ADDENDUM NO. 02

to

CONTRACT DOCUMENTS

SYRACUSE HANCOCK INTERNATIONAL AIRPORT

SYRACUSE, NEW YORK

RECONFIGURE TAXIWAYS C, F, B, E, AND G

FAA AIP NO. 3-36-0114-144-2016 (D)
FAA AIP NO. 3-36-0114-XXX-2018 (C)

M-J PROJECT NO.: 18180.04

June 12, 2018

SYRACUSE HANCOCK INTERNATIONAL AIRPORT

RECONFIGURE TAXIWAYS C, F, B, E, AND G

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ADDENDUM NO. 02
June 12, 2018

1. INSTRUCTIONS TO ALL HOLDERS OF CONTRACT DOCUMENTS

Your attention is directed to the following interpretations of changes in and additions to the Contract Documents for the construction of the RECONFIGURE TAXIWAYS C, F, B, E, AND G project at the Syracuse Hancock International Airport.

Please indicate receipt of this addendum (including date) on page 300-5 of the Form of Proposal documents.

2. QUESTIONS RECEIVED FROM PROSPECTIVE BIDDERS

Q1: Is subbase removal included in the Unclassified Excavation quantity? In the typical section on proposed H2 and H3 it shows the subbase removal being paid under the Pavement Removal Item. Please clarify.

A1: All existing pavement shown to be removed shall be paid for under Item P-101-1 Pavement Excavation. Existing subbase removal and any additional material required to be removed for the installation of the proposed pavement section, shall be paid for under Item P-152-1 Unclassified Excavation and Disposal. The pavement excavation payment lines shown on the Typical Section for Proposed Taxiways H2 and H3 on sheet TS-01 have been updated.

Q2: On plan sheet 30 (DR-01), detail 2: It says, "new frame and grate as indicated on grading plans". No frame and grate types are indicated on the grading plans. Are new frames and grates required for these alters? If so, what size and style are required?

A2: New frames and grates will not be required for these drainage structure alterations. The existing frames and grates shall be removed, stored, and reset once the alterations are complete. Proposed elevations shall be as indicated on sheet DR-03. Detail #2 on sheet DR-01 has been updated.

Q3: Addendum #1 provides a detail for undercut excavation and backfill in the plans. It shows backfilling with number 3 stone typical. The P-152 specification states "backfill of the excavated area with P-209". Please advise on which material to use. If we are to utilize No. 3 stone, is that NYSDOT # 3 stone or can you provide a gradation?

A3: Undercut areas shall be backfilled with material meeting the requirements of New York State Department of Transportation (NYSDOT) #3 stone. Gradation requirements for NYSDOT #3 stone are listed in Table 703-4 SIZES OF STONE, GRAVEL AND SLAG of the NYSDOT Standard Specifications. Specification P-152 has been updated with this information. Specification P-100 has been revised to include requirements for geogrid.

Q4: L-108-4: Please indicate if there is to be conduit and trenching included in this pay item or if this is to be installed in L-110-1: 2" schedule 40 PVC? Is there just one type of sensor cable for this pay item? On drawings there is indication of Sensor(V) cable and in separate conduit, Sensor/ Power cable is designated.

A4: Conduit carrying the proposed Sensor (V) cable will be paid for separately under Item L-110-1 Non-Encased Electrical Conduit, 2" Sch. 40 PVC. Sensor/Power cable labeled on the drawings shall be #8 AWG, 5kV type paid for under Item L-108-1.

Q5: L-109-1, L-109-2: Please state required size and type for conduit, wire and breakers in vault. Are CCR's removed to be turned over to owner, and if so removed from vault?

A5: For the purposes of the competitive bid process, the Contractor shall include in its price full removal and proper disposal of the existing CCRs noted to be removed. This effort shall be coordinated with the Airport as they will have the right of first refusal for any equipment to be

removed. Additionally, the Airport may need to make record of the Contractor's removal of the CCRs, as these units may have been received as part of a past FAA grant, and the disposal may need to be coordinated with the FAA.

The following is the basis for design only; the Contractor is responsible for properly sizing conduit, wire, and breakers based on manufacturer's requirements for final equipment to be installed during construction:

1. 20kW Taxiway B & M (North) CCR, 208V
    a. Breaker Size: 150A, 2-Pole
    b. CCR Input Wire Size: #1/0 AWG, THWN-2 (#6 AWG Ground)
    c. Conduit Size: 1-1/2"
    d. Conduit Type: Rigid Galvanized Steel (RGS)
2. 15kW Taxiway A (Center), U, W CCR, 208V
    a. Breaker Size: 100A, 2-Pole
    b. CCR Input Wire Size: #2 AWG, THWN-2 (#6 AWG Ground)
    c. Conduit Size: 1-1/4"
    d. Conduit Type: Rigid Galvanized Steel (RGS)
3. 20kW Taxiway B (Between T/W A & T/W S) CCR, 208V
    a. Breaker Size: 150A, 2-Pole
    b. CCR Input Wire Size: #1/0 AWG, THWN-2 (#6 AWG Ground)
    c. Conduit Size: 1-1/2"
    d. Conduit Type: Rigid Galvanized Steel (RGS)
4. 15kW Taxiway G, H, H2, H3 CCR, 480V
    a. Breaker Size: 45A, 2-Pole
    b. CCR Input Wire Size: #8 AWG, THWN-2 (#6 AWG Ground)
    c. Conduit Size: 3/4"
    d. Conduit Type: Rigid Galvanized Steel (RGS)

Q6: L-110-4; Please indicate size of existing duct bank for removal.

A6: The basis for design size on existing duct bank removal is an 8-way duct bank with dimensions 31"x17".

Q7: L-115-3, L-115-4: Please indicate sizes of Manholes for removals. Are these to be taken off site?

A7: The basis for design size on electrical manhole removal is a 6'x6'x6' I.D. electrical manhole.

Q8: L-858-3: Are existing Sign Foundations to be removed, and if so, what are foundation sizes for removals? Are these guidance signs to be turned over or disposed of?

A8: Yes, Item L-858-3 includes removal of the existing concrete sign foundations. Existing sign foundations to be removed vary in size and are dependent on the sign installed. All existing guidance signs to be removed are Size 3. The Airport shall be given right of first refusal for all existing electrical equipment removed. However, for bidding purposes, Contractors shall assume

that all existing equipment to be removed shall be disposed of off-site.

3. REVISIONS/CLARIFICATIONS TO CONTRACT SPECIFICATIONS

SPECIFICATIONS

Note: Changes to the Contract Specifications are identified with red underlined text.

1. P-100 GEOTEXTILES – Replace with attached.
    a. Revised specification to include geogrid.
2. P-152 EXCAVATION AND EMBANKMENT – Replace with attached.
    a. Clarified material to be used for undercut excavation.
    b. Removed reference to PennDOT.

4. REVISIONS/CLARIFICATIONS TO CONTRACT DRAWINGS

1. Replace the following revised sheets with attached:

    a. TS-01 TYPICAL SECTIONS – 1

        i. Revised and clarified payment lines for Item P-101-1 Pavement Excavation and Item P-152-1 Unclassified Excavation.

    b. GR-01 GRADING & DRAINAGE PLAN (SHEET 1 OF 4)

        i. Added top of grate and invert elevations to proposed underdrain cleanouts.

    c. GR-02 GRADING & DRAINAGE PLAN (SHEET 2 OF 4)

        i. Added top of grate and invert elevations to proposed underdrain cleanouts.

    d. GR-04 GRADING & DRAINAGE PLAN (SHEET 4 OF 4)

        i. Added top of grate and invert elevations to proposed underdrain cleanouts.

    e. DR-01 DRAINAGE DETAILS (SHEET 1 OF 3)

        i. Clarified frame and grate requirements for structure adjustments. Existing frames and grates shall be reset.

5. DIRECTIONS TO BID OPENING CONFERENCE ROOM

The following are directions to the Bid Opening Conference Room:

Directions to the Board Room Conference Room:

Attached is the roadway closures map. Please note that the passenger walk-over bridge from the garage in the North (Terminal B/Delta United) side, is currently closed for renovations. For those parking in the garage on that side, please just take the elevator down to level 1, walk into the terminal from the ground floor and make your way upstairs towards the TSA security checkpoint area.

Please refer to the attached map.

- **If you are coming from the South Concourse A** – Make your way towards the TSA security checkpoint on the 2nd level. Just prior to getting to the checkpoint, on your right, you will see an elevator that says "Employees only".

