Exhibit 4-2

TECHNICAL SPECIAL PROVISION

FOR

WICK DRAINS, GEOTECHNICAL MONITORING EQUIPMENT, AND INSTALLATION

FPN Number

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Prepared by: _____, P.E.
Date: _____
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TECHNICAL SPECIAL PROVISION FOR WICK DRAINS, GEOTECHNICAL MONITORING EQUIPMENT, AND INSTALLATION

1.0 DESCRIPTION

This section specifies requirements for monitoring the stabilization of a roadway embankment along State Road 83 project from Station 101+50.84 to Station 400+00.00. This project is in Walton County, from just south of SR 20 to north of Owl's Head Road. This section includes requirements for installation of wick drains and instrumentation and monitoring of the embankment to be constructed over existing organic and other soft soils. The limits of the areas addressed by this Technical Special Provision are from Station 196+00 to Station 204+20, Station 216+00 to Station 222+20, and Station 245+00 to Station 254+00. Settlement Plates are only required from Station 196+00 to Station 204+20 and from Station 216+00 to Station 222+20. From Station 245+00 to Station 254+00, wick drains, settlement plates, pore pressure transducers, and vertical inclinometers are required.

The construction of this project shall be conducted as detailed in the Plans, in this Technical Special Provision, and as directed by the Engineer. The Contractor is responsible for furnishing all materials, labor, and equipment to perform all operations necessary and incidental for the installation and monitoring of the geotechnical monitoring equipment.

2.0 INSTRUMENTATION INSTALLATION PLAN & WICK DRAIN INSTALLALTION PLAN

At the Preconstruction Conference or no later than 30 days prior to beginning the installation of the monitoring instrumentation, embankment construction, or wick drain installation, the Contractor shall submit a Wick Drain Installation Plan and an Instrumentation Installation Plan for review by the Engineer. The Instrumentation Installation Plan shall provide detailed information including the following:

1. List and size of proposed installation equipment including the experience of the Contractor's Specialty Engineer, the personnel that will install the instrumentation, the methods proposed for installation, along with any additional supplies such as sand, grout, seals, cables, software, etc.

2. List of all proposed instrumentation and casing with manufacturer's data sheets, as described under this Technical Special Provision. All instrumentation is subject to the review of the Engineer.

3. Other pertinent information from the equipment manufacturer, material suppliers, or the suitable sources necessary for completion of work under this Technical Special Provision.

4. Proposed methods of installation of all the required instrumentation.

5. Sequence/schedule of installation.

6. Other information shown in the Plans or required by the Engineer.

The Wick Drain Installation Plan shall provide detailed information including the following:

1. Certification(s) acceptable to the Department that drains conform to the required specifications in the Plans.

2. Method of installation.

3. Dimensions and length of mandrel.

4. Details of wick anchorage and connection.

5. Proposed methods for splicing wick drains.

6. Proposed methods for overcoming any obstructions.

7. Schedule showing sequence of construction and installation including a plan view of the wick drains with the proposed numbering system for the wick drains.

8. Four sets of legible (copyable) bound installation logs and reports for all wicks, showing not less than the following:

   (a) Date of installation.
   (b) Wick number referenced to installation plan.
   (c) Depth and tip elevation.
   (d) Time of installation.
   (e) Observations, peculiarities, other anomalies noted during installation.
   (f) Type of equipment used.
   (g) Ground Surface Elevation.

The Engineer will review the Instrumentation Installation Plan and the Wick Drain Installation Plan for conformance with the Plans, Standard Specifications, and this Technical Special Provision. Within 20 days after receipt of the Plans, the Engineer will notify the Contractor of any additional information required and/or changes that may be necessary in the opinion of the District Geotechnical Engineer to meet the Plans, Standard Specifications, and Technical Special Provision requirements.

