH BELOW THE INTERMEDIATE GRADE.
15. CHIP TREES AND VEGETATION 3 INCHES OR SMALLER IN DIAMETER AND SPREAD ON SITE IN A MAXIMUM THICKNESS OF 3 INCHES.
16. DISPOSE OF TREES (LARGER THAN 3 INCHES IN DIAMETER), STUMPS, OR ROOTS, OFF-SITE.
17. PERFORM INTERMEDIATE GRADING OF THE SITE.
18. PERFORM INTERMEDIATE SURVEY OF INTERMEDIATE GRADING.
19. PLACE SEPARATION FABRIC AND ENGINEERED COVER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
20. MAKE MODIFICATIONS TO EXISTING MONITORING WELLS MAINTAIN A MINIMUM 42 INCHES FROM FINISHED GRADE TO TOP OF STANDPIPE AND PROTECTIVE CASING.
21. ESTABLISH SOIL VEGETATIVE COVER IN DISTURBED AREAS AND AREAS RECEIVING TYPE I OR TYPE II ENGINEERED COVERS.
22. DEMOBILIZE EQUIPMENT, REMOVE TEMPORARY FACILITIES, CONTROLS, AND SEDIMENT, EROSION AND STORM WATER CONTROL MEASURES.
23. COMPLETE SITE RESTORATION.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Department of
Environmental
Conservation

Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT

00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015
PROJECT NO.: 00266425
FILE NAME: G-03
DESIGNED BY: E. LANZAROTTA
DRAWN BY: S. HAUSMANN
CHECKED BY: D. LOEWENSTERN

SHEET TITLE

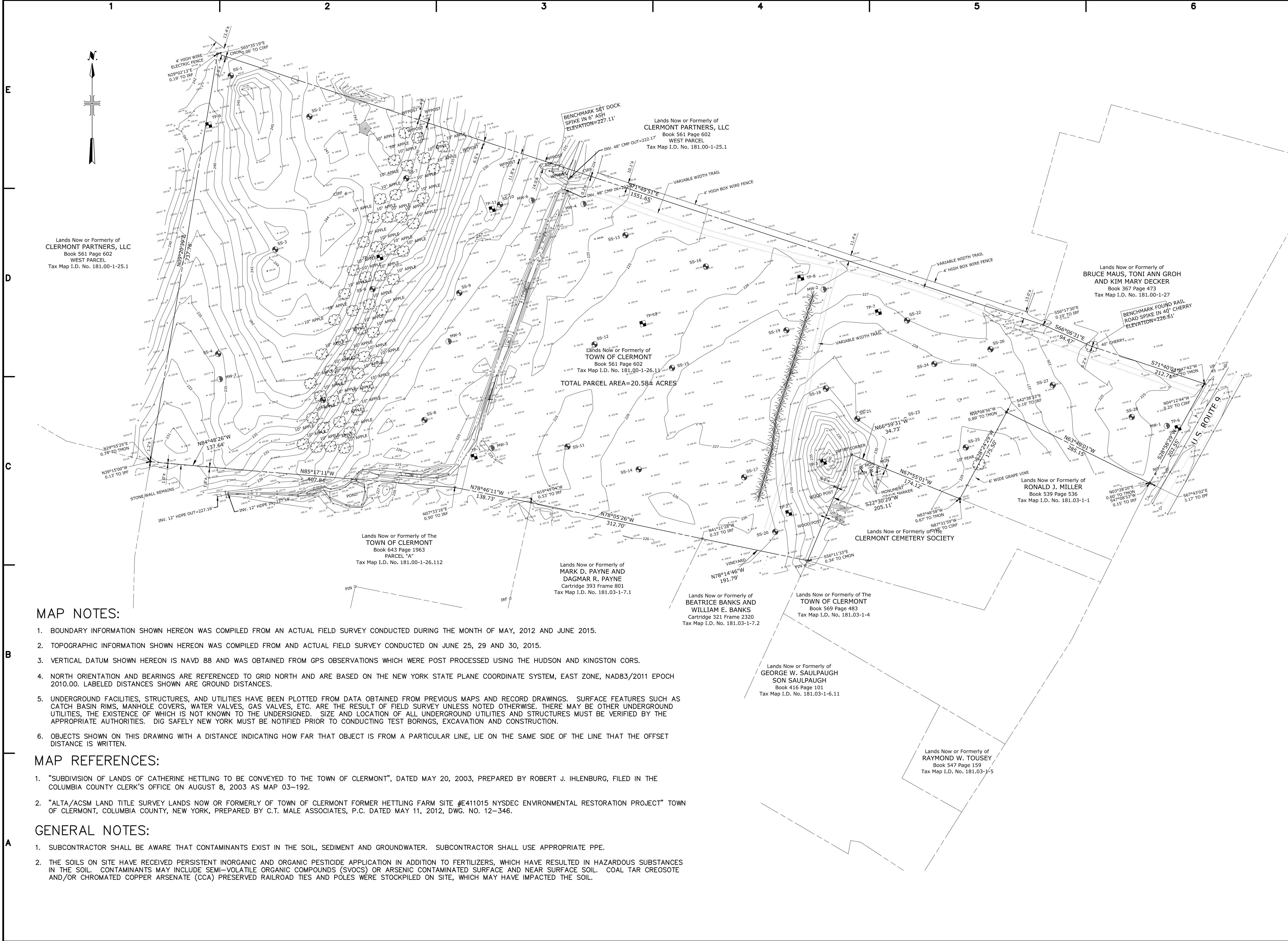
GENERAL NOTES
AND SEQUENCE
OF CONSTRUCTION

SCALE: AS SHOWN

G-03

SHEET 3 OF 3

User:HAUSMANN Spec:AUS-NC5MOD File:G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-01.DWG Scale:1:1 SaveDate:11/13/2015 Time:09:26 Plot Date: Hausmann, Steve; 11/13/2015; 09:44 : Layout:CT



MAP NOTES:

- BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED DURING THE MONTH OF MAY, 2012 AND JUNE 2015.
- TOPOGRAPHIC INFORMATION SHOWN HEREON WAS COMPILED FROM AND ACTUAL FIELD SURVEY CONDUCTED ON JUNE 25, 29 AND 30, 2015.
- VERTICAL DATUM SHOWN HEREON IS NAVD 88 AND WAS OBTAINED FROM GPS OBSERVATIONS WHICH WERE POST PROCESSED USING THE HUDSON AND KINGSTON CORS.
- NORTH ORIENTATION AND BEARINGS ARE REFERENCED TO GRID NORTH AND ARE BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD83/2011 EPOCH 2010.00. LABELED DISTANCES SHOWN ARE GROUND DISTANCES.
- UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM DATA OBTAINED FROM PREVIOUS MAPS AND RECORD DRAWINGS. SURFACE FEATURES SUCH AS CATCH BASIN RIMS, MANHOLE COVERS, WATER VALVES, GAS VALVES, ETC. ARE THE RESULT OF FIELD SURVEY UNLESS NOTED OTHERWISE. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH IS NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. DIG SAFELY NEW YORK MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.
- OBJECTS SHOWN ON THIS DRAWING WITH A DISTANCE INDICATING HOW FAR THAT OBJECT IS FROM A PARTICULAR LINE, LIE ON THE SAME SIDE OF THE LINE THAT THE OFFSET DISTANCE IS WRITTEN.

MAP REFERENCES:

- "SUBDIVISION OF LANDS OF CATHERINE HETTLING TO BE CONVEYED TO THE TOWN OF CLERMONT", DATED MAY 20, 2003, PREPARED BY ROBERT J. IHLENBURG, FILED IN THE COLUMBIA COUNTY CLERK'S OFFICE ON AUGUST 8, 2003 AS MAP 03-192.
- "ALTA/ACSM LAND TITLE SURVEY LANDS NOW OR FORMERLY OF TOWN OF CLERMONT FORMER HETTLING FARM SITE #E411015 NYSDEC ENVIRONMENTAL RESTORATION PROJECT" TOWN OF CLERMONT, COLUMBIA COUNTY, NEW YORK, PREPARED BY C.T. MALE ASSOCIATES, P.C. DATED MAY 11, 2012, DWG. NO. 12-346.

GENERAL NOTES:

- SUBCONTRACTOR SHALL BE AWARE THAT CONTAMINANTS EXIST IN THE SOIL, SEDIMENT AND GROUNDWATER. SUBCONTRACTOR SHALL USE APPROPRIATE PPE.
- THE SOILS ON SITE HAVE RECEIVED PERSISTENT INORGANIC AND ORGANIC PESTICIDE APPLICATION IN ADDITION TO FERTILIZERS, WHICH HAVE RESULTED IN HAZARDOUS SUBSTANCES IN THE SOIL. CONTAMINANTS MAY INCLUDE SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) OR ARSENIC CONTAMINATED SURFACE AND NEAR SURFACE SOIL. COAL TAR CREOSOTE AND/OR CHROMATED COPPER ARSENATE (CCA) PRESERVED RAILROAD TIES AND POLES WERE STOCKPILED ON SITE, WHICH MAY HAVE IMPACTED THE SOIL.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

**REMEDIAL
CONSTRUCTION
PROJECT**
00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-01

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

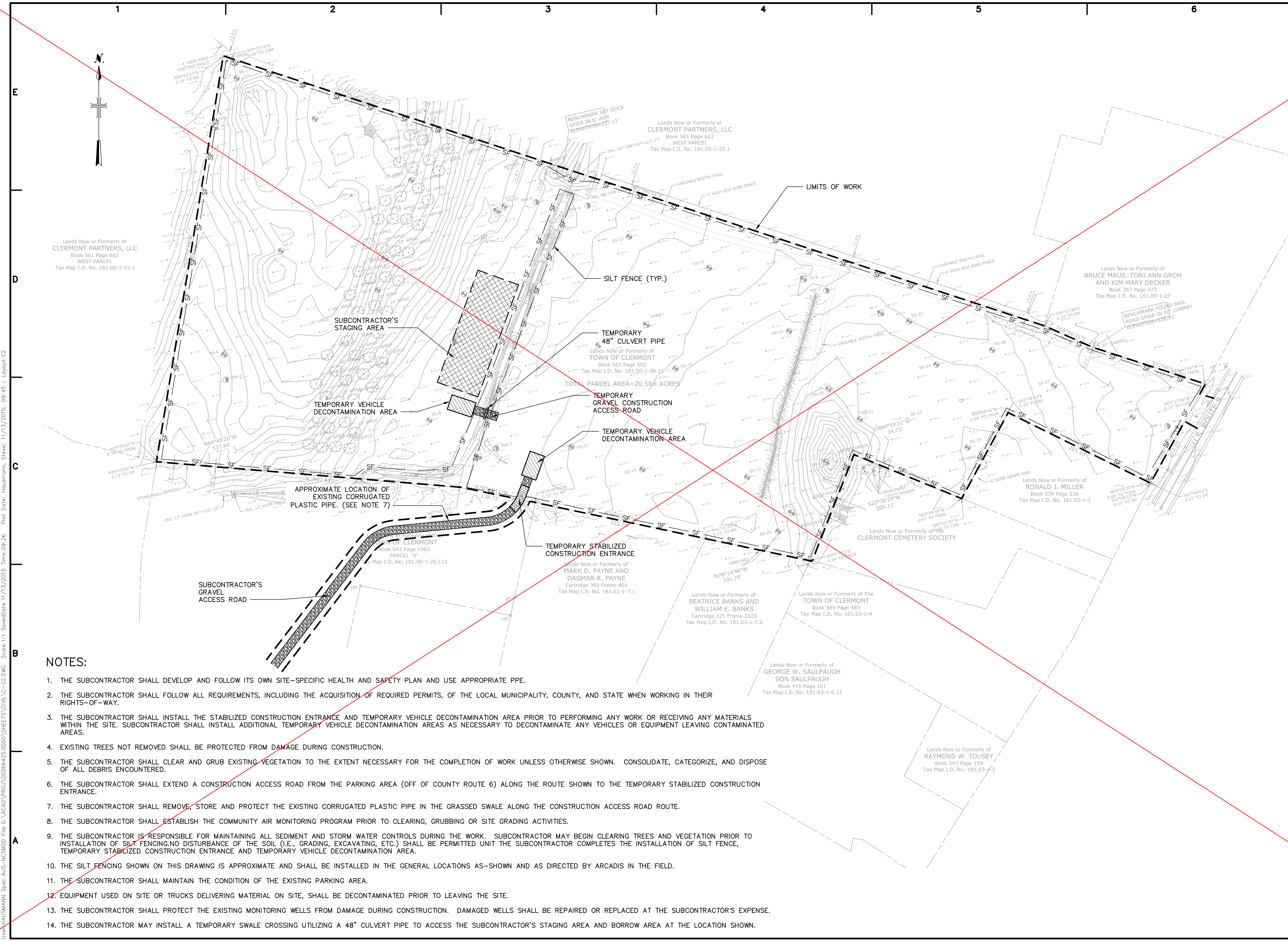
SHEET TITLE

**FORMER
HETTLING SITE**
EXISTING CONDITIONS

SCALE: 0 40' 80' 160'

