

**Indian River County  
Purchasing Division  
1800 27<sup>th</sup> Street  
Vero Beach, FL 32960  
Phone (772) 226-1416**



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## **ADDENDUM NO. 1**

Date: **July 22, 2019**

Project Name: **49<sup>TH</sup> STREET MILLING AND RESURFACING (58<sup>TH</sup> AVE. TO 31<sup>ST</sup> AVE.)  
(IRC-1414)**

Bid Number: **2019010**

Bid Opening Date: **Wednesday, July 31, 2019 at 2:00 p.m.**

This addendum is released to provide clarification, and plan and specifications updates. All information provided herein is hereby incorporated into the bid documents.

**Attachments:**

REVISED Plan sheets 4, 5, 6 and 14

REVISED Itemized Bid Schedule

REVISED Technical Specifications – SECTION 334 SUPERPAVE ASPHALT PAVEMENT, Bid Item No. 334-1-53A

Superpave Asphaltic Concrete (0"-3" Thick) (Overbuild) Type SP-12.5 (Traffic C, 76-22) - Changed units to Per Ton, Added SECTION 339 Miscellaneous Asphalt – Bid Item No. 339-1 - Miscellaneous Asphalt, 2" Thick Under Guardrail – Per Ton.

Pre-Bid Meeting Minutes

Pre-Bid Meeting Sign-in Sheet

**\*\*\*\*\*This Addendum must be acknowledged with submittal package and/or by return of this Acknowledgement with your submittal package \*\*\*\*\***

**Company Name** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Title:** \_\_\_\_\_  
(Type / Printed)

**Authorized Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_ **Email:** \_\_\_\_\_



# **Board of County Commissioners**

1801 27th Street  
Vero Beach, Florida 32960-3365  
Telephone: (772) 567-8000  
Fax: (772) 778-9391

## **PRE-BID MEETING MINUTES JULY 18, 2019, 10:00 A.M. INDIAN RIVER COUNTY ADMINISTRATION BUILDING Room A1-303 Building A**

**Project Name: 49<sup>TH</sup> STREET MILLING AND RESURFACING (58<sup>TH</sup> AVE. TO 31<sup>ST</sup> AVE.)**

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*The following meeting notes set forth our understanding of the discussions and decisions made at the subject meeting. If no objections, questions, additions, or comments are received within three (3) working days from issuance of the meeting notes, we will assume that our understandings are correct. The project will move forward according to the bid plans and specifications and the understandings herein.*

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Project Number: IRC-1414  
FM No. 436850-1-54-01  
Bid Number: 2019010

### **INTRODUCTIONS / SIGN IN SHEET**

This meeting was recorded.

**10:02 AM William Johnson P.E. opened the meeting.  
Introductions were made.**

### **PROJECT DESCRIPTION:**

***This project will be performed to resurface 49<sup>th</sup> Street from 58<sup>th</sup> Avenue to 31<sup>st</sup> Avenue. The proposed improvements include milling of existing pavement, installation of superpave asphaltic concrete, curb and gutter, guardrail upgrades, sodding, and installation of thermoplastic pavement markings. This project is an F.D.O.T. Small County Outreach Program (SCOP) funded project, FM No. 436850-1-54-01.***

### **CONTRACT DETAILS**

Bid opening: Wednesday, July 31, 2019 at 2:00 PM  
Contract time: 180 days to substantial completion  
210 days to final completion  
Estimate: \$768,212.00  
Liquidated Damages: \$1,584.00 per day

### **CONTACTS BIDDING PROCESS**

All communications concerning this bid shall be directed to Indian River County Purchasing Division at [purchasing@ircgov.com](mailto:purchasing@ircgov.com).