All reviews given by the Engineer shall be subject to trial and satisfactory performance in the field. The Contractor will make any required changes that may result from unsatisfactory field performance. Final acceptance will be given after necessary modifications are made. No changes in the instrumentation may be made after final review without the approval of the Engineer. The review of the Engineer does not relieve the Contractor of the responsibility to provide working instrumentation as described in this Technical Special Provision.

3.0 CONSTRUCTION SEQUENCE AND LIMITS

1. Clear and Grub.
2. Install wick drains (only in specified areas).
3. Install monitoring instrumentation.
4. Place embankment fill until final grade is attained.
5. Place surcharge fill.
6. When settlement is completed to the acceptance of the Engineer, remove surcharge fill and continue with the roadway construction.

Sequencing and monitoring requirements should proceed in accordance with the earlier sections of this Technical Special Provision and as summarized in this section. The first step is to clear and grub the project area in the approved manner, including the removal of surficial roots and stump materials.

Following installation of the required instrumentation in the approved manner, structural fill shall be placed for full height and width of the proposed embankment. This placement shall be accomplished using methods of placement and compaction typical for embankment construction. The pace of fill placement will be governed by the monitoring information. For estimating purposes, assume that three feet of fill may be placed per week. Because of the required surcharge time, the complete approach embankment shall be placed early in the construction schedule and constructed as specified in the Plans. The fill and surcharge placement needs to be coordinated in the Contractor's bridge construction sequencing and other roadway construction work activities. The surcharge shall be placed using approved methods. The surcharge and early placement of materials shall be placed for full width of the embankment. The areas of surcharge may have temporary side slopes at 2 to 1.

4.0 CONSTRUCTION

4.1 Site Preparation

In areas where the proposed embankment will be constructed, the existing vegetation and topsoil shall be removed entirely in accordance with Specifications from all areas beneath the proposed embankment and roadway to a 5 foot horizontal margin outside the limits of the proposed embankment areas. All tree trunks, roots, and branches of ¼ inch or larger in diameter shall be removed from the site and disposed of in accordance with Specifications.

4.2 Fill Placement

Overall fill placement shall be in accordance with the requirements of Specifications. For the purposes of bidding and scheduling, the Contractor should use a fill placement rate for both embankment and surcharge no greater than three feet per week. The actual rate of

fill placement will be determined based on the monitoring results.

5.0 CONTRACT TIME AND LIMITATIONS

5.1 Limitations of Operations

After completion of the fill and surcharge placement, a time period will commence that will allow monitoring of the settlement and pore water pressure changes, that will occur from consolidation of the organic and silt layer. The Engineer will determine when settlement is sufficiently complete for construction to resume on the basis of data obtained from settlement platforms, vertical inclinometers, and pore pressure transducers. The estimated time for settlement to occur is 90 calendar days. It is possible that settlement may require more or less actual time to complete and the actual time required will be based on the results of the monitoring program. Day one of this time estimate is 24 hours following the completion of surcharge fill placement required to achieve the proposed embankments and does not include fill placement time.

It is emphasized that the time given above is an estimate. The actual time required for settlement to occur may be more or less than that indicated and will be based upon the monitoring data obtained from the instrumentation.

Sodding of the embankment side slopes in the zone of the surcharge will not be allowed until the settlement program is complete. Erosion control of the side slopes in the zone during the settlement program shall be accomplished with artificial covering or as otherwise directed by the Engineer.

5.2 Protection of Monitoring Devices

The Contractor shall exercise extreme caution to prevent damage to the settlement platforms or other instrumentation by construction equipment and activities. No payment will be made on platforms or other instrumentation that are rendered inoperable by the Contractor's construction equipment or activities as determined by the Engineer, prior to completion of the surcharge program. Should the settlement platforms or other instrumentation be rendered inoperable by the Contractor's construction equipment or activities, as determined by the Engineer, all work shall cease on the embankment. Work may resume after the Contractor has repaired or replaced the damaged settlement platform or instrumentation at his own expense.