- **If you are coming from the North Concourse B** - Make your way towards the TSA security checkpoint on the 2nd level. Go past the TSA security checkpoint and the pre check enrollment center and on your left, will be an elevator that says "Employees Only".

Take that elevator down to first level and you will be in the conference room section. Go to the right when exiting the elevator and the Board Room Conference Room is in the back left section and is labeled just to the left of the doors. We will have someone stationed by the elevator upstairs to direct you and others, as well.

If you would like your parking ticket validated, please bring it in to the conference room with you.

6. ATTACHMENTS

1. Specification Item P-100 Geotextiles
2. Specification Item P-152 Excavation and Embankment
3. Drawing TS-01 Typical Sections – 1
4. Drawing GR-01 Grading & Drainage Plan (Sheet 1 of 4)
5. Drawing GR-02 Grading & Drainage Plan (Sheet 2 of 4)
6. Drawing GR-04 Grading & Drainage Plan (Sheet 4 of 4)
7. Drawing DR-01 Drainage Details (Sheet 1 of 3)
8. Syracuse Airport Road Map
9. Terminal Map

ITEM P-100 GEOTEXTILES

DESCRIPTION

100-1.1 GEOTEXTILES. This work shall consist of furnishing and installing approved Geotextile of the Class and Type indicated, over the prepared subgrade surfaces, and in the manner shown on the plans or as directed by the Engineer, in writing, prior to performing the work.

100-1.2 GEOGRIDS. This work shall consist of furnishing and installing approved Geogrid meeting the material requirements indicated, at the locations, and in the manner shown on the plans or as directed by the Engineer, in writing, prior to performing the work.

100-1.3 GENERAL. No separate measurement for payment will be made for geotextile fabric used in the installation of the following items, rather it shall be considered incidental to the installation/construction of that item. Additionally, material requirements for geotextile fabric shall be as specified in the following items.

- Item P-152 – Excavation and Embankment
- Item P-156 – Erosion and Sediment Control
- Item D-705 – Pipe Underdrains for Airports
- Other items as specified

MATERIALS

100-2.1 GEOTEXTILE FABRIC. Geotextile fabric shall consist of woven or non-woven filaments of polypropylene, polyester, nylon or polyethylene. Non-woven fabric may be needle punched, heat-bonded, or combinations thereof. The fabric shall be inert to commonly encountered chemicals, rot proof, dimensionally stable (i.e. fibers must maintain their relative position with respect to each other), resistant to delamination, and conform to the following physical properties:

TABLE P-100-1 GEOTEXTILE REQUIREMENTS

Property	**Test Method**	**Units**	**Elongation <50%**	**Elongation ≥50%**
Grab Strength	ASTM D 4632	lbs	247 (min)	157 (min)
Tear Strength	ASTM D 4533	lbs	90[1] (min)	56 (min)
Puncture Strength	ASTM D 6241	lbs	495 (min)	309 (min)
Permittivity	ASTM D 4491	sec^{-1}	0.02 (min)	
Apparent Opening Size	ASTM D 4751	U.S.	No. 30 Sieve max. avg. roll value	

Table 100-1 Notes:
[1] For woven monofilament geotextiles the minimum average value is 56 lbf.

The geotextile fabric shall be specified by the manufacturer for use as a separation layer. Fabric values should represent "minimum average roll values (MARV)".

100-2.2 GEOGRID. Geogrid shall consist of an integrally formed biaxial structure made of polypropylene. The geogrid shall be specified by the manufacturer for use as base reinforcement and/or subgrade reinforcement and shall conform to the following physical properties:

TABLE P-100-2 GEOGRID REQUIREMENTS				
Property	**Test Method**	**Units**	**MD Values**	**XMD Values**
Aperture Dimensions	Nominal	in	1.0	1.3
Minimum Rib Thickness	Nominal	in	0.05	0.05
Tensile Strength at 2% Strain	ASTM D 6637	lb/ft	410	620
Tensile Strength at 5% Strain	ASTM D 6637	lb/ft	810	1340
Ultimate Tensile Strength	ASTM D 6637	lb/ft	1310	1970
Junction Efficiency	ASTM D 7737	%	93	
Flexural Stiffness	ASTM D 7748	mg-cm	750,000	
Aperture Stability	GRI GG9	m-N/deg	0.65	

CONSTRUCTION METHODS

100-3.1 GENERAL. Geotextile fabric shall be placed on the prepared subgrade surface where shown in the plans, on subgrade in prepared undercut areas as described in Item P-152, and as directed by the Engineer.

Geogrid shall be installed as shown in the plans or as directed by the Engineer to provide base/subgrade reinforcement.

Geotextile fabric and geogrid shall be installed in accordance with the details shown on the Contract Drawings and in strict accordance with the manufacturer's recommendations.

100-3.2 DELIVERY, STORAGE, PREPARATION, AND INSTALLATION. Geotextile fabric and geogrid shall be delivered to the job site in such a manner as to facilitate handling and incorporation into the work without damage. Material shall be stored in such a manner as to prevent exposure to direct sunlight and damage by other construction activities.

Prior to the installation of the geotextile fabric, the application surface shall be cleared of debris and sharp objects. All wheel tracks or ruts in excess of three (3) inches in depth shall be graded smooth or otherwise filled with soil to provide a reasonably smooth surface.

Geotextile fabric and/or geogrid may be installed on the application surface either by hand or mechanical methods, provided that the fabric or geogrid is not torn or the surface rutted.

Fabric of insufficient width or length to full cover the specified area shall be lapped, or sewn. The following are minimums for each:

1. Lap Only – 12” or manufacturer’s recommendations, whichever is greater.
2. Sewn – 4”

If sewn, the seam strength shall be equal or more than the minimum grab tensile strength of the fabric when tested wet.

The fabric shall be placed to the width and depth directed by the Engineer. Unless otherwise specified, the material shall be back-dumped on the fabric in a sequence of operations beginning at the outer edges of the treatment area with subsequent placement towards the middle.

Placement of the aggregate on the fabric shall be accomplished by spreading dumped material off of previously placed material with a bulldozer blade or end-loader, in such a manner as to prevent tearing or shoving of the cloth. Dumping of material directly on the fabric will only be permitted to establish an initial working platform. No vehicles or construction equipment shall be allowed on the fabric prior to placement of the granular blanket.

The geotextile fabric shall be protected from exposure to sunlight during transport and storage. Following placement, the fabric shall not be left uncovered for more than twenty-four hours.

The fabric shall be installed immediately before the subbase course to minimize exposure to sunlight. Traffic or construction equipment will not be allowed directly on the geotextile fabric. The Contractor shall keep pedestrian traffic on the applied fabric to a minimum and shall repair any damage to the fabric at his cost as directed by the Engineer.

Fabric that becomes torn or damaged shall be replaced or patched. The patch shall extend three feet beyond the perimeter of the tear or damage.

METHOD OF MEASUREMENT

100-4.1 GEOTEXTILES. The quantity of geotextile fabric will be the number of square yards computed from the payment lines indicated in the contract documents. Measurement will not be made for geotextile used for repairs, seams, or overlaps.

No separate measurement for payment will be made for fabric used in the installation of unsuitable material removal and replacement, rip-rap, stormwater facilities, underdrains, structures, for weed block and other applications but rather it shall be considered incidental to the installation requiring the geotextile fabric.

100-4.2 GEOGRID. No separate measurement or payment will be made for the installation of geogrid. The cost for geogrid shall be considered incidental to, and included in the payments made for other applicable bid items in the Bid Schedule.

BASIS OF PAYMENT

100-5.1 GEOTEXTILES. The unit price bid shall include the cost of furnishing all labor, equipment, and materials necessary to complete the work, including the cost of preparing the surface upon which the geotextile is placed. No payment will be made for replacement or repairs.

Payment will be made under:

Item No.	Description	Pay Unit
P-100-1	Geotextile Stabilization Fabric	Square Yard

MATERIAL REQUIREMENTS

ASTM D4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
ASTM D4833	Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
ASTM D4533	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
ASTM D6637	Standard Test Method for Determining Tensile Properties of Geogrids by the Dingle of Multi-Rib Tensile Method
ASTM D7737	Standard Test Method for Individual Geogrid Junction Strength
ASTM D7748	Standard Test Method for Flexural Rigidity of Geogrids, Geotextile and Related Products
GRI:GG9	Geosynthetic Research Institute, Test Method GG9, Torsional Behavior of Bidirectional Geogrids When Subject to In-Plane Rotation

END OF ITEM P-100

ITEM P-152 EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 CLASSIFCATION. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature, which is not otherwise classified and paid for under the following items.

b. Undercut Excavation and Backfill. Undercut excavation and backfill shall consist of the removal and disposal of deposits of mixtures of soil and organic matter not suitable for foundation material and the backfill of the excavated area with material meeting the gradation for No. 3 Stone listed in Table 703-4 of the New York State Department of Transportation (NYSDOT) Standard Specifications. Geogrid shall be placed at the midpoint of the backfill and shall meet the requirements of Item P-100, Geosynthetics. The backfilling shall include all grading and compaction work required to produce a suitable pavement section foundation.

c. Borrow Embankment. Borrow excavation shall consist of approved material required for the construction of embankment or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from approved off-site locations.