**UTILITIES**

AT&T  
Comcast Cable Communications, Inc.  
Florida Power and Light, Co.  
Indian River County Department of Utilities Services  
Indian River County Telecommunications  
Indian River County Traffic Operations

**OTHER ISSUES**

- Maintenance of Traffic:
  - Contractor shall submit a Maintenance of Traffic Plan to the Indian River County, Engineering Division for approval.
  - The Maintenance of Traffic Plan shall meet the FDOT Index 600, FY2017-2018 Edition and shall be signed and sealed by a Florida Professional Engineer.
  - Traffic shall be maintained at all times.
  - Access for businesses and residences shall be maintained at all times.
  - School buses, sanitation & US Postal Service must be maintained.
  
- Testing per- FDOT specifications.
- Addendums if required – Bidders to review plan docs and provide comments to Purchasing. No further comments or questions 10 days prior to bid opening.
- Project Phasing
- Subcontractors – per Contract Documents requirements “Section 00458 – List of Subcontractors” to be complete.
- Contractor shall submit a “Hurricane Preparedness” plan prior to Notice to Proceed.

**PROJECT REQUIREMENTS:**

- Invoicing shall be submitted on monthly basis and must include release of liens and Surety’s Consent.
- Summary of required contractor form submittals checklist (Section 00200, Instructions to Bidders, Article 15 – Submittal of Bid).

**DISCUSSION**

Questions & answers

- Q. Will the County take ownership of the millings?**
- A. Yes. The millings will be hauled to the Indian River County Road & Bridge facility as spelled out in Section 1009 of the General Requirements.**
- Q. Can 6” of rock be used in lieu of stabilized subgrade under the curb?**
- A. 9” of rock would be acceptable.**
- Q. Is the Contractor responsible for their own QC?**
- A. Yes.**
- Q. In the widening area the Bid Schedule calls for Base Group 9 (10” of limerock) and plans call for asphalt. Which is correct?**
- A. The plans have been corrected to reflect Base Group 9 (10” of limerock)**

- Q. Overbuild should be in tonnage not square yards.
- A. The Itemized Bid Schedule and Technical Specifications have been changed to tons.
- Q. There is no miscellaneous asphalt shown under the guardrail or accounted for on the bid form.
- A. The plans have been revised to show asphalt under the guardrail and Item No. 339-1 has been added to the Summary of Quantities and the Itemized Bid Schedule.
- Q. What is the anticipated start date?
- A. Within a month of the bid opening, depending on BCC meeting schedule.
- Q. Is the embankment required to slope away from the IRFWCD canal per permit requirements?
- A. The 1-foot bench is to slope toward the back of curb, then tie into existing with minimal disturbance to the existing ground.
- Q. Will the current construction project at 43<sup>rd</sup> Avenue be completed by the time of NTP on this project?
- A. Hopefully, but if not, there will have to be some coordination between contractors.
- Q. Will we be required to submit certified payroll?
- A. No.

**Meeting Adjourned.**

**PRE-BID MEETING  
SIGN-IN SHEET**

**INDIAN RIVER COUNTY ENGINEERING  
INDIAN RIVER COUNTY ADMINISTRATION BUILDING**

Room A1-303 Building A

**49<sup>TH</sup> STREET MILLING AND RESURFACING (58<sup>TH</sup> AVENUE TO 31<sup>ST</sup> AVENUE)**

**PROJECT No.: IRC-1414 / FM No. 436850-1-54-01**

**JULY 18, 2019 at 10:00 A.M.**

NAME	COMPANY & ADDRESS	PHONE # / FAX # / CELL #	EMAIL ADDRESS
Mike Heller	IRC ENGINEERING	772-226-1585	mheller@ircgov.com
Dreco Velazquez	FDOT	772. 321. 6627	dreg.velazquez@dot.state.fl.us
Bill Yoder	Ranger Const. Inc.	772-464-6460	bill.yoder@rangerconstruction.com
Ben Guetter	Guetter Bns. Const.	772-461-8345	ben@guetterconstruction.com
Carrie Ferguson	IRC Engineering	772-226-1771	cferngren@ircgov.com
Jennifer Hyde	IRC Purchasing	772-226-1416	purchasing@ircgov.com
William Johnson	IRC Engineering	972-226-1986	wjohnson@ircgov.com
SCOTT BURES.	Universal	321-400-2955	sbures@universalengineering.com