The Contractor shall develop a protection system for the instrumentation. It shall be sized to permit access to the instrumentation, but at the same time is a highly visible deterrent to construction equipment moving about the site. The Contractor shall submit sketches in shop drawing format for review and comment prior to installation of the protection system. There will be no separate pay item for the protection system. Any costs related to the protection system shall be included in the cost of the instrumentation. The protection system shall be submitted with the Installation Plan.

6.0 INSTRUMENTATION AND MONITORING

6.1 Contractor's Specialty Engineer

As a part of the instrumentation and monitoring, the Contractor shall provide a qualified Specialty Engineer to be in responsible charge of the instrumentation installation and preliminary testing process. This Specialty Engineer shall have had previous experience with the installation and use of the proposed pore pressure piezometers, settlement plates, and vertical inclinometers. Once the pore pressure piezometers, settlement plates, and vertical inclinometers are installed and have been accepted by the Department, the Department will perform the ongoing monitoring of the pore pressure piezometers and vertical inclinometers. The Contractor shall be responsible for the elevation reading of the settlement plates. Any damage, repairs, and/or replacements for any of the monitoring devices (that are damaged due to the operations of the Contractor) will remain the responsibility of the Contractor as part of his requirement to maintain and protect these devices as provided herein.

6.2 Pore Pressure Transducers (Piezometers)

The work specified in this section consists of furnishing and installing pore pressure transducers (piezometers) at the elevations and locations shown in this Technical Special Provision. This work shall be as directed by the Engineer and in accordance with this Technical Special Provision, and furnishing the Department a complete pore pressure transducer control/readout unit as specified below. The locations of the piezometers are provided in the Plans.

Pore pressure transducers are designed to monitor the increase in pore pressure during embankment placement, and the gradual decay of excess pore pressure during the consolidation period. The pore pressure transducers enable the Engineer to observe and determine the rate of consolidation under the embankment and surcharge. The determination of the time at which the necessary consolidation has taken place and the embankment may be released for the next stage of construction will be determined by the Engineer on the basis of the data obtained from the monitoring instrumentation. The control/readout unit shall become the property of the Department at the completion of the monitoring.

6.2.1 Materials

The Contractor shall provide and install pore pressure piezometer transducers as stated below. The specifications of the pore pressure piezometer transducer equipment and installation methods shall be submitted to the Engineer for review at least 30 days prior to installation. The pore pressure piezometer transducers to be used on this project shall be vibrating wire type transducers. The proposed gauge type with the manufacturer's data sheet shall be submitted with the Instrumentation Installation Plan for review by the Engineer.

Pore pressure piezometer transducers shall receive a pre-installation test by the Contractor's Specialty Engineer in a laboratory to verify adequate function and calibration. The testing shall include verification of pore pressure readout with known heads of water.

Certification paperwork shall be provided to document calibration of each piezometer. All wire leads from the piezometer shall be marked with the identification of the transducer.

6.2.2 Installation

Installation of pore pressure piezometer transducers shall follow the typical installation procedure as outlined here unless modifications are approved by the Engineer. After clearing and grubbing, the Contractor shall install pore pressure piezometer transducers in boreholes at the locations as specified in the plans. All locations shall be surveyed to provide as built location for installation.

The pore pressure piezometers shall be installed in a three inch nominal borehole unless otherwise approved by the Engineer. The boring shall be drilled with rotary wash drilling techniques to within three feet of the proposed pore pressure piezometer elevation. Each borehole shall be sampled at 2½ foot intervals using the Standard Penetration Test (ASTM D 1586). The boring data is to be utilized to place the pore pressure piezometer. The split spoon samples of the soils obtained within the zone that is 5 feet above the planned piezometer location shall be delivered in sealed jars along with the boring logs to the Engineer or the Engineer's representative for approval of the pore pressure piezometer elevation. The borehole shall be fully cased using temporary casing to the bottom of the borehole. The borehole shall then be flushed with clean water until the return fluids from the borehole are clean and free of drilling mud. Flushing shall be accomplished at a low pressure in such a manner that will prevent disturbance to the existing soils below the casing.