152-1.3 UNSUITABLE EXCAVATION. Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material, suitable for topsoil may be used on the embankment slope when approved by the Engineer.

CONSTRUCTION METHODS

152-2.1 GENERAL. The suitability of material to be placed in embankments shall be subject to approval by the Engineer. All unsuitable material shall be disposed of in waste areas shown on the plans. All waste areas shall be graded to allow positive drainage of the area and of adjacent areas. The surface elevation of waste areas shall not extend above the surface elevation of adjacent usable areas of the airport, unless specified on the plans or approved by the Engineer.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the Engineer notified per subsection 70-20. At the direction of the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Those areas outside of the limits of the pavement areas where the top layer of soil material has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the Engineer, who shall arrange for their removal if necessary. The Contractor, at his or her expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

152-2.2 EXCAVATION. No excavation shall be started until the work has been staked out by the Contractor and the Engineer has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

When the volume of the excavation exceeds that required to construct the embankments to the grades indicated, the excess shall be used to grade the areas of ultimate development or disposed as directed by the Engineer. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

The grade shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the Engineer shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas so that it can be measured for payment as specified in paragraph 152-3.3.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the Engineer. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard (per cubic meter) for Undercut Excavation and Backfill. The excavated area shall be backfilled with material meeting the gradation for No. 3 Stone listed in Table 703-4 of the NYSDOT Standard Specifications and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans.

c. Overbreak. Overbreak, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the Engineer. All overbreak shall be graded or removed by the Contractor and disposed of as directed by the Engineer. The Engineer shall determine if the displacement of such material was unavoidable and his or her decision shall be final. Payment will not be made for the removal and disposal of overbreak that the Engineer determines as avoidable. Unavoidable overbreak will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by someone other than the Contractor; for

example, the utility unless otherwise shown on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the Engineer. All foundations thus excavated shall be backfilled with suitable material and compacted as specified.

e. Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 25-inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557. The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils).

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade. The finished grading operations, conforming to the typical cross-section, shall be completed and maintained at least 1,000 feet (300 m) ahead of the paving operations or as directed by the Engineer.

All loose or protruding rocks on the back slopes of cuts shall be pried loose or otherwise removed to the slope finished grade line. All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the Engineer.

Blasting shall not be allowed.

f. Proof rolling. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi (0.689 MPa)in the presence of the Engineer. Apply a minimum of 80% coverage, or as specified by the Engineer, to all paved areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications.

152-2.3 BORROW EXCAVATION. Borrow areas within the airport property are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the Engineer.

When borrow sources are outside the boundaries of the airport property, it shall be the Contractor's responsibility to locate and obtain the borrow sources, subject to the approval of the Engineer. The Contractor shall notify the Engineer at least 15 days prior to beginning the excavation so necessary measurements and tests can be made. All borrow pits shall be opened up to expose the various strata of acceptable material to allow obtaining a uniform product. All unsuitable material shall be disposed of by the Contractor. Borrow pits shall be excavated to regular lines to permit accurate measurements, and they shall be drained and left in a neat, presentable condition with all slopes dressed uniformly.

152-2.4 DRAINAGE EXCAVATION. Drainage excavation shall consist of excavating for drainage ditches such as intercepting; inlet or outlet ditches; for temporary levee construction; or for any other type as designed or as shown on the plans. The work shall be performed in sequence with the other construction. Intercepting ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the Engineer. All necessary work shall be performed true to final line,

elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 PREPARATION OF EMBANKMENT AREA. Where an embankment is to be constructed to a height of 4 feet (1.2 m) or less, all sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted as indicated in paragraph 152-2.6. When the height of fill is greater than 4 feet (1.2 m), sod not required to be removed shall be thoroughly disked and recompacted to the density of the surrounding ground before construction of embankment.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

For embankments over 4 feet (1.2m) the Contractor shall install settlement plates to monitor the consolidation of the embankment. The data shall be furnished to the Engineer. Further construction of the pavement section shall not continue until the Engineer has reviewed the data from the settlement plates.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing, the quantity of excavation removed, and installation of settlement plates will be paid for under the respective items of work.

152-2.6 FORMATION OF EMBANKMENTS. Embankments shall be formed in successive horizontal layers of not more than 8 inches (200 mm) in loose depth for the full width of the cross-section, unless otherwise approved by the Engineer.

The layers shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the Engineer. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each layer shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. To achieve a uniform moisture content throughout the layer, the material shall be moistened or aerated as necessary. Samples of all embankment materials for testing, both before and after placement and compaction, will be taken for each Based on these tests, the Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for noncohesive soils, and 90% of maximum density for cohesive soils as determined by ASTM D1557. Under all areas to be paved, the embankments shall be compacted to a depth of 25-inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches (100 mm).

The in-place field density shall be determined in accordance with ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The Engineer shall perform all density tests**.**

Compaction areas shall be kept separate, and no layer shall be covered by another layer until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each layer is placed. Layer placement shall begin in the deepest portion of the embankment fill. As placement progresses, the layers shall be constructed approximately parallel to the finished pavement grade line.
When rock and other embankment material are excavated at approximately the same time, the rock shall be incorporated into the outer portion of the embankment and the other material shall be incorporated under the future paved areas. Stones or fragmentary rock larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 6 inches (150 mm) of the subgrade. Rockfill shall be brought up in layers as specified or as directed by the Engineer and the finer material shall be used to fill the voids with forming a dense, compact mass. Rock or boulders shall not be disposed of outside the excavation or embankment areas, except at places and in the manner designated on the plans or by the Engineer.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in layers of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in layers not exceeding 2 feet (60 cm) in thickness. Each layer shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The layer shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in layers, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.7 FINISHING AND PROTECTION OF SUBGRADE. After the subgrade is substantially complete, the Contractor shall remove any soft or other unstable material over the full width of the subgrade that will not compact properly. All low areas, holes or depressions in the subgrade shall be brought to grade with suitable select material. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans.

Grading of the subgrade shall be performed so that it will drain readily. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes. All ruts or rough places that develop in the completed subgrade shall be graded and recompacted.

No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer.

152-2.8 HAUL. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

152-2.9 TOLERANCES. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a 12-foot (3.7-m) straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of 1/2 inch (12 mm), or shall not be more than 0.05 feet (15 mm) from true grade as established by grade hubs. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and recompacting.

On safety areas, intermediate and other designated areas, the surface shall be of such smoothness that it will not vary more than 0.10 feet (3 mm) from true grade as established by grade hubs. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.10 TOPSOIL. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall not be placed within 213 feet of runway pavement or 48 feet of taxiway pavement and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the Engineer, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further rehandling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as directed, or as required in Item T-905.

No direct payment will be made for topsoil under Item P-152. The quantity removed and placed directly or stockpiled shall be paid for at the contract unit price per cubic yard (cubic meter) for "Unclassified Excavation."

When stockpiling of topsoil and later rehandling of such material is directed by the Engineer, the material so rehandled shall be paid for at the contract unit price per cubic yard (cubic meter) for "topsoiling," as provided in Item T-905.

METHOD OF MEASUREMENT

152-3.1 The quantity of excavation to be paid for shall be the number of cubic yards (cubic meters) measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152-3.3 For payment specified by the cubic yard (cubic meter), measurement for all excavation and embankment shall be computed by the average end area method. The end area is that bound by the original ground line established by field cross-sections and the final theoretical pay line established by excavation and embankment cross-sections shown on the plans, subject to verification by the Engineer. After completion of all excavation and embankment operations and prior to the placing of base or subbase material, the final excavation and embankment shall be verified by the Engineer by means of field cross-sections taken randomly at intervals not exceeding 500 linear feet (150 m).