C-01

SHEET 1 OF 14



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS

Division of Environmental Remediation

**REMEDIAL
CONSTRUCTION
PROJECT**

00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-02

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

**FORMER
HETTLING SITE**

**EROSION AND
STORMWATER CONTROL
PLAN**

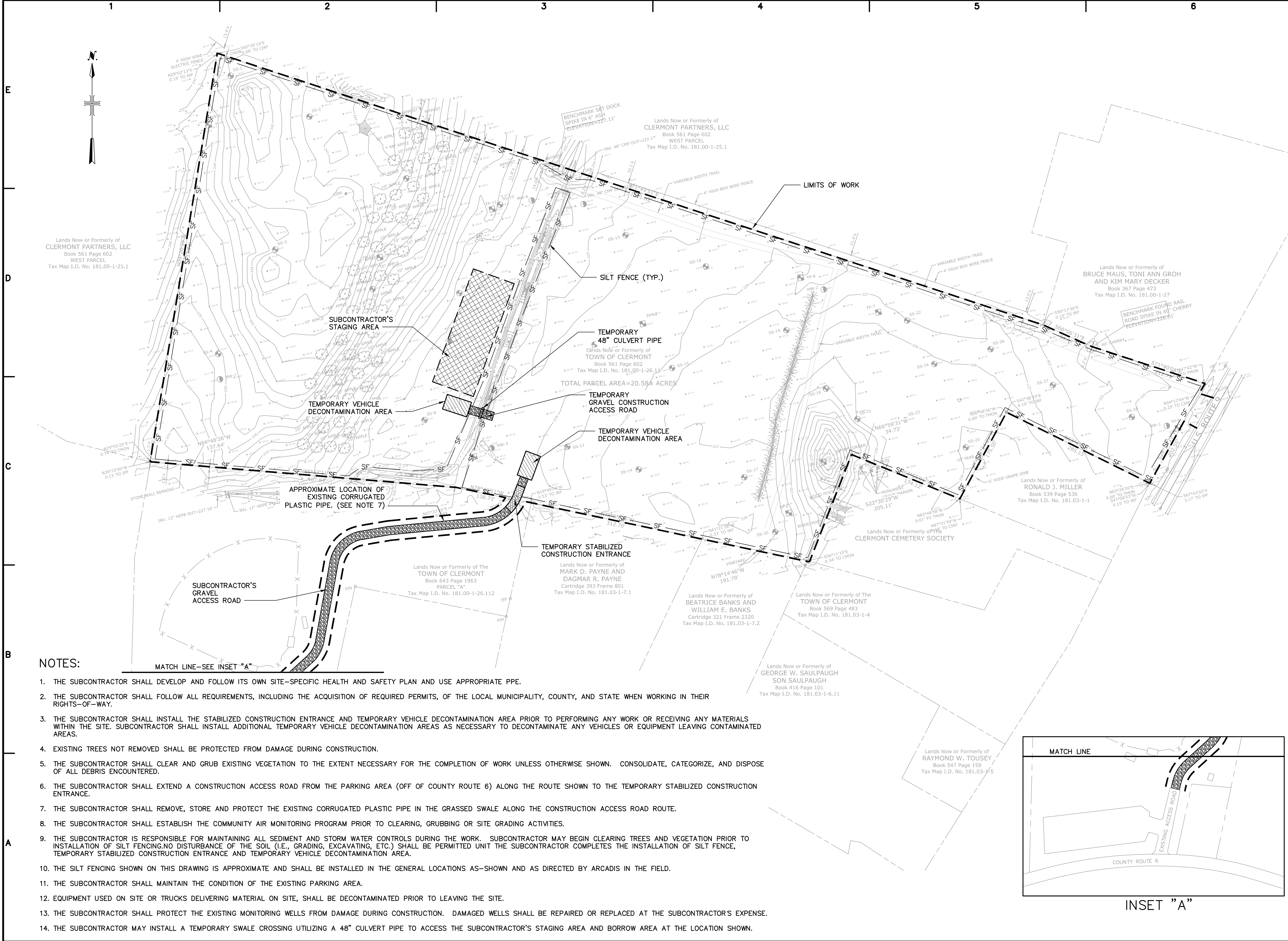
SCALE:

C-02

SHEET 2 OF 14

- NOTES:
1. THE SUBCONTRACTOR SHALL DEVELOP AND FOLLOW ITS OWN SITE-SPECIFIC HEALTH AND SAFETY PLAN AND USE APPROPRIATE PPE.
 2. THE SUBCONTRACTOR SHALL FOLLOW ALL REQUIREMENTS, INCLUDING THE ACQUISITION OF REQUIRED PERMITS, OF THE LOCAL MUNICIPALITY, COUNTY, AND STATE WHEN WORKING IN THEIR RIGHTS-OF-WAY.
 3. THE SUBCONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY VEHICLE DECONTAMINATION AREA PRIOR TO PERFORMING ANY WORK OR RECEIVING ANY MATERIALS WITHIN THE SITE. SUBCONTRACTOR SHALL INSTALL ADDITIONAL TEMPORARY VEHICLE DECONTAMINATION AREAS AS NECESSARY TO DECONTAMINATE ANY VEHICLES OR EQUIPMENT LEAVING CONTAMINATED AREAS.
 4. EXISTING TREES NOT REMOVED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
 5. THE SUBCONTRACTOR SHALL CLEAR AND GRUB EXISTING VEGETATION TO THE EXTENT NECESSARY FOR THE COMPLETION OF WORK UNLESS OTHERWISE SHOWN. CONSOLIDATE, CATEGORIZE, AND DISPOSE OF ALL DEBRIS ENCOUNTERED.
 6. THE SUBCONTRACTOR SHALL EXTEND A CONSTRUCTION ACCESS ROAD FROM THE PARKING AREA (OFF OF COUNTY ROUTE 6) ALONG THE ROUTE SHOWN TO THE TEMPORARY STABILIZED CONSTRUCTION ENTRANCE.
 7. THE SUBCONTRACTOR SHALL REMOVE, STORE AND PROTECT THE EXISTING CORRUGATED PLASTIC PIPE IN THE GRASSED SWALE ALONG THE CONSTRUCTION ACCESS ROAD ROUTE.
 8. THE SUBCONTRACTOR SHALL ESTABLISH THE COMMUNITY AIR MONITORING PROGRAM PRIOR TO CLEARING, GRUBBING OR SITE GRADING ACTIVITIES.
 9. THE SUBCONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT AND STORM WATER CONTROLS DURING THE WORK. SUBCONTRACTOR MAY BEGIN CLEARING TREES AND VEGETATION PRIOR TO INSTALLATION OF SILT FENCING. NO DISTURBANCE OF THE SOIL (I.E., GRADING, EXCAVATING, ETC.) SHALL BE PERMITTED UNTIL THE SUBCONTRACTOR COMPLETES THE INSTALLATION OF SILT FENCE, TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY VEHICLE DECONTAMINATION AREA.
 10. THE SILT FENCING SHOWN ON THIS DRAWING IS APPROXIMATE AND SHALL BE INSTALLED IN THE GENERAL LOCATIONS AS-SHOWN AND AS DIRECTED BY ARCADIS IN THE FIELD.
 11. THE SUBCONTRACTOR SHALL MAINTAIN THE CONDITION OF THE EXISTING PARKING AREA.
 12. EQUIPMENT USED ON SITE OR TRUCKS DELIVERING MATERIAL ON SITE, SHALL BE DECONTAMINATED PRIOR TO LEAVING THE SITE.
 13. THE SUBCONTRACTOR SHALL PROTECT THE EXISTING MONITORING WELLS FROM DAMAGE DURING CONSTRUCTION. DAMAGED WELLS SHALL BE REPAIRED OR REPLACED AT THE SUBCONTRACTOR'S EXPENSE.
 14. THE SUBCONTRACTOR MAY INSTALL A TEMPORARY SWALE CROSSING UTILIZING A 48" CULVERT PIPE TO ACCESS THE SUBCONTRACTOR'S STAGING AREA AND BORROW AREA AT THE LOCATION SHOWN.

User:HAUSMANN Spec:AUS-NCMOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-02.DWG Scale:1:1 SavedDate:11/24/2015 Time:16:27 Plot Date: Hausmann, Steve; 11/24/2015; 16:28 ; Layout: C2



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS

Department of Environmental Conservation

Division of Environmental Remediation

REMEDIAL CONSTRUCTION PROJECT

00266425

1	11/24/15	ADD INSET "A"	E.L.
NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC. 2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-02

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

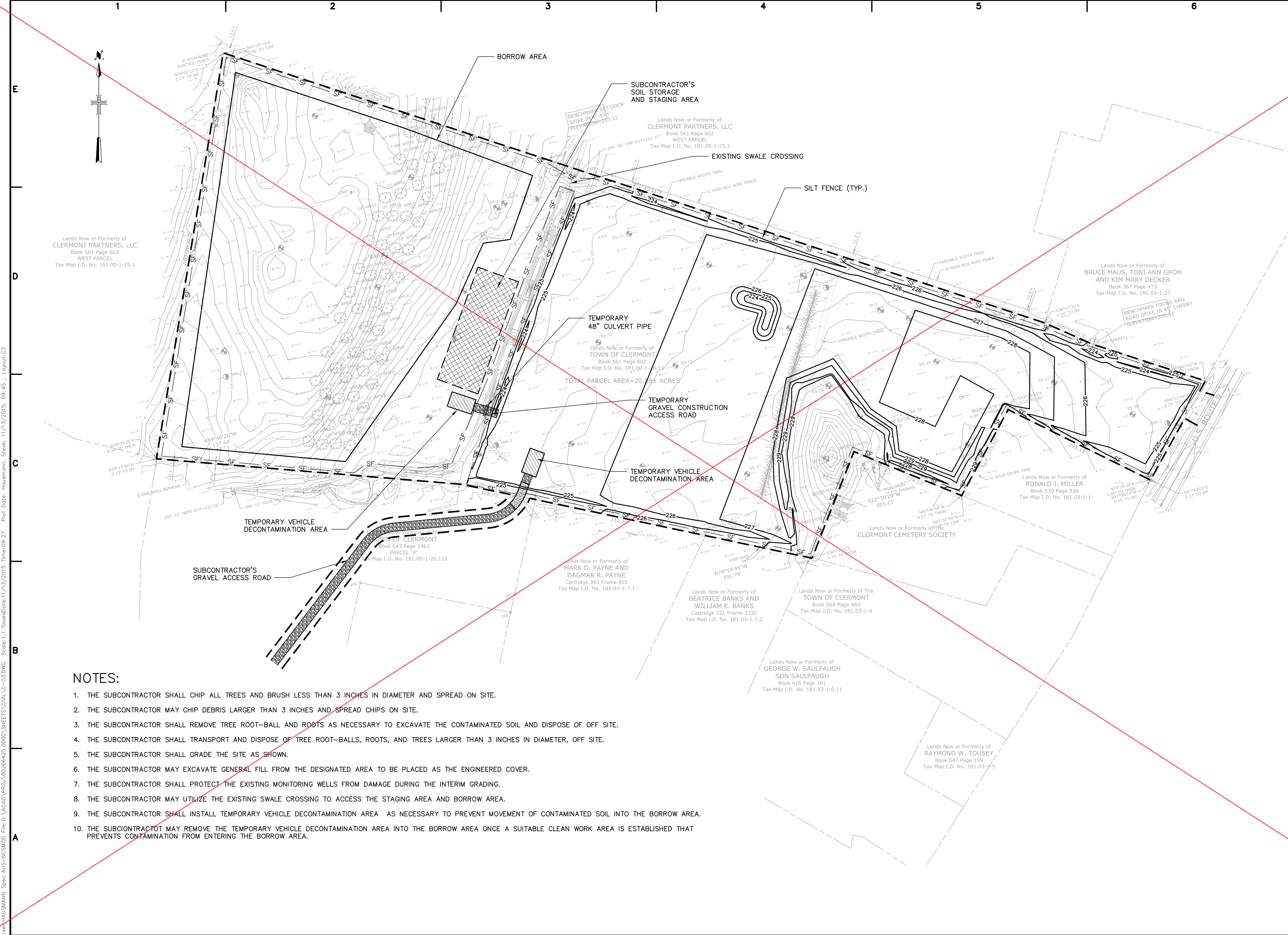
FORMER HETTLING SITE

EROSION AND STORMWATER CONTROL PLAN

SCALE: 0 40' 80' 160'