The pore pressure piezometer shall be fully saturated, then placed and sealed in a plastic bag while underwater. The pore pressure piezometer transducer attached to a specified length of cabling (enough to extend to the location of the junction box that is color coded and marked for positive identification) shall be attached to the drill string with a push mandrel and pore pressure piezometer adapter obtained from the piezometer supplier. The mandrel threads at the adapter connection shall be greased prior to assembly to ensure easy withdrawal later. The plastic bag shall be removed shortly after the piezometer is submerged in the borehole. The pore pressure piezometer shall then be lowered into the borehole and pushed into the soil by hand or with light hydraulic pressure to the elevation specified in the Plans. Note that if substitutions of pore pressure piezometer type are approved, the pore pressure piezometers shall be installed in accordance with the manufacturer's recommendations.

While the pore pressure piezometer is being lowered into the hole and during the insertion process, the Engineer will monitor the piezometer for accuracy and damage. The drill string shall then be withdrawn from the borehole leaving the piezometer transducer in place. The transducer shall then be attached to the readout equipment and checked for accuracy. Bentonite chips shall then be added to the borehole in a sufficient amount as to fill the borehole six inches. This shall be verified by taping the hole before and after the addition of the chips.

The pore pressure piezometer shall be sealed off from all sources of groundwater except that which is to be measured in a particular soil layer. The borehole shall then be fully grouted to the ground surface with the bentonite/grout mix and the temporary casing removed.

A trench with minimum depth of 1.5 feet and width of eight inches shall be excavated from the borehole to the junction box. The cable shall be coiled at the top of the borehole and then laid in the trench in an "S" pattern and backfilled with existing material free of stones or rocks after approval of the Engineer. The Contractor shall perform the trench and backfill construction. The trench should be carefully planned to prevent interference with other planned excavations. The transducer cables shall be mounted in a terminal box at locations agreed to by the Contractor and the Engineer. The purpose of the terminal box is to provide a safe and locatable location for the end of the pore pressure transducer cable so that readings are easily taken, damage to the cable end is less likely, and the box is easily identifiable.

This terminal box should be mounted on a steel post and located outside any fill areas and receive adequate protection as specified in Section 5.2 of this Technical Special Provision. The junction box should be outfitted with the lightning arrestor equipment supplied by the pore pressure piezometer manufacturer in a manner approved by the Engineer. Where a cable splice is required, the Contractor shall provide the epoxy splice as per manufacturer's specifications. Following the grouting and trench backfill operations, the transducer shall again be checked for accuracy. It is anticipated that each pore pressure piezometer will be read individually, therefore no central box or continuous monitoring is required.

Payment for this item shall be measured and paid for under Item 144-71 Pore Pressure Transducer Installation.

The Contractor shall operate their equipment in a manner to ensure that all instrumentation and the junction boxes holding leads for the pore pressure transducers are not damaged. Each junction box shall be clearly marked and flagged with guard stakes and protective barricades shall be erected as approved by the Engineer.

The Contractor shall be responsible for each pore pressure transducer until such time as it has been installed, tested, and all readings for the construction monitoring period completed. The Contractor shall protect these units from damage by his equipment throughout the construction period. No payment shall be made for a unit that has been rendered useless by the Contractor's construction equipment or activities as determined by the Engineer. Should the pore pressure transducer be rendered inoperable by the Contractor's construction equipment or activities, as determined by the Engineer, all work on the embankment shall cease. Work may resume after the Contractor has repaired or replaced the damaged pore pressure transducer at his own expense.

6.2.3 Control/Readout Unit

One control/readout unit is required for the project. The pore pressure transducer control/readout unit shall be delivered to the Engineer for acceptance testing prior to the installation of any pore pressure transducers. The control/readout unit shall be fully compatible with the system proposed and approved by the Engineer.