BASIS OF PAYMENT

152-4.1 "Unclassified excavation" payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

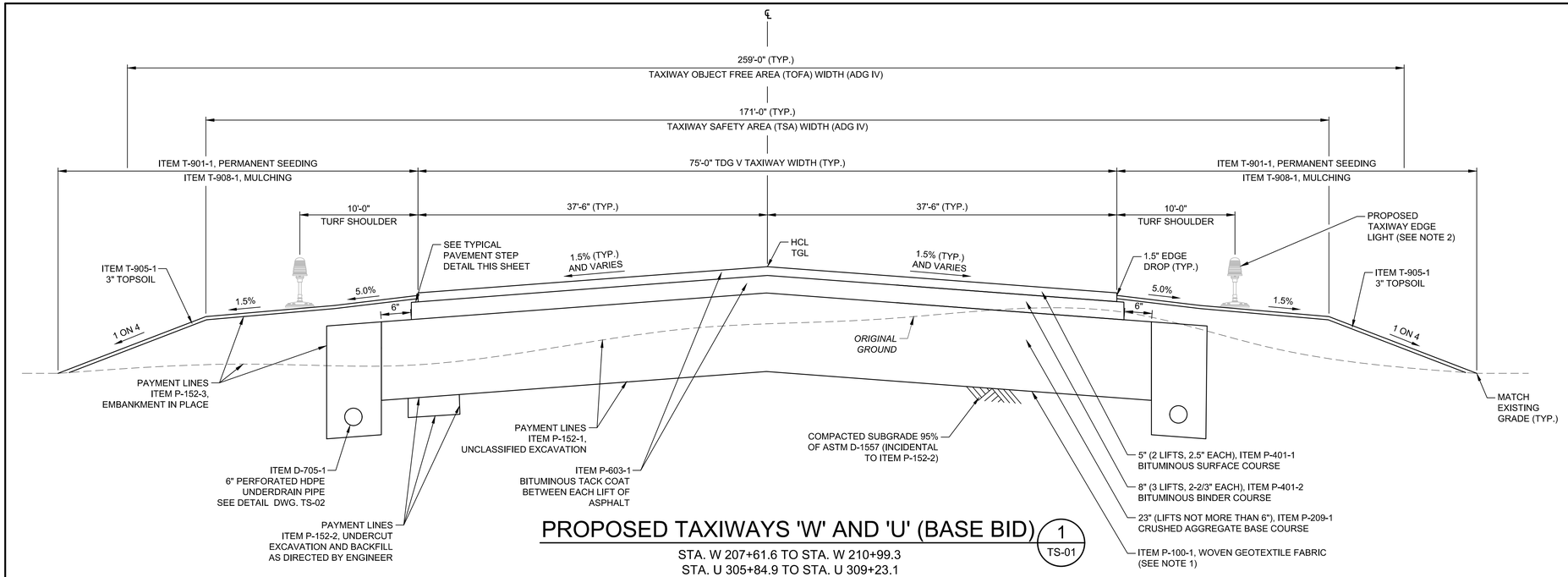
Payment will be made under:

Item No.	Description	Pay Unit
P-152-1	Unclassified Excavation and Disposal	Cubic Yard
P-152-2	Undercut Excavation and Backfill	Cubic Yard
P-152-3	Embankment In Place	Cubic Yard

TESTING REQUIREMENTS

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-152



PROPOSED TAXIWAYS 'W' AND 'U' (BASE BID)

1 / TS-01

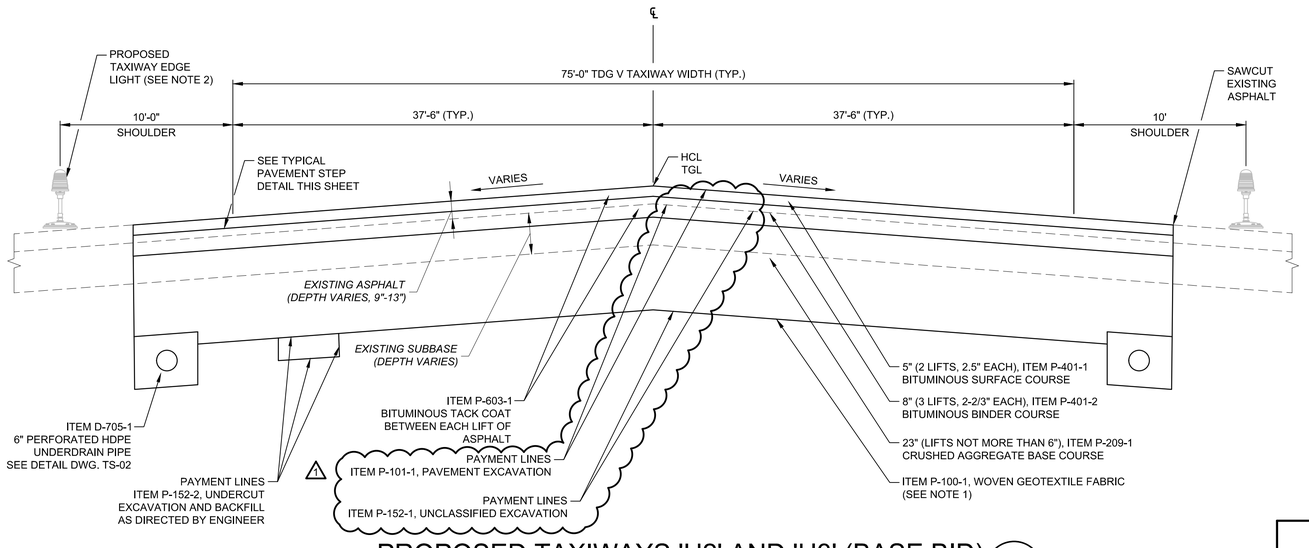
STA. W 207+61.6 TO STA. W 210+99.3
STA. U 305+84.9 TO STA. U 309+23.1
N.T.S.

NOTE:
1. THE GEOTEXTILE FABRIC SHALL BE PLACED AT THE TOP OF SUBGRADE AND EXTEND TO THE UNDERDRAIN.
2. FOR LOCATION AND TYPE OF EDGE LIGHTS, SEE DWG. NOS. EP-01 TO EP-07.

GENERAL NOTES:

1. EMBANKMENT AND SUBGRADE UNDER AREAS TO BE PAVED SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
2. EMBANKMENT AND SUBGRADE UNDER AREAS NOT TO BE PAVED SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 90% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
3. SUBBASE AND BASE COURSE SHALL BE COMPACTED TO 100% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
4. THE CONTRACTOR SHALL OBTAIN SURVEY CROSS SECTIONS OF SURFACE FOLLOWING EXCAVATIONS, PLACEMENT OF EMBANKMENT, AND PRIOR TO PLACEMENT OF BORROW.
5. ALL COSTS ASSOCIATED WITH SAWING, FORMING, AND SEALING OF JOINTS SHALL BE CONSIDERED INCIDENTAL TO THE PAVEMENT ITEMS.
6. LONGITUDINAL PAVING JOINTS IN ONE LAYER SHALL BE OFFSET BY AT LEAST 1.0' FROM LONGITUDINAL PAVING JOINTS IN THE PREVIOUS LAYER.
7. TRANSVERSE PAVING JOINTS IN ADJACENT LANES SHALL BE OFFSET A MINIMUM OF 10'.
8. STRIPPING OF EXISTING TOPSOIL AND SOD WITHIN PAVEMENT SECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM P-152-1.
9. REPLACEMENT OF EXISTING TOPSOIL AND SOD IN EMBANKMENT AREA SHALL BE INCUDED IN ITEM T-905 TOPSOILING.
10. SURVEY OF FINISHED SURFACES: THE CONTRACTOR SHALL CROSS SECTION THE AGGREGATE BASE SURFACE LIFTS AND EACH PAVEMENT LIFT TO VERIFY THAT EACH OPERATION HAS PRODUCED A UNIFORM SURFACE MEETING THE SPECIFICATION REQUIREMENTS. CROSS SECTIONS SHALL BE TAKEN AT 25 L.F. INTERVALS WITH A 25 L.F. MAXIMUM TRANSVERSE SPACING, STARTING AT CENTERLINE. RESULTS OF THE SURVEY SHALL BE FURNISHED TO THE ENGINEER A MINIMUM OF 24 HOURS BEFORE THE INTENDED PLACEMENT OF THE FOLLOWING COURSE. THE INFORMATION SUPPLIED SHALL IDENTIFY THE SURFACE, LOCATION BY STATION AND OFFSET, DESIGN ELEVATION, ACTUAL ELEVATION, AND THE ELEVATION DIFFERENCE NOTED. ANY REQUIRED CORRECTIONS TO THE SURFACE SHALL BE APPROVED BY THE ENGINEER AND CONDUCTED AT NO ADDITIONAL COST TO THE OWNER.
11. MAINLINE PAVING ON THE ASPHALT PAVEMENTS SHALL BE AT A WIDTH OF 19 L.F. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH MANUFACTURER'S INFORMATION VERIFYING THAT THE PAVER(S) TO BE UTILIZED FOR MAINLINE PAVING ARE DESIGNED TO PLACE THE REQUIRED DEPTH OF ASPHALT AT THIS WIDTH.
12. PRODUCTION PAVING SHALL BE SCHEDULED SUCH THAT THE FULL WIDTH OF THE PAVEMENT AREA IS PLACED DURING A SINGLE PAVING PRODUCTION DAY. A FULL WIDTH EXPANSION JOINT SHALL BE PLACED AT THE LOCATION OF THE COLD JOINT LEFT AT THE END OF EACH PRODUCTION DAY. COLD JOINTS ON THE FIRST AND SECOND LIFT SHALL BE STAGGERED A MINIMUM OF 50 L.F. FROM EACH OTHER. SEE JOINT SEALING DETAIL ON SHEET TS-03.
13. IRREGULAR JOINTS, OR PAVING JOINTS THAT ARE ALLOWED TO COOL BELOW 150 DEGREES F, SHALL BE SAWCUT FULL DEPTH AND TACK COATED PRIOR TO PLACEMENT OF THE ADJOINING PAVING LANE.
14. PAVING CONTROL: THE INTENT IS TO PROVIDE A BASE SURFACE WHICH UNIFORM LIFTS OF BITUMINOUS ASPHALT CAN BE PLACED. EACH OPERATION SHALL BE CONTROLLED BY MEANS THAT SHALL PRODUCE THE DESIRED SURFACE, GRADES AND UNIFORMITY AS REQUIRED BY THE SPECIFICATIONS. THE FOLLOWING CONTROLS SHALL BE UTILIZED FOR THE REFERENCED OPERATION UNLESS OTHERWISE APPROVED BY THE ENGINEER, AND SUCH APPROVAL SHALL REQUIRE ACTUAL DEMONSTRATED PROOF THAT THE CONTROL PROVIDES THE SPECIFIED SURFACE.