C-02

SHEET 2 OF 14



NOTES:

1. THE SUBCONTRACTOR SHALL CHIP ALL TREES AND BRUSH LESS THAN 3 INCHES IN DIAMETER AND SPREAD ON SITE.
2. THE SUBCONTRACTOR MAY CHIP DEBRIS LARGER THAN 3 INCHES AND SPREAD CHIPS ON SITE.
3. THE SUBCONTRACTOR SHALL REMOVE TREE ROOT-BALL AND ROOTS AS NECESSARY TO EXCAVATE THE CONTAMINATED SOIL AND DISPOSE OF OFF SITE.
4. THE SUBCONTRACTOR SHALL TRANSPORT AND DISPOSE OF TREE ROOT-BALLS, ROOTS, AND TREES LARGER THAN 3 INCHES IN DIAMETER, OFF SITE.
5. THE SUBCONTRACTOR SHALL GRADE THE SITE AS SHOWN.
6. THE SUBCONTRACTOR MAY EXCAVATE GENERAL FILL FROM THE DESIGNATED AREA TO BE PLACED AS THE ENGINEERED COVER.
7. THE SUBCONTRACTOR SHALL PROTECT THE EXISTING MONITORING WELLS FROM DAMAGE DURING THE INTERIM GRADING.
8. THE SUBCONTRACTOR MAY UTILIZE THE EXISTING SWALE CROSSING TO ACCESS THE STAGING AREA AND BORROW AREA.
9. THE SUBCONTRACTOR SHALL INSTALL TEMPORARY VEHICLE DECONTAMINATION AREA AS NECESSARY TO PREVENT MOVEMENT OF CONTAMINATED SOIL INTO THE BORROW AREA.
10. THE SUBCONTRACTOR MAY REMOVE THE TEMPORARY VEHICLE DECONTAMINATION AREA INTO THE BORROW AREA ONCE A SUITABLE CLEAN WORK AREA IS ESTABLISHED THAT PREVENTS CONTAMINATION FROM ENTERING THE BORROW AREA.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Department of
Environmental
Conservation

Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015
PROJECT NO.: 00266425
FILE NAME: C-03
DESIGNED BY: E. LANZAROTTA
DRAWN BY: S. HAUSMANN
CHECKED BY: D. LOEWENSTEIN

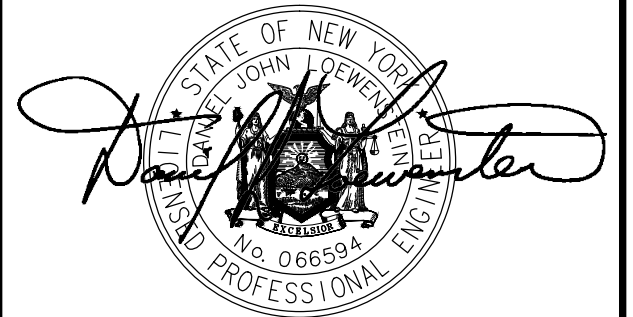
SHEET TITLE

FORMER
HETTLING SITE
INTERIM GRADING PLAN

SCALE: 0 40' 80' 160'

C-03

SHEET 3 OF 14



REMEDIAL
CONSTRUCTION
PROJECT

00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-04

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

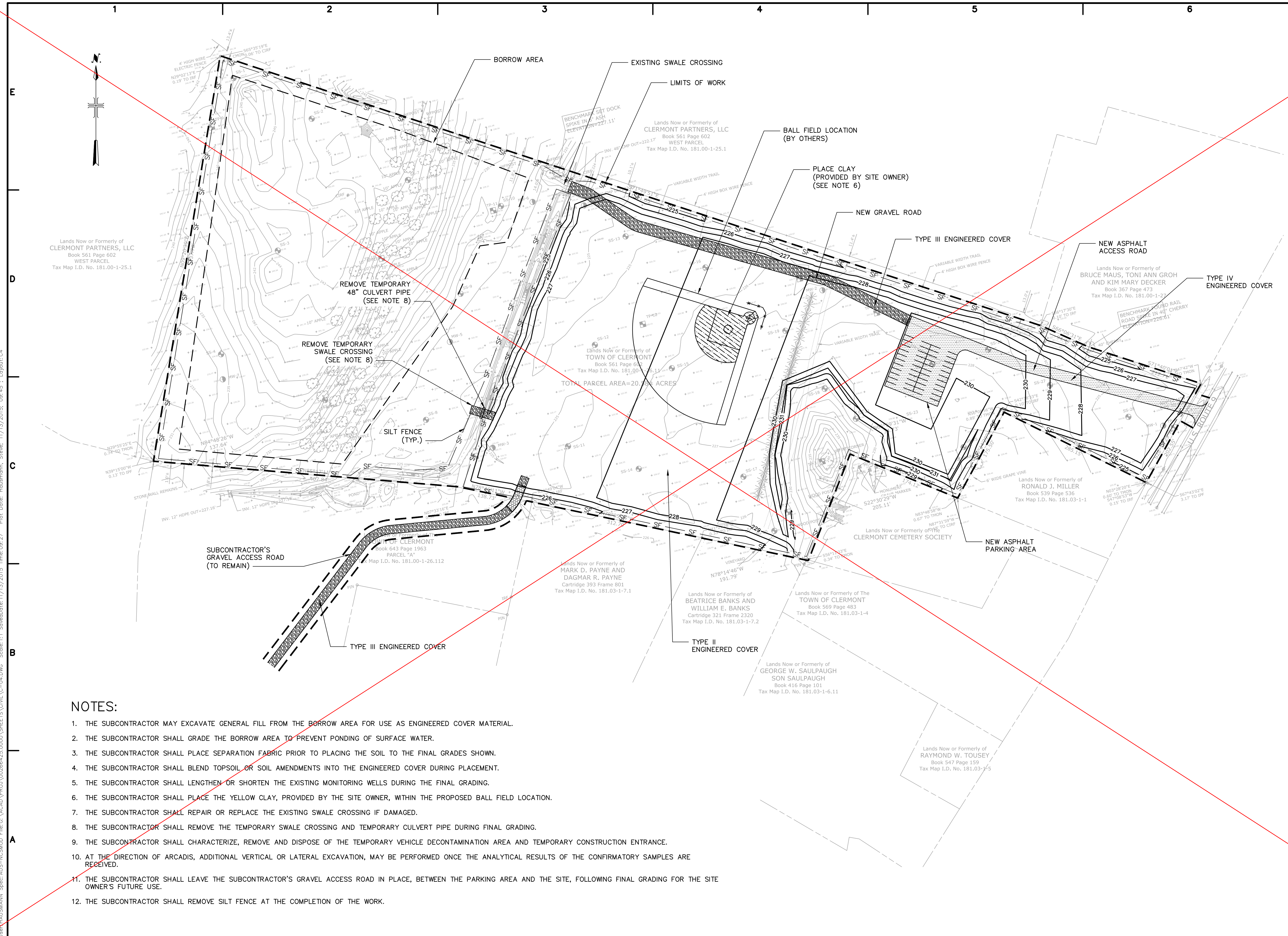
SHEET TITLE

FORMER
HETTLING SITE
FINAL GRADING PLAN

SCALE: 0 40' 80' 160'