6.3 Settlement Platform Assembles

6.3.1 Description

The work specified in this section consists of the fabrication, installation, protection, and maintenance of settlement platforms in accordance with this Technical Special Provision, the details shown on Standard Index 540, and as directed by the Engineer. The system of settlement platforms is designed to enable the Engineer to observe and determine the magnitude and rate of foundation settlement, under the embankment. Observations will be made by the Contractor. The determination of the time at which the necessary consolidation has taken place and the embankment may be released for the next stages of construction will be determined by the District Geotechnical Engineer on the basis of the data obtained from combined settlement, vertical inclinometer readings, and pore pressure monitoring instrumentation.

After clearing and grubbing, the Contractor shall install settlement plates at the locations as specified in the Plans, unless modified by the Engineer. All locations shall be surveyed to provide as built locations for installation.

6.3.2 Materials

The platform plate shall be constructed of a good grade of treated lumber or steel plate, meeting the approval of the Engineer, and shall be securely fastened together with standard galvanized bolts and fittings as shown in Standard Index 540. All steel pipe and fittings shall be galvanized and fabricated from standard weight stock of the sizes shown on Standard Index 540. Materials will be accepted on the basis of certification and a visual inspection.

6.3.3 Installation

The construction details for settlement plates are illustrated in Standard Index Drawings 540. Settlement plates are to be installed at, or as close as possible, to natural ground surface elevation. Settlement plates are to be installed at the following locations and in accordance with the following instructions, unless otherwise approved by the Engineer.

An excavation slightly larger than the four foot square platform plate shall be made approximately one foot below the elevation of the existing ground. The excavation bottom shall be leveled and compacted as directed by the Engineer.

The platform plate, with attached marker pipe shall be placed on the prepared excavation bottom and the first section of cover pipe shall be slipped over the riser pipe and centered about it. Six inches of oakum seal shall be wrapped about the bottom of the riser pipe to prevent soil from getting in between the pipes when settlement occurs. Before installation of the backfill, the initial elevation of the top of the platform base shall be determined and recorded by the Contractor and provided to the Engineer.

With pipes centered with respect to each other and maintained in a vertical position, the backfill shall be placed in layers and thoroughly compacted using hand equipment to the

elevation of the natural ground. The layer thickness and density shall be as directed by the Engineer.

Compaction of backfill (permanent and temporary) around settlement plates shall conform to other earthwork specifications; however, the backfill shall be placed by hand using light-weight walk-behind compaction equipment to not disturb settlement plates and risers. Compaction should be as specified for embankment construction in the Standard Specifications, Section 120.

When the installation described above is complete, the Contractor shall notify the Engineer so that they may verify the Contractors' determination of the elevation of the top of the riser pipe. No additional embankment shall be placed until this elevation has been determined.

When the elevation of the top surface of the embankment fill and/or surcharge reaches a level approximately 1.5 feet below the top of the cover pipe, the Engineer shall be notified and the section of the cover pipe and riser pipe shall be installed in his presence. Added section should not be greater than 5 feet in length.

The embankment material in the immediate vicinity of the settlement platform shall be placed and compacted in accordance with the requirements of Specifications, or as directed by the Engineer.

As the height of the embankment fill and/or surcharge increases, the procedure shall be repeated until the embankment and surcharge fill is completed. At such time as approved by the Engineer, the top section of the riser and cover pipes shall be removed or adjusted in height so as not to interfere with construction operations. Settlement platforms shall remain in place and become the property of the Department.

6.3.4 Protection and Maintenance

Such precautions as are necessary and shall be taken to keep the alignment of the riser and cover pipe maintained in a vertical position at all times during the life of this Contract. The Contractor shall operate his equipment in a manner to ensure that the settlement platforms are not damaged or displaced laterally. Each assembly shall be clearly marked and flagged with guard stakes and protective barricades that shall be constructed as specified in Section 5.2 of this Technical Special Provision. Pipe deviating from a vertical position, becoming uncoupled or broken shall be repaired or replaced by the Contractor, as directed by the Engineer, at the Contractor's expense.