A. MILLING OPERATION: DUAL REFERENCE STRING LINE
B. BASE AND SURFACE LIFT OF ASPHALT: DUAL REFERENCE STRING LINE
C. FINAL LIFT OF ASPHALT: MOBILE REFERENCE NOT LESS THAN 30 FEET IN LENGTH

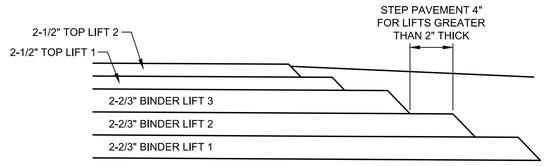


PROPOSED TAXIWAYS 'H2' AND 'H3' (BASE BID)

2 / TS-01

STA. H2 600+82.1 TO STA. H2 601+36.1
STA. H3 700+79.8 TO STA. H3 701+36.5
N.T.S.

NOTE:
1. THE GEOTEXTILE FABRIC SHALL BE PLACED AT THE TOP OF SUBGRADE AND EXTEND TO THE UNDERDRAIN.
2. FOR LOCATION AND TYPE OF EDGE LIGHTS, SEE DWG. NOS. EP-01 TO EP-07.



TYPICAL PAVEMENT STEP DETAIL

3 / TS-01

N.T.S

CONSTRUCTION BID SET

REV	DATE	DESCRIPTION	BY
1	6/7/2018	ADDENDUM NO. 2: REVISED PAYMENT LINES FOR	JPM
		PAVEMENT EXCAVATION ITEM. ADDED PAYMENT LINES	
		FOR UNCLASSIFIED EXCAVATION.	

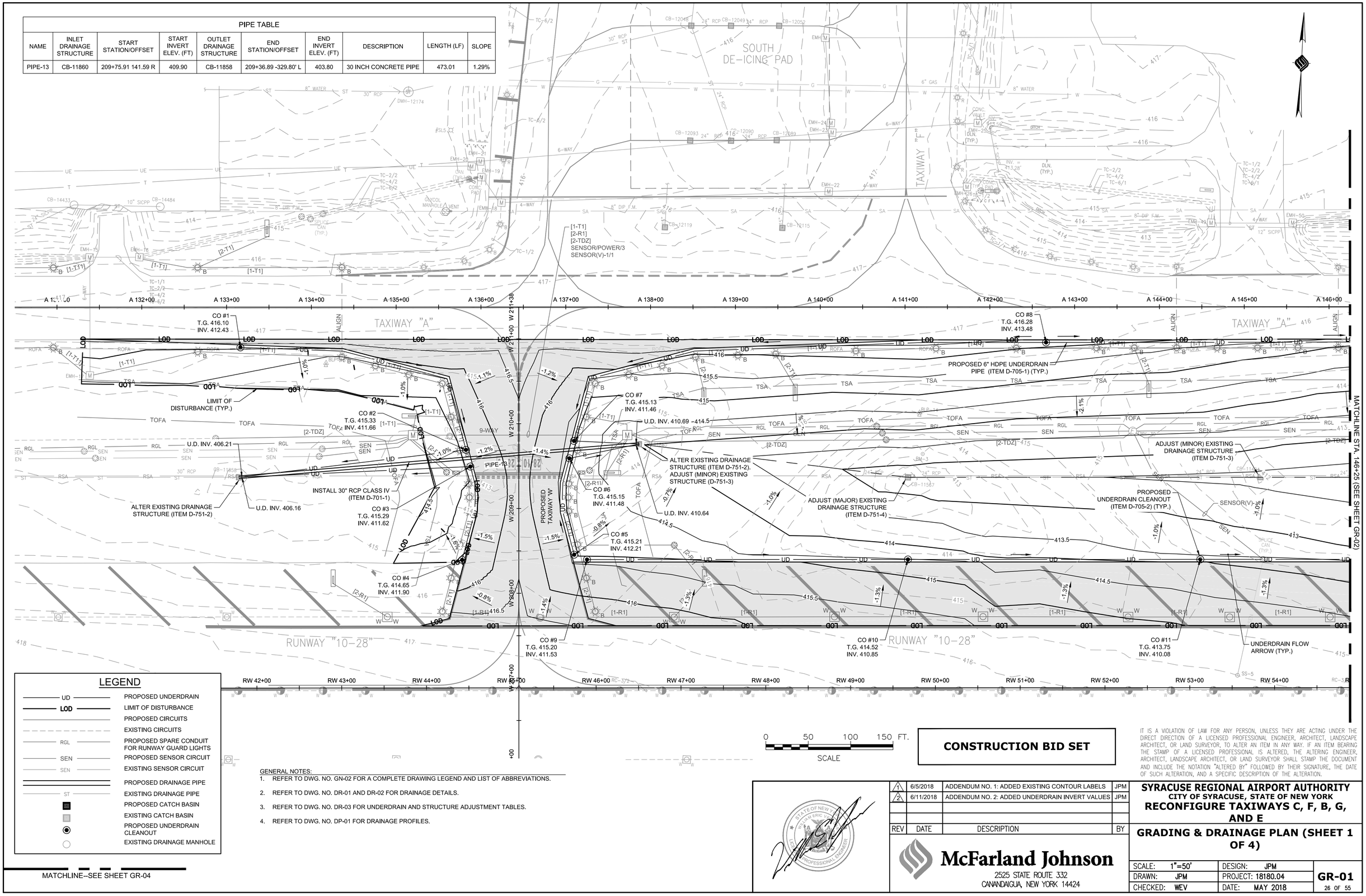
McFarland Johnson
2525 STATE ROUTE 332
CANANDAIGUA, NEW YORK 14424

SYRACUSE REGIONAL AIRPORT AUTHORITY
CITY OF SYRACUSE, STATE OF NEW YORK
RECONFIGURE TAXIWAYS C, F, B, G, AND E

TYPICAL SECTIONS - 1

SCALE: AS SHOWN	DESIGN: JPM	TS-01
DRAWN: JPM	PROJECT: 18180.04	23 OF 55
CHECKED: WEV	DATE: MAY 2018	

PIPE TABLE									
NAME	INLET DRAINAGE STRUCTURE	START STATION/OFFSET	START INVERT ELEV. (FT)	OUTLET DRAINAGE STRUCTURE	END STATION/OFFSET	END INVERT ELEV. (FT)	DESCRIPTION	LENGTH (LF)	SLOPE
PIPE-13	CB-11860	209+75.91 141.59 R	409.90	CB-11858	209+36.89 -329.80' L	403.80	30 INCH CONCRETE PIPE	473.01	1.29%