~~C-04~~

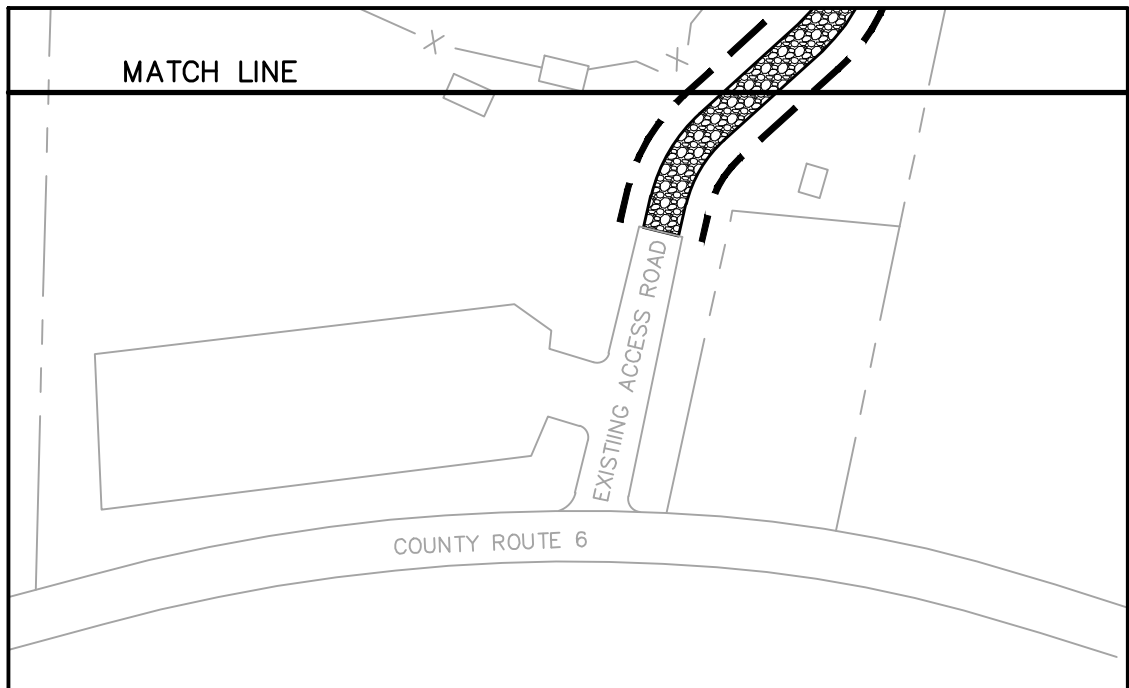
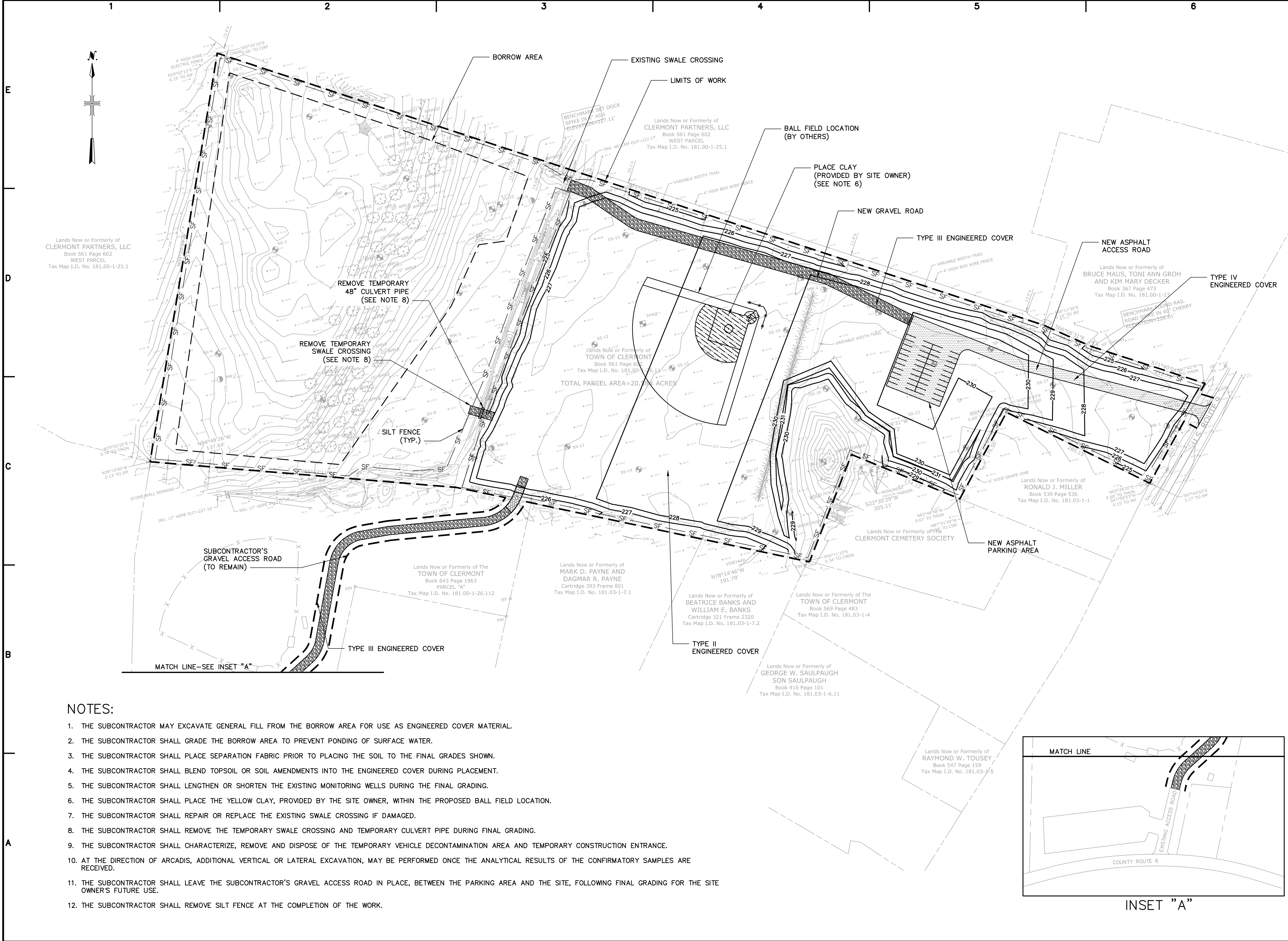
SHEET 4 OF 14



NOTES:

1. THE SUBCONTRACTOR MAY EXCAVATE GENERAL FILL FROM THE BORROW AREA FOR USE AS ENGINEERED COVER MATERIAL.
2. THE SUBCONTRACTOR SHALL GRADE THE BORROW AREA TO PREVENT PONDING OF SURFACE WATER.
3. THE SUBCONTRACTOR SHALL PLACE SEPARATION FABRIC PRIOR TO PLACING THE SOIL TO THE FINAL GRADES SHOWN.
4. THE SUBCONTRACTOR SHALL BLEND TOPSOIL OR SOIL AMENDMENTS INTO THE ENGINEERED COVER DURING PLACEMENT.
5. THE SUBCONTRACTOR SHALL LENGTHEN OR SHORTEN THE EXISTING MONITORING WELLS DURING THE FINAL GRADING.
6. THE SUBCONTRACTOR SHALL PLACE THE YELLOW CLAY, PROVIDED BY THE SITE OWNER, WITHIN THE PROPOSED BALL FIELD LOCATION.
7. THE SUBCONTRACTOR SHALL REPAIR OR REPLACE THE EXISTING SWALE CROSSING IF DAMAGED.
8. THE SUBCONTRACTOR SHALL REMOVE THE TEMPORARY SWALE CROSSING AND TEMPORARY CULVERT PIPE DURING FINAL GRADING.
9. THE SUBCONTRACTOR SHALL CHARACTERIZE, REMOVE AND DISPOSE OF THE TEMPORARY VEHICLE DECONTAMINATION AREA AND TEMPORARY CONSTRUCTION ENTRANCE.
10. AT THE DIRECTION OF ARCADIS, ADDITIONAL VERTICAL OR LATERAL EXCAVATION, MAY BE PERFORMED ONCE THE ANALYTICAL RESULTS OF THE CONFIRMATORY SAMPLES ARE RECEIVED.
11. THE SUBCONTRACTOR SHALL LEAVE THE SUBCONTRACTOR'S GRAVEL ACCESS ROAD IN PLACE, BETWEEN THE PARKING AREA AND THE SITE, FOLLOWING FINAL GRADING FOR THE SITE OWNER'S FUTURE USE.
12. THE SUBCONTRACTOR SHALL REMOVE SILT FENCE AT THE COMPLETION OF THE WORK.

User:HAUSMANN Spec:AUS-NC5MOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-04.DWG Scale:1:1 SavedDate:11/24/2015 Time:16:22 Plot Date: Hausmann, Steve; 11/24/2015; 16:31 : Layout: C4



NOTES:

1. THE SUBCONTRACTOR MAY EXCAVATE GENERAL FILL FROM THE BORROW AREA FOR USE AS ENGINEERED COVER MATERIAL.
2. THE SUBCONTRACTOR SHALL GRADE THE BORROW AREA TO PREVENT PONDING OF SURFACE WATER.
3. THE SUBCONTRACTOR SHALL PLACE SEPARATION FABRIC PRIOR TO PLACING THE SOIL TO THE FINAL GRADES SHOWN.
4. THE SUBCONTRACTOR SHALL BLEND TOPSOIL OR SOIL AMENDMENTS INTO THE ENGINEERED COVER DURING PLACEMENT.
5. THE SUBCONTRACTOR SHALL LENGTHEN OR SHORTEN THE EXISTING MONITORING WELLS DURING THE FINAL GRADING.
6. THE SUBCONTRACTOR SHALL PLACE THE YELLOW CLAY, PROVIDED BY THE SITE OWNER, WITHIN THE PROPOSED BALL FIELD LOCATION.
7. THE SUBCONTRACTOR SHALL REPAIR OR REPLACE THE EXISTING SWALE CROSSING IF DAMAGED.
8. THE SUBCONTRACTOR SHALL REMOVE THE TEMPORARY SWALE CROSSING AND TEMPORARY CULVERT PIPE DURING FINAL GRADING.
9. THE SUBCONTRACTOR SHALL CHARACTERIZE, REMOVE AND DISPOSE OF THE TEMPORARY VEHICLE DECONTAMINATION AREA AND TEMPORARY CONSTRUCTION ENTRANCE.
10. AT THE DIRECTION OF ARCADIS, ADDITIONAL VERTICAL OR LATERAL EXCAVATION, MAY BE PERFORMED ONCE THE ANALYTICAL RESULTS OF THE CONFIRMATORY SAMPLES ARE RECEIVED.
11. THE SUBCONTRACTOR SHALL LEAVE THE SUBCONTRACTOR'S GRAVEL ACCESS ROAD IN PLACE, BETWEEN THE PARKING AREA AND THE SITE, FOLLOWING FINAL GRADING FOR THE SITE OWNER'S FUTURE USE.
12. THE SUBCONTRACTOR SHALL REMOVE SILT FENCE AT THE COMPLETION OF THE WORK.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

1	11/24/15	ADD INSET "A"	E.L.
NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015
PROJECT NO.: 00266425
FILE NAME: C-04
DESIGNED BY: E. LANZAROTTA
DRAWN BY: S. HAUSMANN
CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

FORMER
HETTLING SITE
FINAL GRADING PLAN

SCALE: 0 40' 80' 160'

C-04

SHEET 4 OF 14

1. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED JUNE 29 AND 30, 2015.
2. NORTH ORIENTATION AND BEARINGS ARE GRID NORTH BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83 (2011) EPOCH 2010.00 AS OBTAINED FROM GPS OBSERVATIONS.
3. VERTICAL DATUM SHOWN HEREON IS NAVD 88 AND WAS OBTAINED FROM GPS OBSERVATIONS WHICH WERE POST PROCESSED USING ALBANY AND SARATOGA CORS WITH A DIRECT TIE TO USC&GS BENCHMARK S 42.
4. OBJECTS SHOWN ON THIS DRAWING WITH A DISTANCE INDICATING HOW FAR THAT OBJECT IS FROM A PARTICULAR LINE, LIE ON THE SAME SIDE OF THE LINE THAT THE OFFSET DISTANCE IS WRITTEN.
5. THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS, IF ANY EXIST, OR AS SHOWN HEREON, ARE NOT CERTIFIED. THERE MAY BE UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. DIG SAFELY NEW YORK MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS EXCAVATION AND CONSTRUCTION.
6. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN UP TO DATE ABSTRACT OF TITLE OR TITLE REPORT AND IS THEREFORE SUBJECT TO ANY EASEMENTS, COVENANTS, RESTRICTIONS OR ANY STATEMENT OF FACT THAT SUCH DOCUMENTS MAY DISCLOSE.

1. "PIERHEAD AND BULKHEAD LINES, HUDSON RIVER, N.Y. WATERFORD TO HUDSON, SHEET NO. 2, U.S. DAM TO PORT SCHUYLER" PREPARED BY THE U.S. ENGINEER SUB-OFFICE, FIRST DISTRICT, N.Y. DATE APPROVED MAY 10, 1934.
2. "TOPOGRAPHIC SURVEY PORTION OF LANDS OF SCOLITE INTERNATIONAL CO. PREPARED FOR R. KELLY FREDMAN" PREPARED BY C.T. MALE ASSOCIATES DATED MAY 17, 1994, PROJ. NO 94.4491, DWG. NO. 94-286.
3. "ALTA/ACSM LAND TITLE SURVEY PORTION OF LANDS OF THE CITY OF TROY, NEW YORK" PREPARED BY DAVID A. FLANDERS SURVEYING & SITE CONSULTANT, PLLC DATED AUGUST 28, 2009 MAP NO. 09-44-L, PROVIDED AS COURTESY.

1. SUBCONTRACTOR SHALL BE AWARE THAT CONTAMINANTS EXIST IN THE SOIL AND GROUNDWATER. SUBCONTRACTOR SHALL USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE).
2. THE SOILS ON THE SITE HAVE RECEIVED PERSISTENT INDUSTRIAL USE WHICH HAVE RESULTED IN HAZARDOUS SUBSTANCES IN THE SOIL. CONTAMINANTS MAY INCLUDE VOLATILE ORGANIC COMPOUNDS (VOC), SEMI VOLATILE ORGANIC COMPOUNDS (SVOC), EPA METALS, PETROLEUM PRODUCTS, ASBESTOS CONTAMINATED MATERIALS (ACM) AND POLYCHLORINATED BIPHENYLS (PCB).