The Contractor will not be held responsible for repair or replacement of any settlement platform that is made inoperable as a result of instability of the embankment caused by factors which in the opinion of the Engineer are beyond the control of the Contractor.

6.3.5 Settlement Plate Readings

The Contractor shall obtain and record all measurements and elevations necessary for accurate determinations of settlement data during the construction of embankment and placing of the surcharge. The survey notes shall account for the rod extensions as fill is placed. As a rod is extended, a survey reading immediately prior to the extension and a reading immediately following extension are required. Notes shall be kept in a standard

format. As a minimum, a reading shall consist of the Settlement Plate number, Settlement Plate elevation, and the ground surface elevation adjacent to the Settlement Plate plus the date and time of reading and name of the instrument operator. Settlement data shall be forwarded to the Engineer in a timely manner.

Readings shall be taken when the settlement plate is installed to provide the initial elevation of the plate. The initial reading should also include locating the Settlement Plate by Station and offset. Readings shall be taken daily during fill placement including surcharge fill. Once the surcharge is placed and fill placement has ceased, readings shall be taken at least twice weekly with approximately three days between readings. Additional or confirmatory readings should be taken if unusual events occur (e.g. heavy rainfall event) or if a reading appears to be wrong based on previous data. Settlement Plate readings should be coordinated with the Engineer to coincide as best as practical with the pore pressure transducer readings and the inclinometer readings.

7.0 VERTICAL INCLINOMETERS

7.1 Description

The work specified in this section consists of furnishing and installing vertical inclinometers at the elevations and locations shown in this Technical Special Provision, in accordance with this Technical Special Provision, and as directed by the Engineer, and furnishing the Department a complete vertical inclinometer system as specified below. The vertical inclinometers are used to verify that the stability of the slope is being maintained during fill placement. The inclinometer data will be used in conjunction with the other instrumentation data to determine the time that the embankment may be released for the next stage of construction and will be determined by the Engineer on the basis of the data obtained from the monitoring instrumentation.

7.2 Materials

The Contractor shall provide and install inclinometer casing as stated below. In addition, the Contractor will obtain and provide a complete vertical inclinometer monitoring system. The vertical inclinometer system shall become the property of the Department at the completion of the monitoring. Payment for this item shall be made under 144-73 Digital Inclinometer.

The system shall consist of:

1. One Vertical inclinometer with aluminum carrying case.

2. One 200 foot (one foot increments) of cable with sturdy locking storage box.

3. One Readout box (with self-contained memory), including power, downloading cables, and software for data analysis and reporting.

4. One Control guide (pulley assembly) for top of casing.

5. Inclinometer casing including couplings and associated misc. materials for installation.

7.2.1 Protection and Maintenance

Such precautions as are necessary shall be taken to protect the surface of the inclinometer casings from damage at all times during the life of this Contract. The Contractor shall operate his equipment in a manner to ensure that the inclinometer casings are not damaged. Each inclinometer casing shall be clearly marked and flagged with guard stakes and protective barricades that shall be constructed as specified in Section 5.2 of this Technical Special Provision. Inclinometer casings deviating from a vertical position, becoming uncoupled or otherwise broken shall be repaired or replaced by the Contractor, as directed by the Engineer, at the Contractor's expense.

The Contractor will not be held responsible for repair or replacement of any settlement platform that is made inoperable as a result of instability of the embankment caused by factors which in the opinion of the Engineer are beyond the control of the Contractor.

8.0 VERTICAL WICK DRAINS

8.1 Description

Under this item, the Contractor shall furnish all necessary plant, labor, equipment, and materials and perform all operations in accordance with the details shown on the Plans and with the requirements for this Technical Special Provision. The wick drains shall consist of a band-shaped plastic core enclosed in a an acceptable filter material and shall be spaced at 5 foot centers and arranged in a square pattern as shown in the Plans or as otherwise directed by the Engineer. The vertical wick drains are to be installed from Station 245+00 to Station 254+00 from the left toe of the permanent slope to the right toe of the permanent slope in accordance with the Plans. For example, wick drain installation could begin at Station 245+00 at the left toe of the permanent slope (55 feet left of centerline) and continue either at 5 foot intervals. The Contractor is responsible for selecting the proposed sequence. The end result would be wick drains on 5 foot square centers as illustrated in the Plans.