LEGEND

- UD — PROPOSED UNDERDRAIN
- LOD — LIMIT OF DISTURBANCE
- PROPOSED CIRCUITS
- EXISTING CIRCUITS
- RGL — PROPOSED SPARE CONDUIT FOR RUNWAY GUARD LIGHTS
- SEN — PROPOSED SENSOR CIRCUIT
- SEN — EXISTING SENSOR CIRCUIT
- PROPOSED DRAINAGE PIPE
- ST — EXISTING DRAINAGE PIPE
- PROPOSED CATCH BASIN
- EXISTING CATCH BASIN
- PROPOSED UNDERDRAIN CLEANOUT
- EXISTING DRAINAGE MANHOLE

GENERAL NOTES:

1. REFER TO DWG. NO. GN-02 FOR A COMPLETE DRAWING LEGEND AND LIST OF ABBREVIATIONS.
2. REFER TO DWG. NO. DR-01 AND DR-02 FOR DRAINAGE DETAILS.
3. REFER TO DWG. NO. DR-03 FOR UNDERDRAIN AND STRUCTURE ADJUSTMENT TABLES.
4. REFER TO DWG. NO. DP-01 FOR DRAINAGE PROFILES.

0 50 100 150 FT.
SCALE

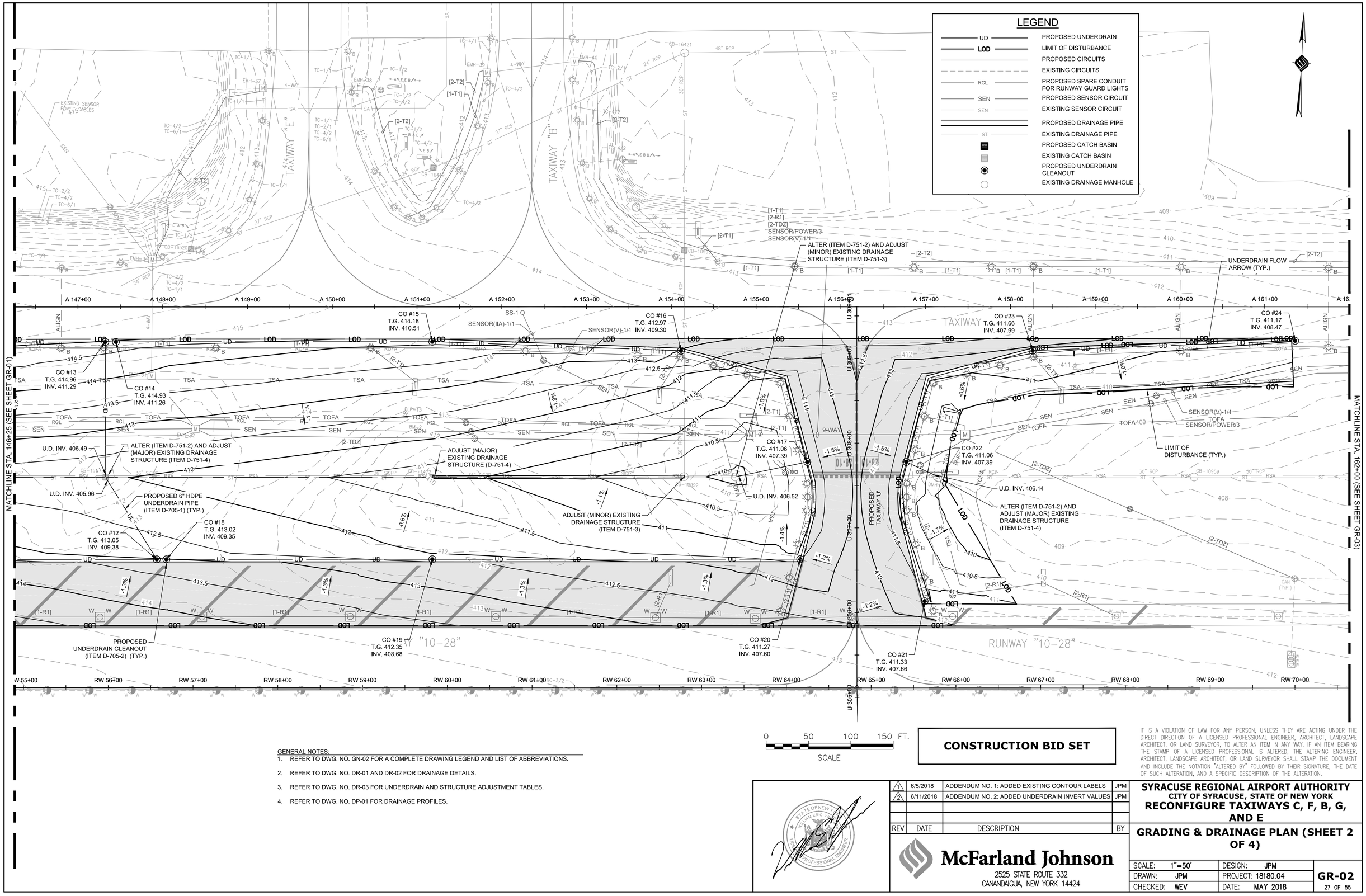
CONSTRUCTION BID SET

REV	DATE	DESCRIPTION	BY
1	6/5/2018	ADDENDUM NO. 1: ADDED EXISTING CONTOUR LABELS	JPM
2	6/11/2018	ADDENDUM NO. 2: ADDED UNDERDRAIN INVERT VALUES	JPM

McFarland Johnson
2525 STATE ROUTE 332
CANANDAIGUA, NEW YORK 14424

SYRACUSE REGIONAL AIRPORT AUTHORITY
CITY OF SYRACUSE, STATE OF NEW YORK
RECONFIGURE TAXIWAYS C, F, B, G, AND E
GRADING & DRAINAGE PLAN (SHEET 1 OF 4)

SCALE: 1"=50'	DESIGN: JPM	GR-01	
DRAWN: JPM	PROJECT: 18180.04		
CHECKED: WEV	DATE: MAY 2018	26 OF 55	



0 50 100 150 FT.

SCALE

CONSTRUCTION BID SET

GENERAL NOTES:

1. REFER TO DWG. NO. GN-02 FOR A COMPLETE DRAWING LEGEND AND LIST OF ABBREVIATIONS.
2. REFER TO DWG. NO. DR-01 AND DR-02 FOR DRAINAGE DETAILS.
3. REFER TO DWG. NO. DR-03 FOR UNDERDRAIN AND STRUCTURE ADJUSTMENT TABLES.
4. REFER TO DWG. NO. DP-01 FOR DRAINAGE PROFILES.

REV	DATE	DESCRIPTION	BY
1	6/5/2018	ADDENDUM NO. 1: ADDED EXISTING CONTOUR LABELS	JPM
2	6/11/2018	ADDENDUM NO. 2: ADDED UNDERDRAIN INVERT VALUES	JPM