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

[illegible]

COPYRIGHT: ARCADIS CE, INC.
2015

DATE:	NOVEMBER 2015
PROJECT NO.:	00266425
FILE NAME:	C-05
DESIGNED BY:	E. LANZAROTTA
DRAWN BY:	S. HAUSMANN
CHECKED BY:	D. LOEWENSTEIN

SHEET TITLE

FORMER
SCOLITE SITE

EXISTING CONDITIONS

SCALE: 0 30' 60'

C-05

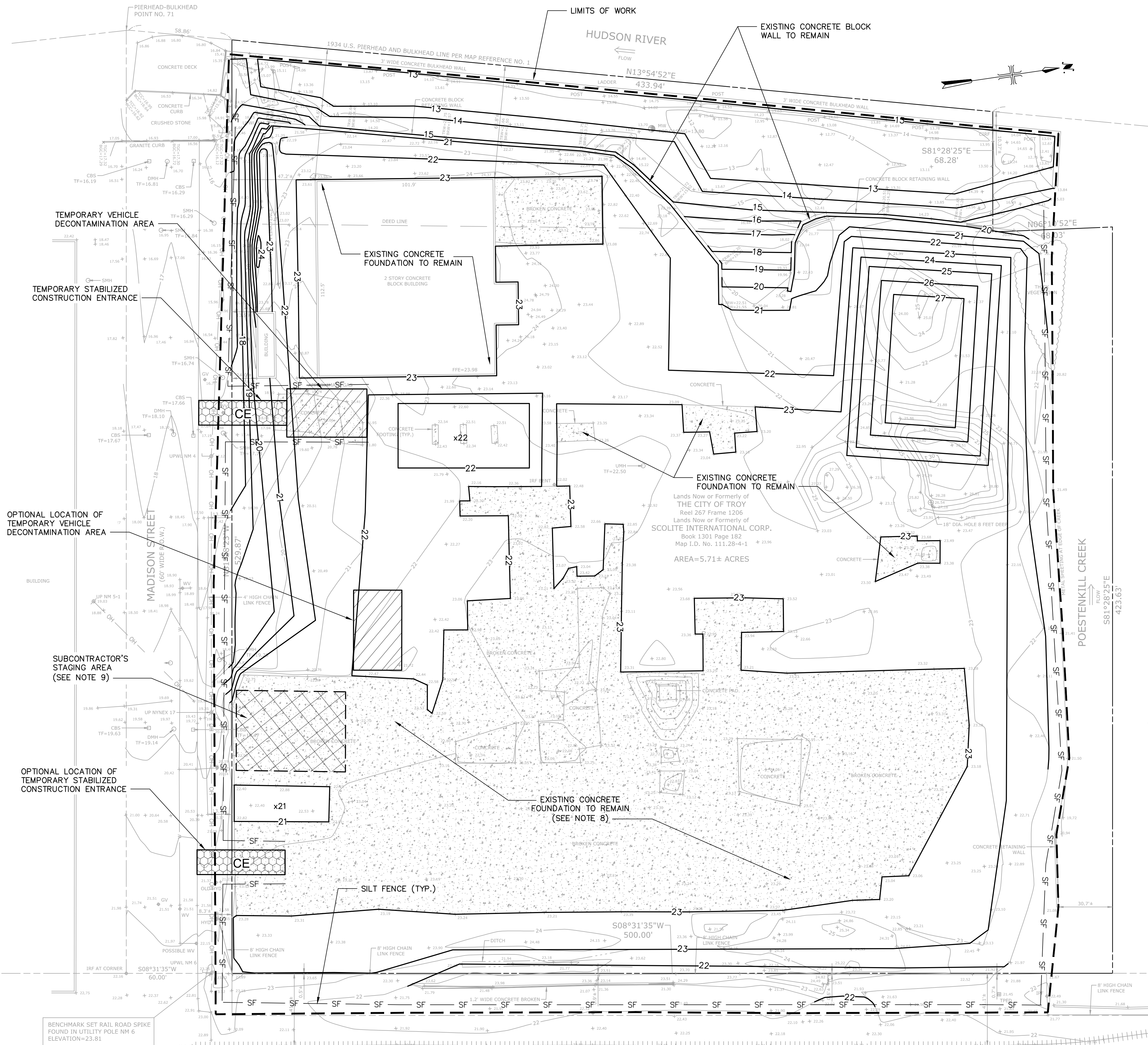
SHEET 5 OF 14

Lands Now or Formerly of
NEW YORK CENTRAL LINES LLC

User: HAUSMANN Spec: AUS - NCSMOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-07.DWG Scale: 1:1 Saved Date: 11/13/2015 Time: 09:29 Plot Date: Hausmann, Steve; 11/13/2015, 09:46 : Layout: C7

NOTES:

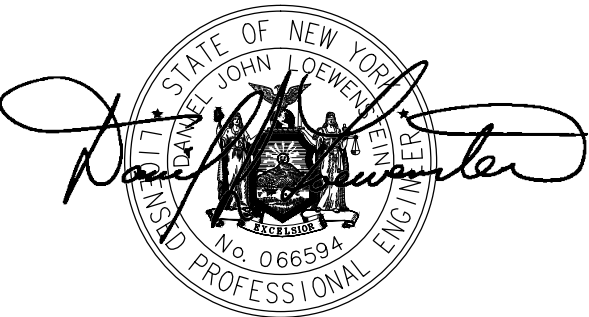
1. THE SUBCONTRACTOR SHALL CHIP ALL TREES AND BRUSH LESS THAN 3 INCHES IN DIAMETER AND SPREAD ON SITE.
2. THE SUBCONTRACTOR MAY CHIP DEBRIS LONGER THAN 3 INCHES AND SPREAD CHIPS ON SITE.
3. THE SUBCONTRACTOR SHALL REMOVE TREE ROOT-BALL AND ROOTS AS NECESSARY TO EXCAVATE THE CONTAMINATED SOIL AND DISPOSE OF OFF SITE.
4. THE SUBCONTRACTOR SHALL TRANSPORT AND DISPOSE OF TREE ROOT-BALLS, ROOTS, AND TREES LARGER THAN 3 INCHES IN DIAMETER, OFF SITE.
5. THE SUBCONTRACTOR SHALL GRADE THE SITE AS SHOWN.
6. THE SUBCONTRACTOR SHALL PROTECT THE EXISTING MONITORING WELLS FROM DAMAGE DURING THE INTERIM GRADING.
7. THE SUBCONTRACTOR SHALL EXCAVATE POSTS FOR NEW CHAIN LINK FENCE. SOIL EXCAVATED FROM THE POST HOLES, SHALL BE PLACED IN THE INTERIM GRADING CONTOURS.
8. THE SUBCONTRACTOR SHALL SWEEP THE CONCRETE FREE OF DIRT AND DEBRIS.
9. THE SUBCONTRACTOR MAY ESTABLISH THE STAGING AREA ON THE CONCRETE AFTER THE CONCRETE HAS BEEN DECONTAMINATED.
10. THE SUBCONTRACTOR MAY UTILIZE THE CONCRETE SURFACE FOR PARKING ONCE THE CONCRETE HAS BEEN DECONTAMINATED.
11. THE SUBCONTRACTOR SHALL NOT TRANSITION VEHICLES OR PERSONNEL BETWEEN DECONTAMINATED CONCRETE AND CONTAMINATED CONCRETE UNLESS BEING DECONTAMINATED.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

NO.	DATE	ISSUED FOR	BY
-----	------	------------	----

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015
PROJECT NO.: 00266425
FILE NAME: C-07
DESIGNED BY: E. LANZAROTTA
DRAWN BY: S. HAUSMANN
CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

FORMER
SCOLITE SITE
INTERIM
GRADING PLAN

SCALE: 0 30' 60'

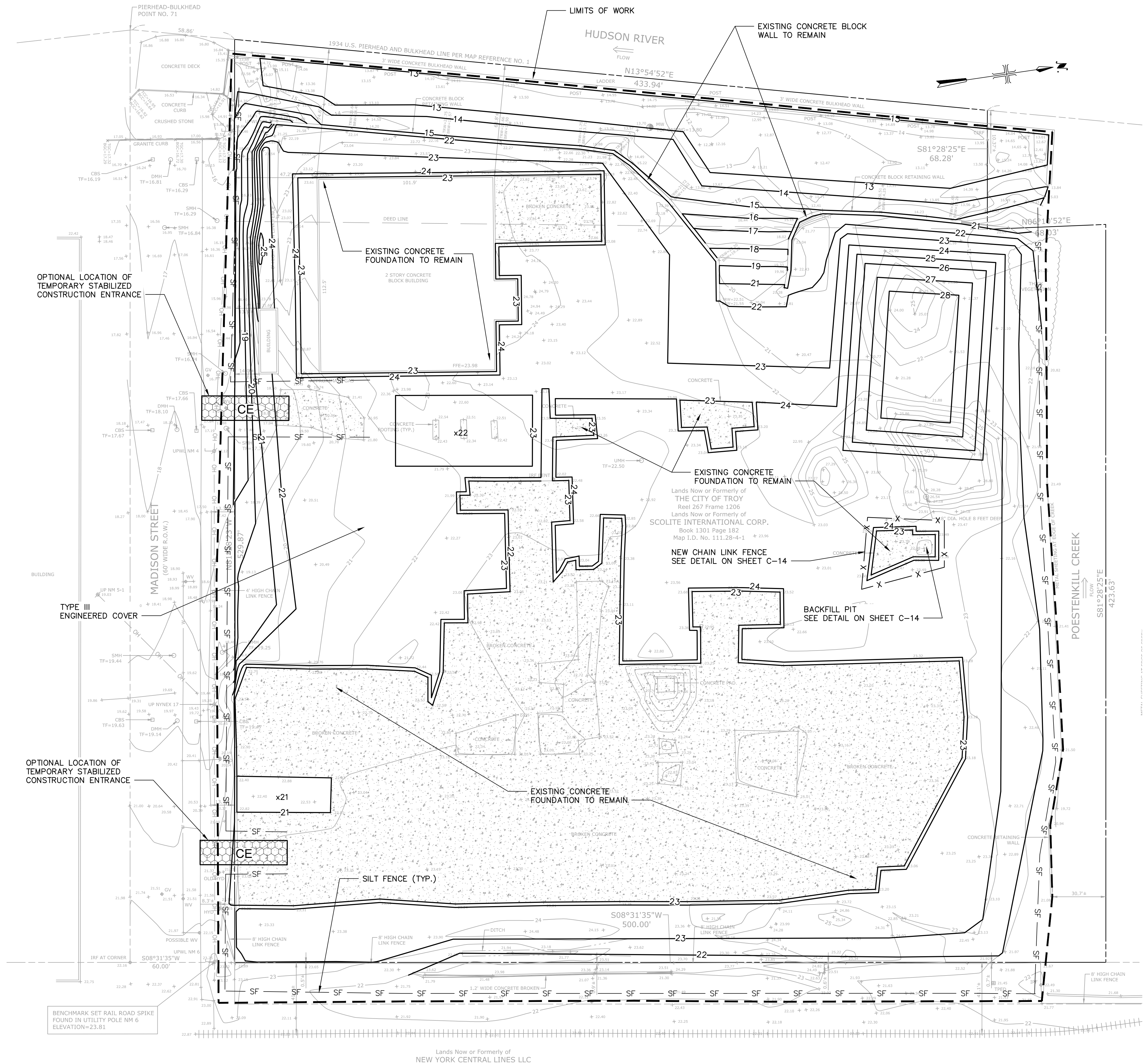
C-07

SHEET 7 OF 14

User:HAUSMANN Spec:AUS-NCMOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-08.DWG Scale:1:1 SavedDate:11/13/2015 Time:09:29 Plot Date: Hausmann, Steve; 11/13/2015; 09:46 : Layout:08

NOTES:

1. THE SUBCONTRACTOR SHALL PLACE SEPARATION FABRIC PRIOR TO PLACING THE SOIL TO THE FINAL GRADES SHOWN.
2. THE SUBCONTRACTOR SHALL CHARACTERIZE, REMOVE AND DISPOSE OF THE TEMPORARY VEHICLE DECONTAMINATION AREA AND TEMPORARY CONSTRUCTION ENTRANCE.
3. AT THE DIRECTION OF ARCADIS, ADDITIONAL VERTICAL OR LATERAL EXCAVATION, MAY BE PERFORMED ONCE THE ANALYTICAL RESULTS OF THE CONFIRMATORY SAMPLES ARE RECEIVED.
4. INSTALL NEW CHAIN LINK FENCE AT THE LOCATIONS SHOWN.
5. THE SUBCONTRACTOR SHALL LENGTHEN OR SHORTEN THE EXISTING MONITORING WELLS DURING THE FINAL GRADING.
6. THE SUBCONTRACTOR SHALL REMOVE SILT FENCE AT THE COMPLETION OF THE WORK.