It is intended that the drainage wick be placed into the clayey sand below the organic and silt layer. These clayey sands may offer more resistance to installation and may be used based on the six trial wick drain installations as a guide for the actual tip elevation. Therefore, adjustments in length of each drainage wick are possible during installation.

8.2 Material

The drainage wick shall be a prefabricated type made of a drainage core wrapped in a filter material consisting of a non-woven polyester material. The core shall be fabricated with acceptable vertical drainage channels. The materials used shall be in compliance with the specifications shown in the Plans.

Subject to compliance with this Technical Special Provision, manufacturers of the other products may be approved. Should the Contractor desire to use a product with an alternate design, the manufacturer's design and recommendations may be submitted to the Engineer for review. Requests for consideration of other wick drains should be submitted with the Wick Drain Installation Plan.

8.3 Equipment

Drainage wicks shall be installed with approved modern equipment of a type that will cause a minimum of disturbance of the subsoil during the installation operation. The drainage wicks shall be installed using a mandrel or sleeve, which shall be intruded into the soil. The mandrel or sleeve shall protect the wick material form tears, cuts, and abrasions during installation, and shall be retracted after each drainage wick is installed. The sleeve shall be rhombic or rectangular in shape, and of minimum cross-sectional area. To minimize disturbance to the subsoil, the sleeve cannot be intruded into the subsoil using impact methods.

The wick drains may be installed through the compressible soils to the required depth using vibratory, constant load, or constant rate of advancement methods. The wick drains shall be provided with an anchor plate or rod at the bottom to anchor the bottom of the wick drain at the required depth at the time of mandrel removal. The projected cross-sectional area of the mandrel and anchor combination shall not be greater than 12 square inches.

At least two weeks prior to the installation of drainage wicks, the Contractor shall submit to the Engineer for his review and approval, details of the sequence and method of installation. Approval by the Engineer will not relieve the Contractor of his responsibility to install drainage wicks in accordance with this Technical Special Provision.

8.4 Construction Requirements - General

As a minimum experience requirement, the Contractor shall have successfully completed three wick drain installation projects. The three projects shall be identified by project name, location, project description, size, completion date, and contract manager and submitted to the Engineer.

Prior to the installation of drainage wicks within the designated areas, the Contractor shall demonstrate that his equipment, methods and materials produce a satisfactory installation in accordance with this Technical Special Provision. For this purpose, the Contractor will be required to install six trial wicks at locations designated by the Engineer. At least one of the trail wick drains shall be in the area of Station 247+00. Payment will be at the bid price per linear meter for the drainage wicks. Payment will not be made for installing unsatisfactory trial wicks.

Approval by the Engineer of the method and equipment used to install the trial wicks shall not constitute, necessarily, acceptance of the method for the remainder of the project. If, at any time, the Engineer considers that the method of installation does not produce a satisfactory wick drain, the Contractor shall alter his method and/or equipment as necessary to comply with this Technical Special Provision. Layout of all wick drain system components shall be performed by the Contractor.

Locations shall be numbered, staked, and indicated on a plan view of the area where the wick drains are to be installed. The Contractor shall take all reasonable precautions to preserve the stakes. The location of the drainage wicks shall not vary by more than six inches from the locations indicated on the drawings or as directed by the Engineer.

Drainage wicks shall be installed from the working surface (prior to any permanent or temporary surcharge fill placement) to the depth shown on the drawings to such a depth where the soil resists reasonable effort at further penetration. The Engineer may vary the depths, spacing, or the number of wicks to be installed, and may revised the plan limits for this work as necessary.