## ITEMIZED BID SCHEDULE

PROJECT NAME: 49TH STREET MILLING AND RESURFACING (58TH AVENUE TO 31ST AVENUE)

PROJECT NO. IRC1414

BID NO. 2019010

FM NO. 436850-1-54-01

## BIDDER'S NAME:

Item No.	Description	Unit	Unit Price	Quantity	Total
101-1	MOBILIZATION	LS		1	
102-1	MAINTENANCE OF TRAFFIC	LS		1	
104-1	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	LS		1	
110-1-1	CLEARING AND GRUBBING	LS		1	
120-1	EXCAVATION, REGULAR (ROADWAY)	LS		1	
120-6	EMBANKMENT (COMPACTED IN PLACE)	CY		300	
160-4	TYPE B STABILIZATION 12" SHOULDER (LBR-40)	SY		2,325	
285-709	OPTIONAL BASE GROUP 9 (10" LIMEROCK) LBR100	SY		1,523	
327-70-6	MILL EXISTING ASPHALT (1-1/2" AVERAGE DEPTH)	SY		28,235	
334-1-53	SUPERPAVE ASPHALTIC CONCRETE (1-1/2" THICK) TRAFFIC C (WIDENING) TYPE SP-12.5	SY		858	
* 334-1-53A	SUPERPAVE ASPHALTIC CONCRETE (0"-3" THICK) (OVERBUILD) TYPE SP-12.5 (TRAFFIC C, PG 76-22)	TN		851	
337-7-83	ASPHALT CONCRETE FRICTION COURSE TYPE F.C. 12.5 (PG 76-22, PMA) (1-1/2" THICK) (TRAFFIC C)	SY		29,093	
* 339-1	MISCELLANEOUS ASPHALT 2" THICK UNDER GUARDRAIL	TN		14	
425-6	VALVE BOX ADJUSTMENT	EA		17	
520-1-10	CONCRETE CURB AND GUTTER (TYPE F)	LF		1,728	
536-1-1	GUARDRAIL - ROADWAY GENERAL TL-3	LF		350	
536-85-26	GUARDRAIL END TREATMENT - TYPE CRT	EA		4	
570-1-2	PERFORMANCE TURF - SOD (BAHIA)	SY		3,500	
700-1-5	SINGLE POST SIGN (RELOCATE)	AS		3	
700-1-5A	SINGLE POST SIGN (BIKE ROUTE)	AS		4	
706-3	REFLECTIVE PAVEMENT MARKERS BI-DIRECTIONAL AMBER/AMBER	EA		602	
711-4	BICYCLE LANE MARKING, THERMOPLASTIC (WHITE)	EA		20	
711-11-123	SOLID TRAFFIC STRIPE (12" WHITE) THERMOPLASTIC (CROSSWALK)	LF		136	
711-11-125	SOLID TRAFFIC STRIPE (24" WHITE) THERMOPLASTIC	LF		221	
711-11-141	SKIP TRAFFIC STRIPE (6" WHITE 2'-4') THERMOPLASTIC	GM		0.164	

**ITEMIZED BID SCHEDULE****PROJECT NAME: 49TH STREET MILLING AND RESURFACING (58TH AVENUE TO 31ST AVENUE)****PROJECT NO. IRC1414****BID NO. 2019010****FM NO. 436850-1-54-01****BIDDER'S NAME:**