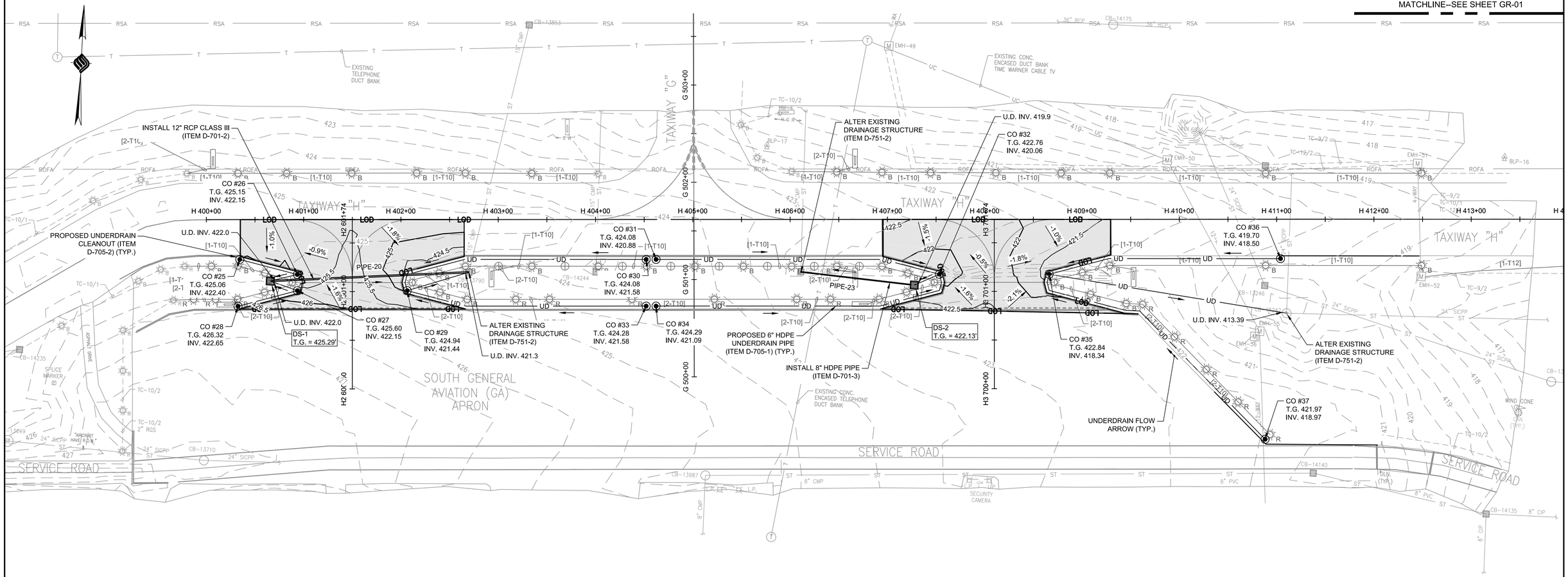
McFarland Johnson
2525 STATE ROUTE 332
CANANDAIGUA, NEW YORK 14424

SYRACUSE REGIONAL AIRPORT AUTHORITY
CITY OF SYRACUSE, STATE OF NEW YORK
RECONFIGURE TAXIWAYS C, F, B, G, AND E

GRADING & DRAINAGE PLAN (SHEET 2 OF 4)

SCALE: 1"=50'	DESIGN: JPM	GR-02	
DRAWN: JPM	PROJECT: 18180.04		
CHECKED: WEV	DATE: MAY 2018		27 OF 55

MATCHLINE--SEE SHEET GR-01



LEGEND

- UD — PROPOSED UNDERDRAIN
- LOD — LIMIT OF DISTURBANCE
- PROPOSED CIRCUITS
- EXISTING CIRCUITS
- RGL — PROPOSED SPARE CONDUIT FOR RUNWAY GUARD LIGHTS
- SEN — PROPOSED SENSOR CIRCUIT
- SEN — EXISTING SENSOR CIRCUIT
- PROPOSED DRAINAGE PIPE
- ST — EXISTING DRAINAGE PIPE
- PROPOSED CATCH BASIN
- EXISTING CATCH BASIN
- PROPOSED UNDERDRAIN CLEANOUT
- EXISTING DRAINAGE MANHOLE

GENERAL NOTES:

1. REFER TO DWG. NO. GN-02 FOR A COMPLETE DRAWING LEGEND AND LIST OF ABBREVIATIONS.
2. REFER TO DWG. NO. DR-01 AND DR-02 FOR DRAINAGE DETAILS.
3. REFER TO DWG. NO. DR-03 FOR UNDERDRAIN AND STRUCTURE ADJUSTMENT TABLES.
4. REFER TO DWG. NO. DP-01 FOR DRAINAGE PROFILES.

PIPE TABLE

NAME	INLET DRAINAGE STRUCTURE	START STATION/OFFSET	START INVERT ELEV. (FT)	OUTLET DRAINAGE STRUCTURE	END STATION/OFFSET	END INVERT ELEV. (FT)	DESCRIPTION	LENGTH (LF)	SLOPE
PIPE-20	DS-1	601+10.95 -84.30 L	422.00	CB-13790	601+19.92 119.84' R	421.30	12 INCH CONCRETE PIPE	204.33	0.34%
PIPE-23	DS-2	701+06.54 -82.23 L	419.90	CB-14243	701+20.15 -198.87' L	419.60	8 INCH CORRUGATED HDPE PIPE	117.43	0.26%

0 50 100 150 FT.

SCALE

CONSTRUCTION BID SET

REV	DATE	DESCRIPTION	BY
1	6/5/2018	ADDENDUM NO. 1: ADDED EXISTING CONTOUR LABELS	JPM
2	6/11/2018	ADDENDUM NO. 2: ADDED UNDERDRAIN INVERT VALUES	JPM

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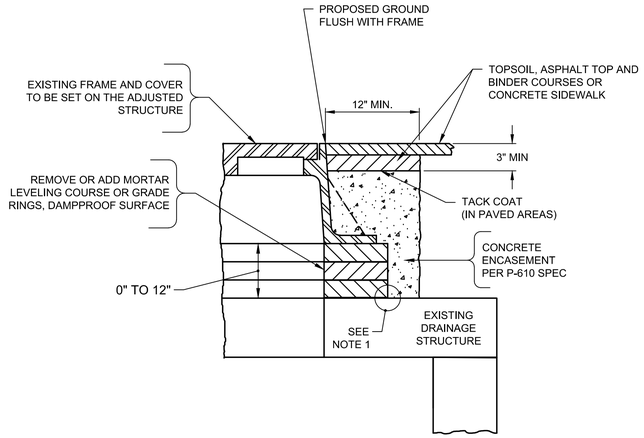
2525 STATE ROUTE 332
CANANDAIGUA, NEW YORK 14424

SYRACUSE REGIONAL AIRPORT AUTHORITY
CITY OF SYRACUSE, STATE OF NEW YORK
RECONFIGURE TAXIWAYS C, F, B, G, AND E

GRADING & DRAINAGE PLAN (SHEET 4 OF 4)

SCALE: 1"=50'	DESIGN: JPM	GR-04	
DRAWN: JPM	PROJECT: 18180.04		
CHECKED: WEV	DATE: MAY 2018	29 OF 55	

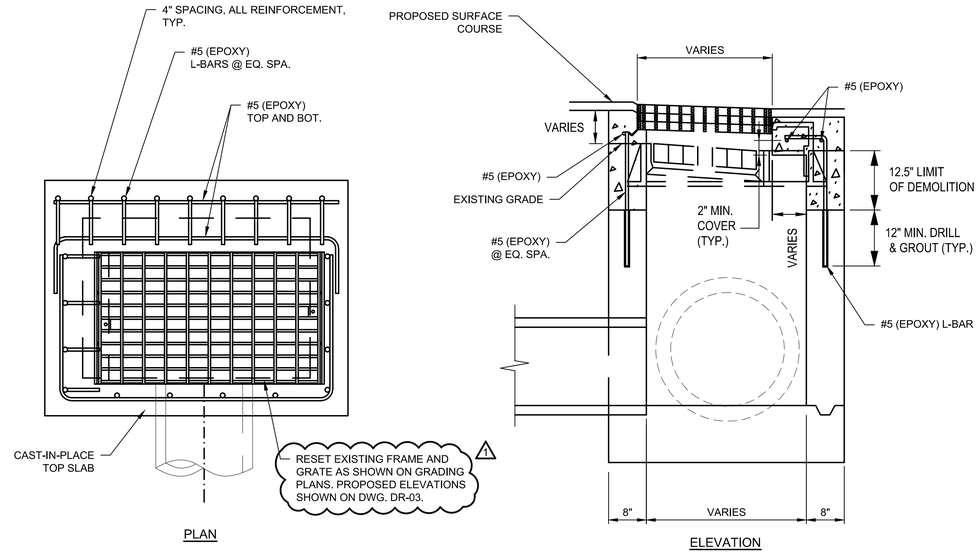


NOTES:
1. THE LOWER LIMIT OF THE CONCRETE ENCASEMENT SHALL BE AT, OR BELOW, THE LOWEST PORTION OF THE BRICK AND MORTAR LEVELING COURSE.
2. THE CONTRACTOR SHALL REMOVE OR ADD COURSES OF BLOCK OR BRICK IN ORDER TO ADJUST THE MANHOLE SUCH THAT THE FRAME AND COVER/GRATE WILL BE AT THE PROPER FINISH GRADE AND CROSS-SLOPE.
3. THE COST FOR TACK COAT, CONCRETE ENCASEMENT, DAMPROOFING, EXCAVATION, BACKFILL AND LEVELING COURSES SHALL BE INCLUDED IN ITEM D-751-3.