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

NO.	DATE	ISSUED FOR	BY
-----	------	------------	----

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015
PROJECT NO.: 00266425
FILE NAME: C-08
DESIGNED BY: E. LANZAROTTA
DRAWN BY: S. HAUSMANN
CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

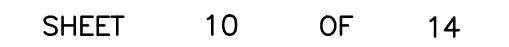
FORMER
SCOLITE SITE

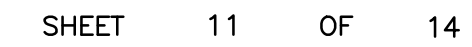
FINAL
GRADING PLAN

SCALE: 0 30' 60'

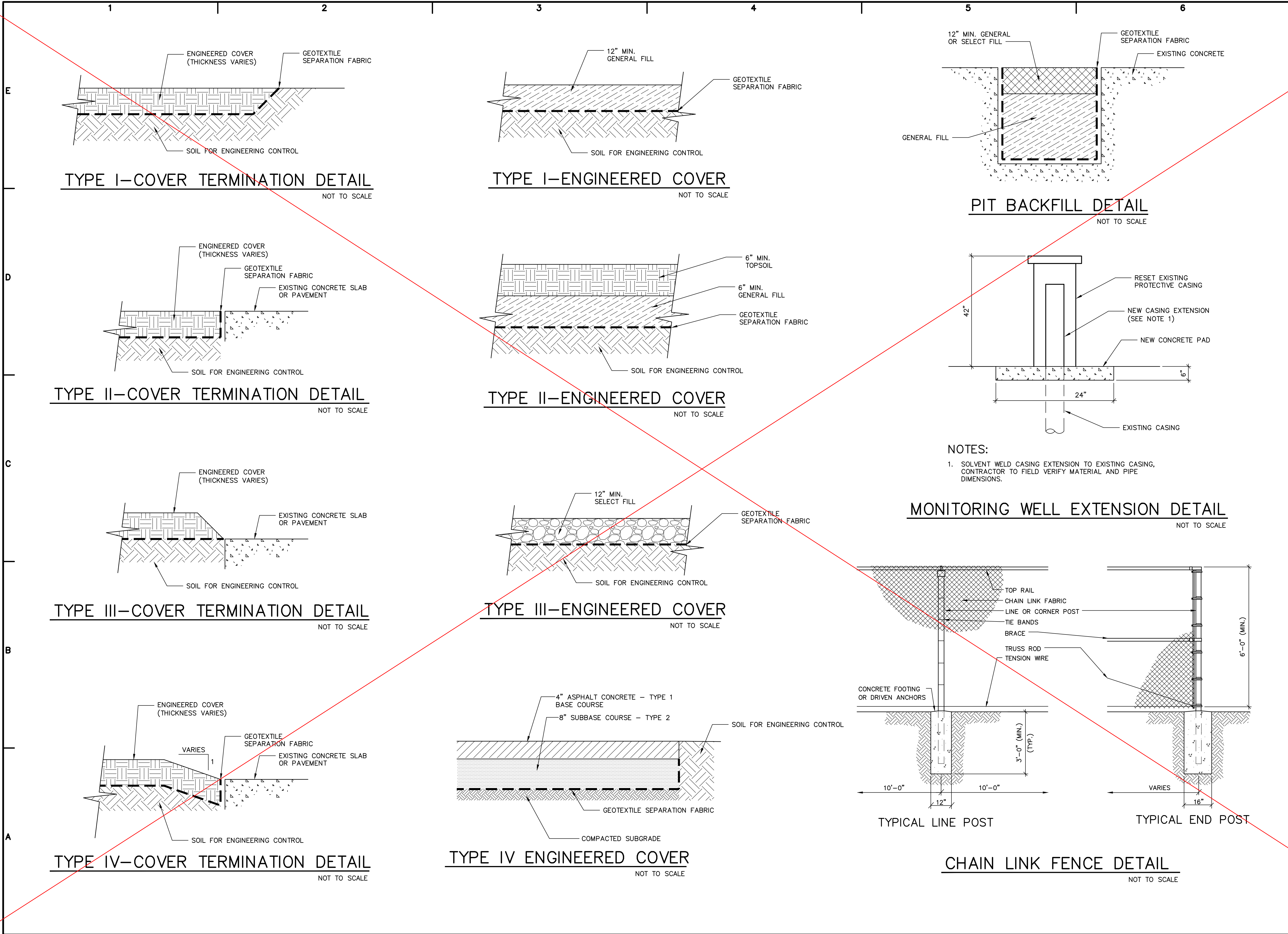
C-08

SHEET 8 OF 14





Use: HAUSMANN Spec: AUS-NC5MOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-14.DWG Scale: 1:1 SaveDate: 11/13/2015 Time: 09:33 Plot Date: Hausmann, Steve; 11/13/2015; 09:47 ; Layout: C14



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS

Department of
Environmental
Conservation

Division of Environmental Remediation

**REMEDIAL
CONSTRUCTION
PROJECT**

00266425

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS CE, INC. 2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-14

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

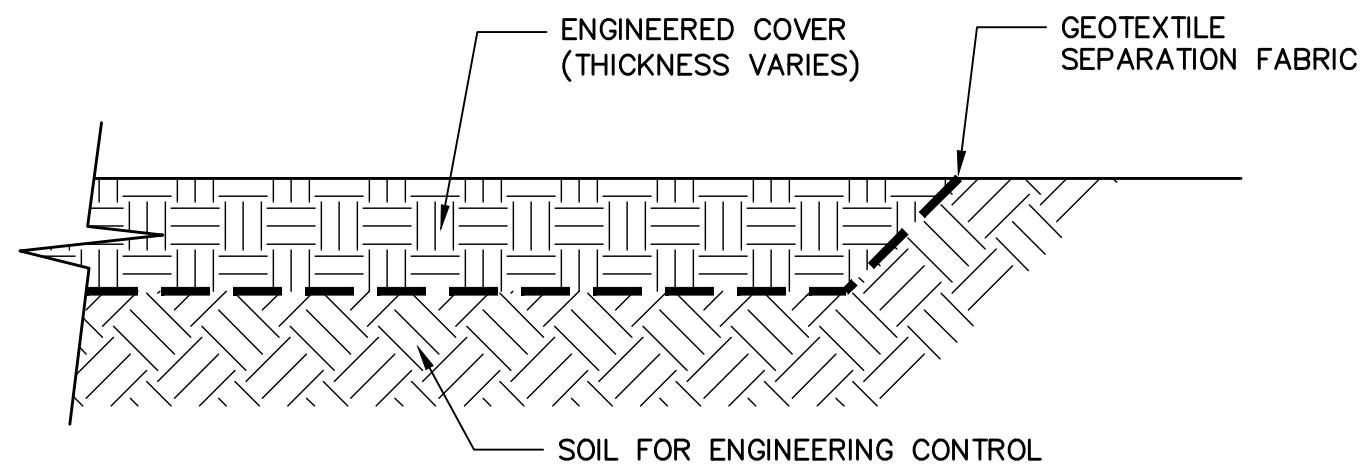
DETAILS 2

SCALE: AS SHOWN

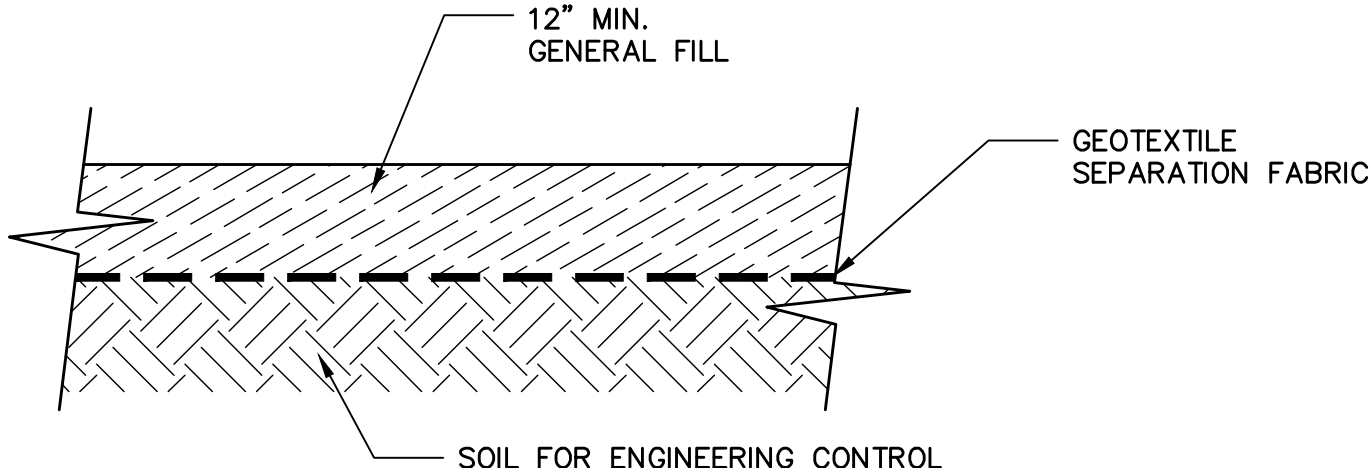
C-14

SHEET 14 OF 14

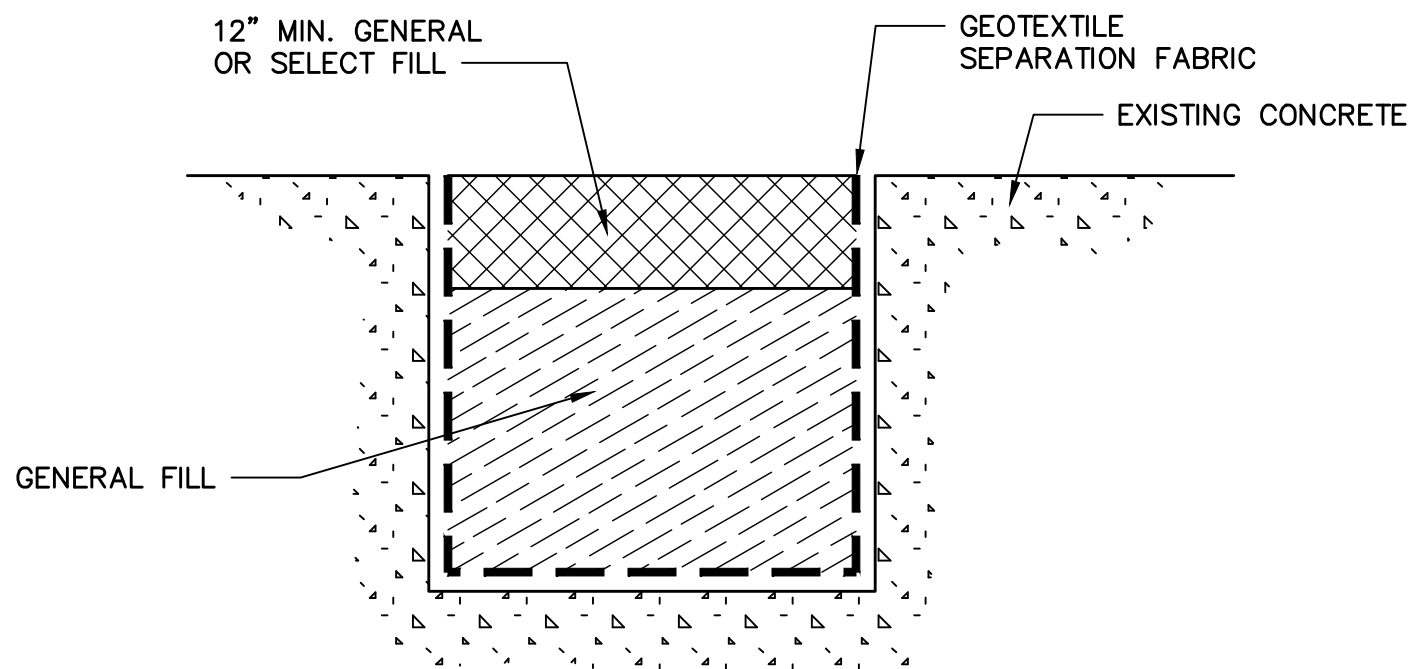
User:HAUSMANN Spec:AUS-NC5MOD File G:\ACAD\PROJ\00266425\0000\SHEETS\CIVIL\C-14.DWG Scale:1:1 SaveDate:12/1/2015 14:48 Layout:C14