Item No.	Description	Unit	Unit Price	Quantity	Total
711-11-141A	SKIP TRAFFIC STRIPE (6" WHITE 6'-10') THERMOPLASTIC	GM		0.044	
711-11-170	TURN ARROWS, THERMOPLASTIC (WHITE)	EA		18	
711-11-224	SOLID TRAFFIC STRIP (18" YELLOW) THERMOPLASTIC	LF		651	
711-11-241	SKIP TRAFFIC STRIP (6" YELLOW 6'-10') THERMOPLASTIC	GM		0.027	
711-16-101	SOLID TRAFFIC STRIPE (6" WHITE) THERMOPLASTIC	GM		2.210	
711-16-201	SOLID TRAFFIC STRIPE (6" YELLOW) THERMOPLASTIC	GM		3.114	
999-1	RECORD DRAWINGS/AS-BUILTS	LS		1	
			<b>SUB TOTAL</b>		
999-25	FORCE ACCOUNT				<b>\$90,000.00</b>
<b>49TH STREET (58TH AVE-31ST AVE) RESURFACING PROJECT</b>					

LS = Lump Sum LF = Linear Foot EA = Each SY = Square Yard SF = Square Foot GM = Gross Mile

**NOTE: IF THERE IS A DISCREPANCY BETWEEN THE PLANS (SUMMARY OF PAY ITEMS) AND THE ITEMIZED BID SCHEDULE, THE BID SCHEDULE WILL BE UTILIZED FOR BIDDING PURPOSES.****TOTAL PROJECT BID AMOUNT IN WORDS** \_\_\_\_\_

**DIVISION 2 TECHNICAL PROVISIONS**

SECTION NO. 001	Technical Specifications
SECTION NO. 004	Scope of Work
SECTION NO. 101	Mobilization
SECTION NO. 102	Maintenance of Traffic
SECTION NO. 104	Prevention, Control, and Abatement of Erosion and Water Pollution
SECTION NO. 110	Clearing and Grubbing
SECTION NO. 120	Excavation and Embankment
SECTION NO. 160	Stabilizing
SECTION NO. 285	Optional Base Course
SECTION NO. 327	Milling of Existing Asphalt Pavement
SECTION NO. 334	Superpave Asphalt Concrete
SECTION NO. 337	Asphalt Concrete Friction Course
SECTION NO. 339	Miscellaneous Asphalt
SECTION NO. 425	Inlets, Manholes and Junction Boxes
SECTION NO. 520	Concrete Gutter, Curb Elements and Traffic Separator
SECTION NO. 536	Guardrail
SECTION NO. 570	Performance Turf
SECTION NO. 700	Highway Signing
SECTION NO. 706	Raised Retroreflective Pavement Markers and Bituminous Adhesive
SECTION NO. 711	Thermoplastic Pavement Markings
SECTION NO. 999	Record Drawings/As-Built Drawings



## **SECTION 1- Technical Specifications**

### **STANDARD SPECIFICATIONS**

- A. All work of this Contract shall conform to the applicable technical specifications of Florida Department of Transportation Standard Specifications for Road and Bridge Construction, July 2017, and Supplemental Specification, Special Provisions and addenda thereto, except as modified and supplemented hereinafter. Reference to Article numbers herein-after apply to the FDOT Standard Specifications, and reference in FDOT Standard Specifications to Department shall be taken as the Owner or its appointed Representative. Wherever the Specifications, Supplementals, etc. may refer to the "Owner", "Department", "State of Florida Department of Transportation", or words relating to offices of State Government, such words shall be taken as meaning Owner or Indian River County, Florida. Wherever the word "Owner's Engineer", "District Engineer", "Engineer", "Project Engineer", etc., appears, it shall be taken to mean the Registered Professional Project Engineer of the Indian River County Public Works Department, Engineering Division acting directly or through duly authorized representatives. Wherever the word "Resident Engineer" appears, it shall be taken to mean an authorized representative of the Owner's Engineer on the Project (Resident Construction Inspector) who will act as an agent for Indian River County, assigned to observe the progress quantity and quality of the work.