MINOR FRAME & COVER/GRATE ADJUSTMENT - RAISE & LOWER

1 / DR-01

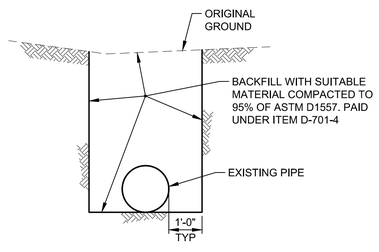
N.T.S
ITEM D-751-3



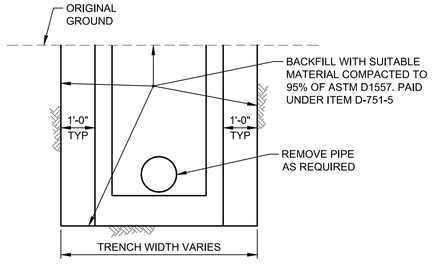
MAJOR FRAME & COVER/GRATE ADJUSTMENT - RAISE

2 / DR-01

NOT TO SCALE
ITEM D-751-4



REMOVAL OF EXISTING PIPES
N.T.S.

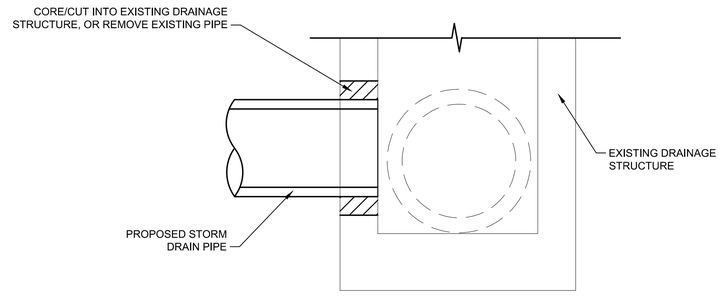


REMOVAL OF EXISTING DRAINAGE STRUCTURES
N.T.S.

NOTE: EXCAVATION AND REMOVAL OF EXISTING STRUCTURES OR EXISTING PIPES WILL BE PAID FOR UNDER ITEM D-751-5 AND ITEM D-701-4, RESPECTIVELY.

EXISTING REMOVAL DETAILS

3 / DR-01



NOTES:
1. WHEN DRAINAGE PIPE TERMINATES AT STRUCTURE THE PIPE SHALL BE PLACED SO THAT IT PENETRATES THE FULL WALL OF THE STRUCTURE. MORTAR SHALL BE PLACED AT ALL VOIDS.
2. ALL WORK ASSOCIATED WITH OUTLETTING PIPE TO DRAINAGE STRUCTURES SHALL BE PAID FOR UNDER ITEM D-751-2.
3. ALTERATIONS (PIPE TIE-IN'S TO EXISTING STRUCTURES) SHALL BE PAID FOR PER EACH TIE-IN COMPLETED AND ACCEPTED BY THE ENGINEER.

CONNECTION TO EXISTING DRAINAGE STRUCTURE

4 / DR-01

N.T.S
ITEM D-751-2

CONSTRUCTION BID SET

REV	DATE	DESCRIPTION	BY
1	6/7/2018	ADDENDUM NO. 2: CLARIFIED FRAME AND GRATE	JPM
		REQUIREMENTS FOR STRUCTURE ADJUSTMENTS	

McFarland Johnson
2525 STATE ROUTE 332
CANANDAIGUA, NEW YORK 14424

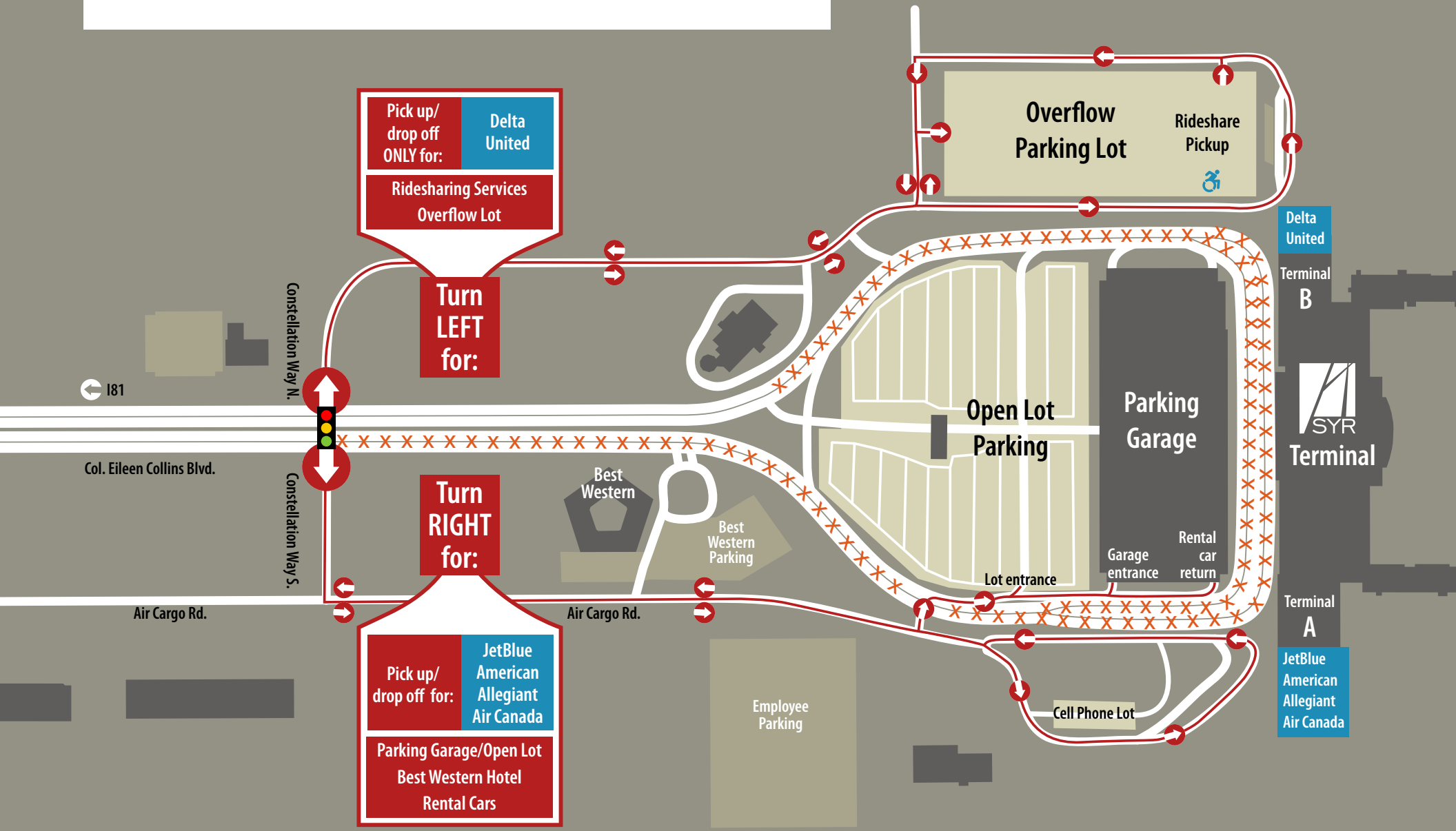
SYRACUSE REGIONAL AIRPORT AUTHORITY
CITY OF SYRACUSE, STATE OF NEW YORK
RECONFIGURE TAXIWAYS C, F, B, G, AND E

DRAINAGE DETAILS (SHEET 1 OF 3)

SCALE: NTS	DESIGN: JPM	**DR-01**	
DRAWN: JPM	PROJECT: 18180.04		
CHECKED: WEV	DATE: MAY 2018	30 OF 55	

SYR Terminal Improvement Project Roadway Closures

Starting October 11




SYR
SYRACUSE
HANCOCK
INTERNATIONAL AIRPORT
Second Floor
North
Concourse B
South
Concourse A
Johnny Rockets
CNBC smartshop
Heritage Booksellers
Middle Ages Brewing Company
Jamba Juice
Dunkin' Donuts
Paradies
eSavvy
Restrooms
Family Restrooms
Baby Care Room
Pet Relief Room
Escalators
Elevators
Hearing Impaired Video Phone
Wireless Hotspot
ATM
gate 24
gate 23
gate 25
gate 22
gate 26
gate 21
gate 27
gate 20
gate 09
gate 08
gate 10
gate 06
gate 11
gate 05
gate 12
gate 04
gate 14
gate 03
gate 01
gate 15
TSA Security Checkpoint
RED PHONE
Dept. of Aviation Offices 2nd Floor
Uniformed Security
Military Courtesy Room
Closed for Construction
TSA Pre✓ Enrollment Center
Barbershop