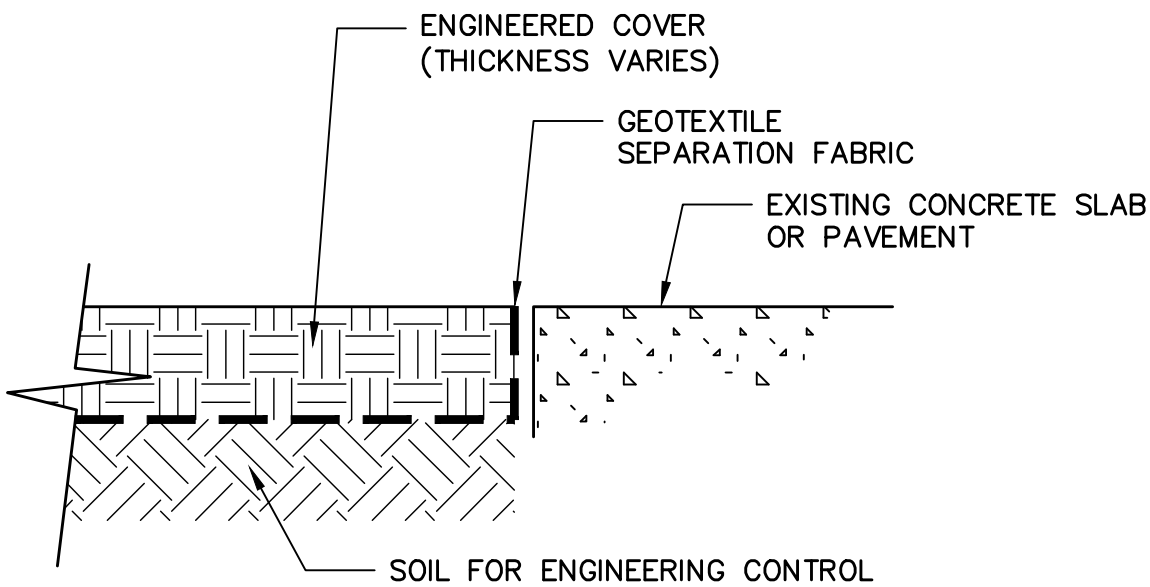
TYPE I-COVER TERMINATION DETAIL
NOT TO SCALE



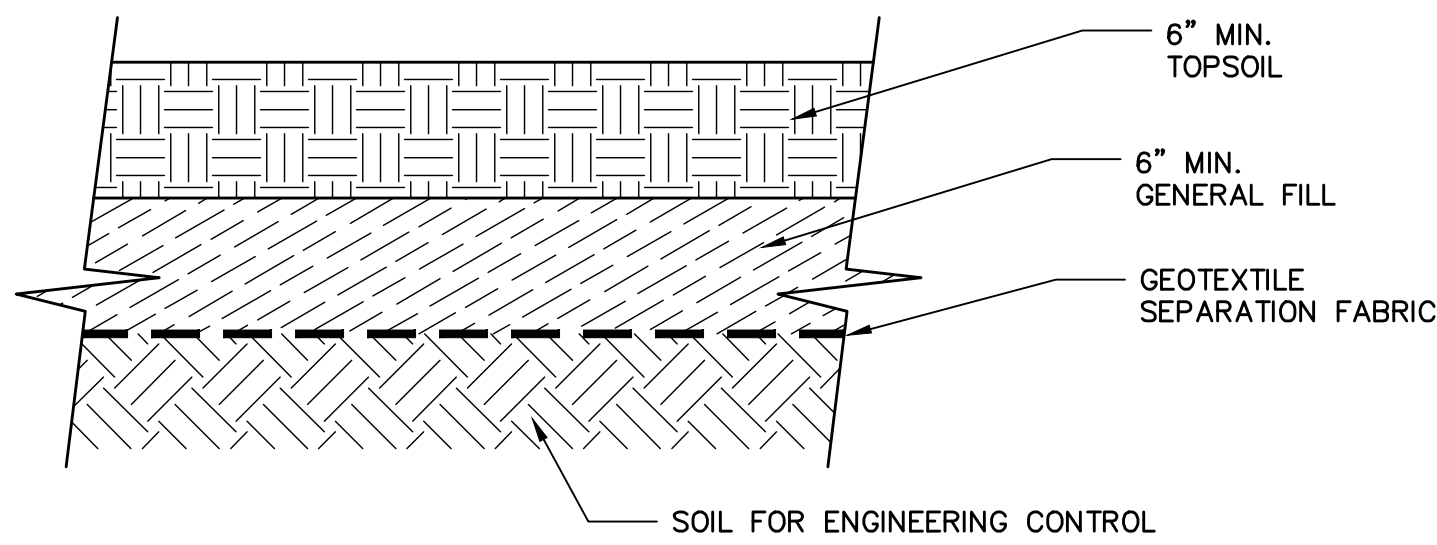
TYPE I-ENGINEERED COVER
NOT TO SCALE



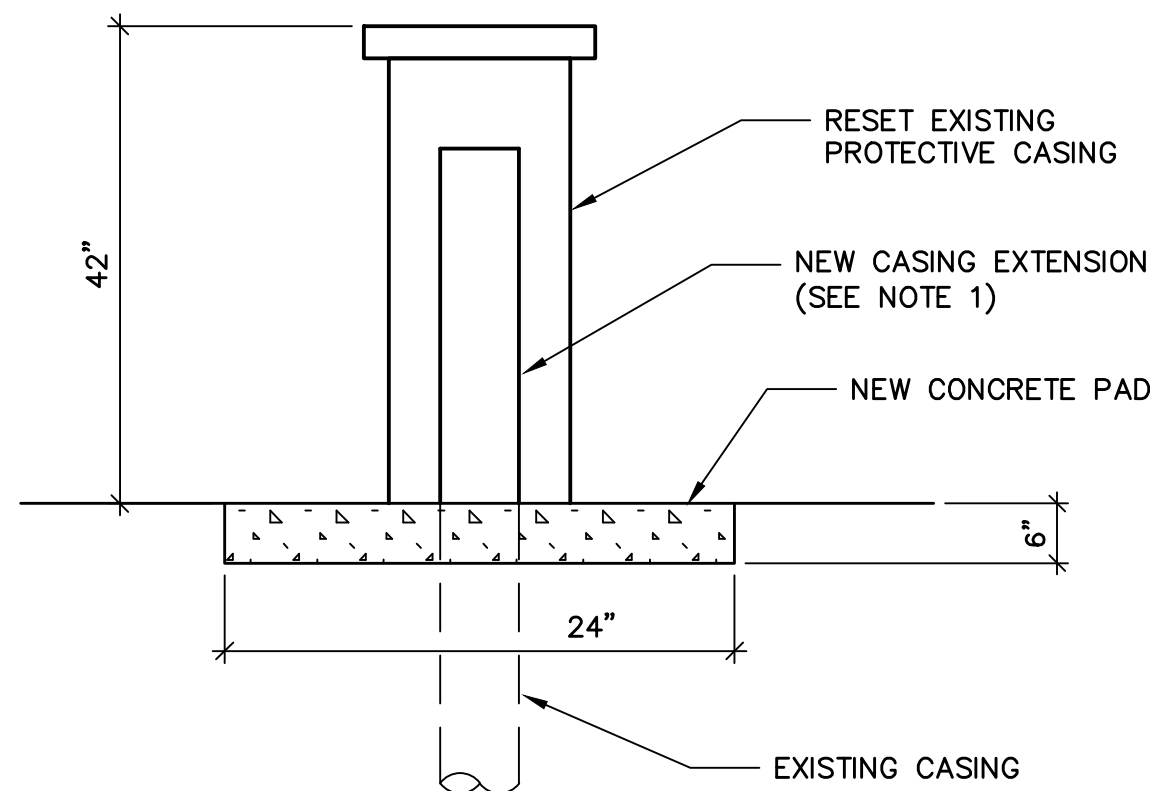
PIT BACKFILL DETAIL
NOT TO SCALE



TYPE II-COVER TERMINATION DETAIL
NOT TO SCALE

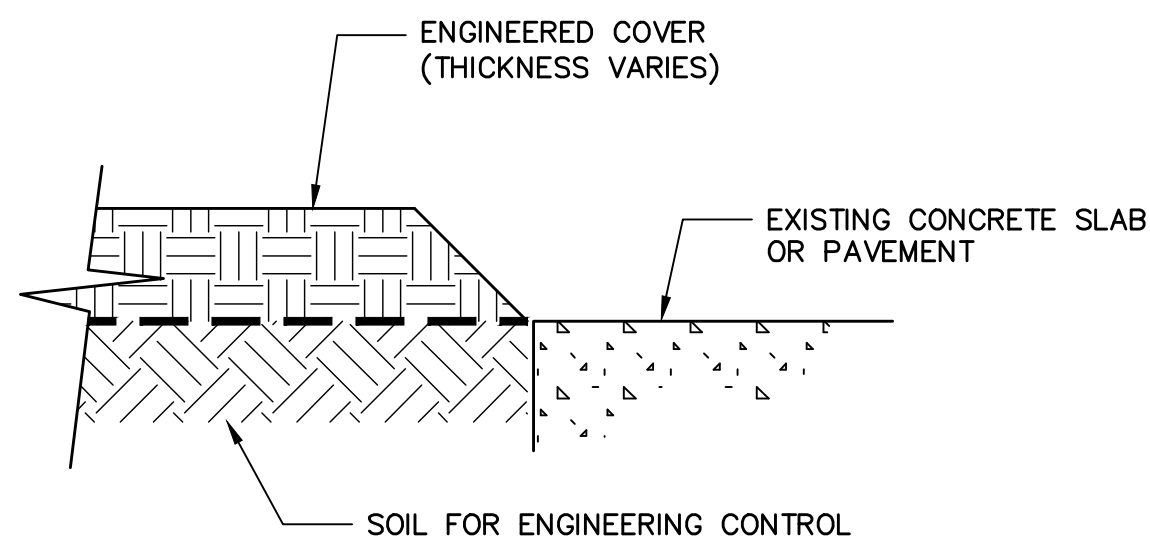


TYPE II-ENGINEERED COVER
NOT TO SCALE

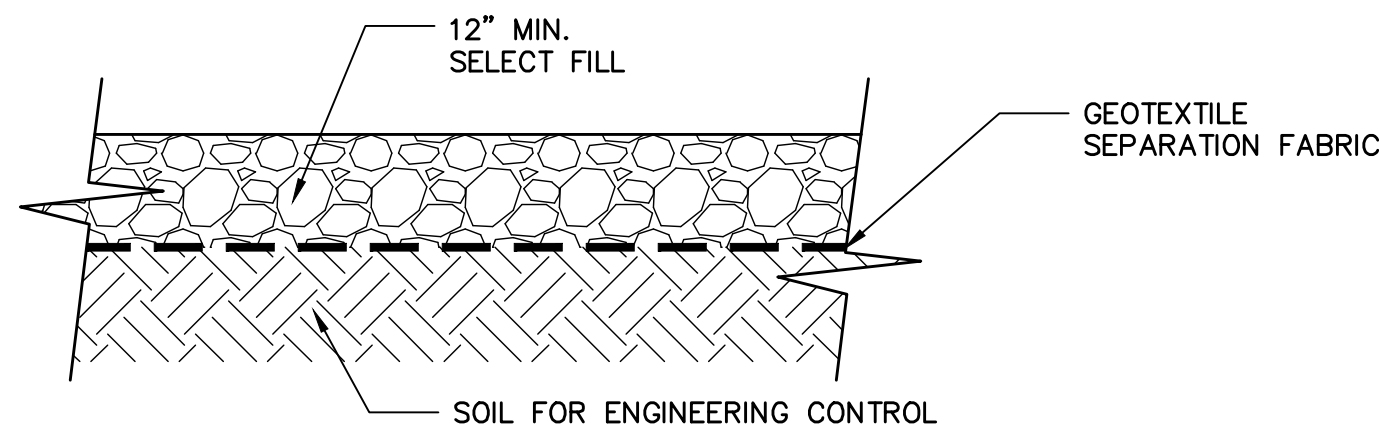


- NOTES:
1. SOLVENT WELD CASING EXTENSION TO EXISTING CASING, CONTRACTOR TO FIELD VERIFY MATERIAL AND PIPE DIMENSIONS.