The equipment shall be carefully checked for plumbness prior to advancing each wick drain and must not deviate more the ¼ inch per foot from the vertical. The Contractor shall provide the Engineer with a suitable means of verifying the plumbness of the mandrel.

Wick drains that are out of their proper locations by more than six inches, or wick drains that are damaged in installation, or wick drains that are improperly completed shall be rejected by the Engineer, and no compensation will be allowed for any materials furnished or for any work performed on such wick drains. Rejected wick drains may be removed or abandoned in place, at the Contractor's option. Replacement wick drains shall be offset approximately one foot from the location of the rejected wick drain. All rejected wick drains will be replaced at the Contractor's expense.

The Contractor shall provide suitable means of making a linear determination of the quantity of wick material used at each wick drain location. During installation of the wick drain, the Contractor shall provide suitable means of determining the depth of the wick drain tip at any given time.

Splices or connections in the drainage wick material shall be done in a workmanlike manner in accordance with the wick drain suppliers' instructions and so as to ensure continuity of wick material. There shall be six inch to 12 inch length of wick drain material protruding above the ground surface at each wick drain installation. The wick material shall be cut neatly at its upper end.

The Contractor shall be permitted to use auguring, excavations, or other methods to loosen dense or stiff upper soils or penetrate obstructions prior to the installation of the drainage wick, provided that such auguring does not extend into the underlying compressible soils by more than one foot.

9.0 METHOD OF MEASUREMENT

The units of measurement for the geotechnical instrumentation shall be as follows:

9.1 Embankment Fill and Surcharge Fill

Measurement and payment for site preparation and embankment and surcharge fill placement shall be made as stated in Specifications.

9.2 Vibrating Wire Transducer Piezometer and Control/Readout Unit

The work to be paid under this section shall be made at the contract unit price per each pore pressure transducer. Such prices and payments shall be full compensation for furnishing all materials (including cable lengths to junctions boxes), labor, and equipment for proper installation of the pore pressure transducers, for protecting the pore pressure

transducer systems, and for all other work and incidentals necessary to complete the work as specified herein, shown in the Plans, and as directed by the Engineer.

The contract unit price for the control/readout unit shall be full compensation for furnishing the Department with an acceptable unit. The Department shall retain ownership of the unit furnished.

9.3 Settlement Plates

Each settlement platform assembly acceptably installed and maintained in a satisfactory operating condition until the area is released for further construction, will be paid for at the unit price bid for each assembly. Price and payment shall be full compensation for furnishing all material, labor and equipment for proper installation of the settlement platform, for protecting settlement platforms, for repair and replacing damaged settlement platforms and for all other work and incidentals necessary to complete the work as specified herein, shown in the Plans and as directed by the Engineer. A total of 24 settlement plates shall be used.

9.4 Digital Inclinometers

The work to be paid under this section shall be made at the contract unit price per lineal meter of digital inclinometer casing. Such prices and payments shall be full compensation for furnishing all materials (including drilling of the boreholes and proper backfilling), labor, and equipment for proper installation of the digital inclinometer casing, for protecting the digital inclinometer casing, and for all other work and incidentals necessary to complete the work as specified herein, shown in the Plans, and as directed by the Engineer.

The contract unit price for the complete vertical inclinometer monitoring system shall be full compensation for furnishing the Department with an acceptable unit. The Department shall retain ownership of the unit furnished.

10.0 METHOD OF PAYMENT

The pay item numbers for the geotechnical instrumentation are as follows:

Payment Item No.: 120-74	Surcharge Embankment - per cubic yard
Payment Item No.: 141-70	Settlement Plate Assembly - per assembly
Payment Item No.: 144-71	Pore Pressure Transducer (Piezometer) - per each
Payment Item No.: 144-74	Pore Pressure Transducer Control/Readout Unit - per each
Payment Item No.: 144 1 1	Digital Inclinometer Casing – per linear foot
Payment Item No.: 144-73	Digital Inclinometer – per each
Payment Item No.: 442-70	Vertical Drainage Wicks - per linear foot