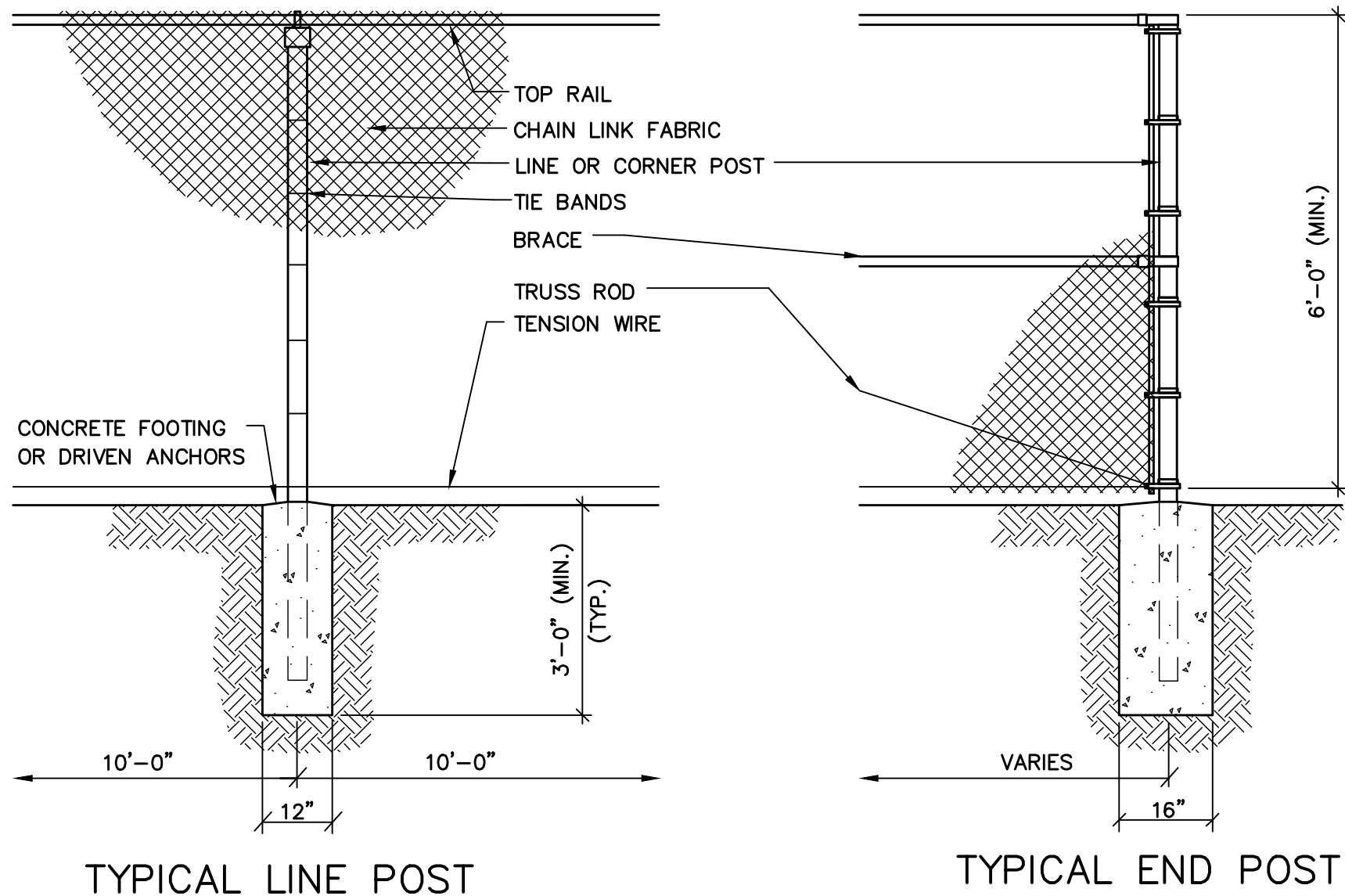
MONITORING WELL EXTENSION DETAIL
NOT TO SCALE



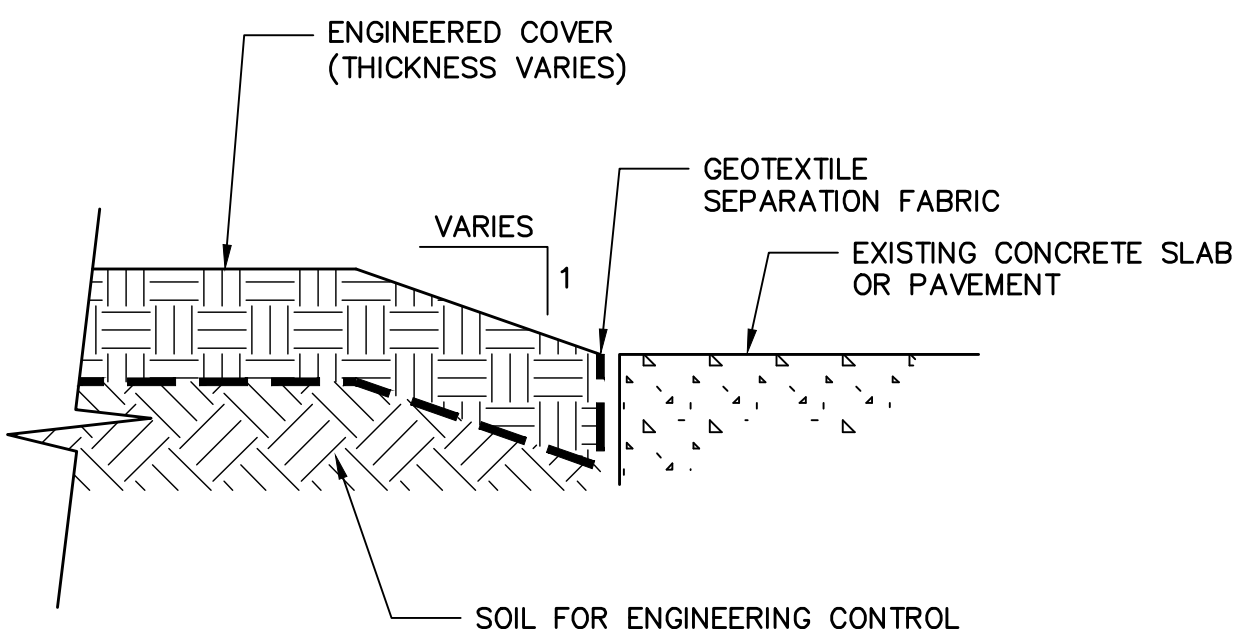
TYPE III-COVER TERMINATION DETAIL
NOT TO SCALE



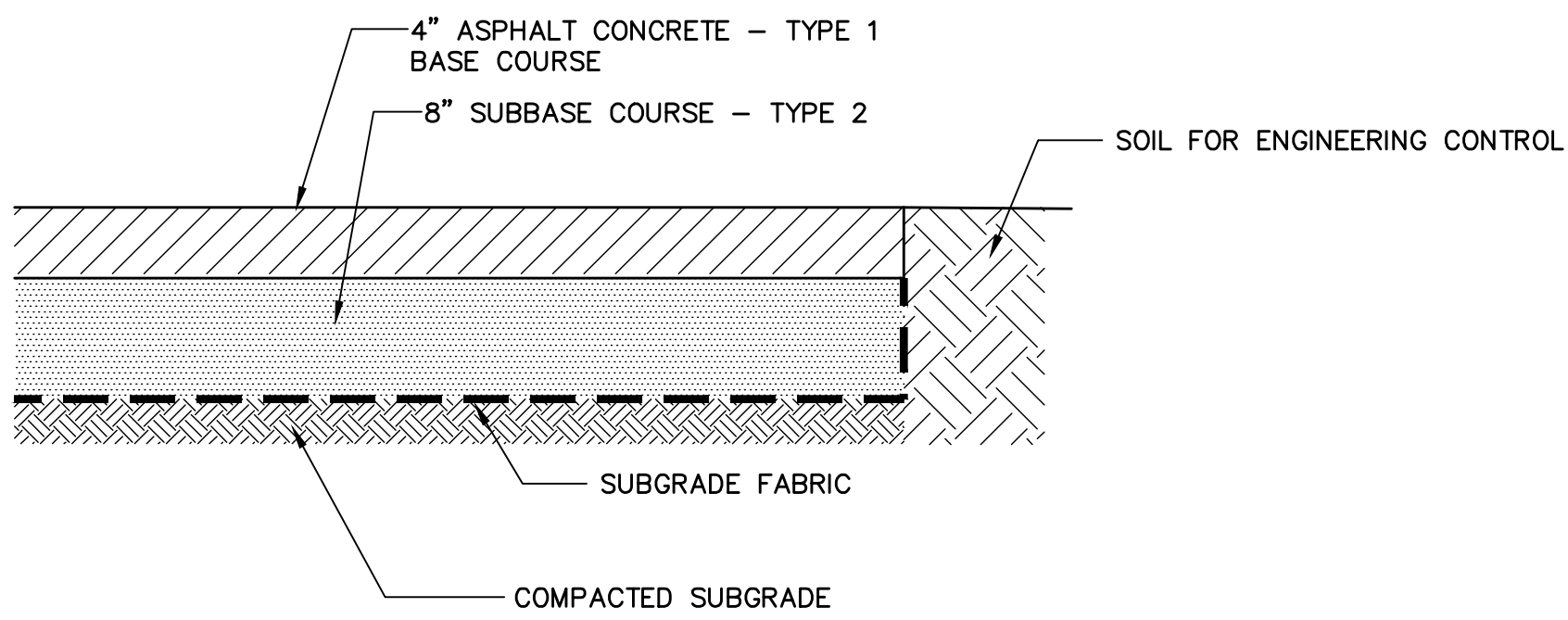
TYPE III-ENGINEERED COVER
NOT TO SCALE



CHAIN LINK FENCE DETAIL
NOT TO SCALE



TYPE IV-COVER TERMINATION DETAIL
NOT TO SCALE



TYPE IV ENGINEERED COVER
NOT TO SCALE



LEGAL ENTITY:
ARCADIS CE, INC.

CONSULTANTS

SEALS



Division of Environmental Remediation

REMEDIAL
CONSTRUCTION
PROJECT
00266425

NO.	DATE	TYPE	DETAIL REVISION	ISSUED FOR	BY
1	12/1/15	TYPE 4 ENG COVER	E.L.		

COPYRIGHT: ARCADIS CE, INC.
2015

DATE: NOVEMBER 2015

PROJECT NO.: 00266425

FILE NAME: C-14

DESIGNED BY: E. LANZAROTTA

DRAWN BY: S. HAUSMANN

CHECKED BY: D. LOEWENSTEIN

SHEET TITLE

DETAILS 2

SCALE: AS SHOWN

C-14

SHEET 14 OF 14