The work to be performed per sheet Bid item 1643-700 and all other utility work shall conform to the applicable technical specifications of the "Indian River County Department of Utility Services, Water, Wastewater, Utility Standards" March, 2018 or the current version.

The work to be performed per line items 700 through 711 shall conform to the applicable standards of Indian River County Typical Drawings for Pavement Markings, Signing & Geometrics Revised March 2012.

### **SECTION - 4 - SCOPE OF WORK**

Section 4-3.9 Value Engineering Incentive is deleted in its entirety.

### **SECTION - 101 - MOBILIZATION**

The work specified in this section shall conform to Section 101 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. Public Construction Bond shall be included in this item.

#### **Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 101-1 - Mobilization – Per Lump Sum

## **SECTION - 102 - MAINTENANCE OF TRAFFIC**

The work specified in this item shall conform to Section 102 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, except as modified herein.

- A. **GENERAL PROVISIONS-DESCRIPTION:** The work specified in this Section consists of maintaining traffic within the limits of the project for the duration of the construction period, including any temporary suspensions of the work. It shall include the construction and maintenance of any necessary detour facilities; the providing of necessary facilities for access to residences, businesses, etc., along the project; the furnishing, installing and maintaining of traffic control and safety devices during construction, the control of dust through the use of calcium chloride if necessary, and any other special requirements for safe and expeditious movement of traffic as may be called for on the plans. The term, Maintenance of Traffic, as used herein, shall include all of such facilities, devices and operations as are required for the safety and convenience of the public as well as for minimizing public nuisance; all as specified in this Itemized Section 14 of these provisions and Paragraph 24 in General Conditions Section.
- B. **BEGINNING DATE OF CONTRACTOR'S RESPONSIBILITY:** The Contractor shall present his Maintenance of Traffic Plan at the pre-construction conference. The Maintenance of Traffic Plan shall indicate the type and location of all signs, lights, barricades, striping and barriers to be used for the safe passage of pedestrians and vehicular traffic through the project and for the protection of the workmen. The plan will indicate conditions and setups for each phase of the Contractor's activities.

When the project plans include or specify a specific Maintenance of Traffic Plan, alternate proposals will be considered when they are found to be equal to or better than the plan specified.

In no case may the Contractor begin work until the Maintenance of Traffic Plan has been approved in writing by the Engineer. Modifications to the Maintenance of Traffic Plan that become necessary shall also be approved in writing. Except in an emergency, no changes to the approved plan will be allowed until approval to change such plan has been received.

The cost of all work included in the Maintenance of Traffic Plan shall be included in the pay item for Maintenance of Traffic.

The Contractor shall be responsible for performing daily inspections, including weekends and holidays, with some inspections at nighttime, of the installations on the project and replace all equipment and devices not conforming with the approved standards during that inspection. The project personnel will be advised of the schedule of these inspections and be given the opportunity to join in the inspection as is deemed necessary.

- C. TRAFFIC CONTROL - STANDARDS: The FDOT Design Standards For Design, Construction, Maintenance and Utility Operations On The State Highway System, Edition as dated on the plans set forth the basic principles and prescribes minimum standards to be followed in the design, application, installation, maintenance and removal of all traffic control devices and all warning devices and barriers which are necessary to protect the public and workmen from hazards within the project limits. The standards established in the aforementioned manual constitute the minimum requirements for normal conditions, and additional traffic control devices warning devices, barriers or other safety devices will be required where unusual, complex or particularly hazardous conditions exist.

The above referenced standards were developed using F.H.W.A., U.S.D.O.T. Manual on Uniform Traffic Control Devices (MUTCD).

- D. TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS - INSTALLATION: The responsibility for installation and maintenance of adequate traffic control devices, warning devices and barriers, for the protection of the travel in public and workmen, as well as to safeguard the work area in general shall rest with the Contractor. Consideration shall be given to recommendations of the Engineer. The required traffic control devices, warning devices and barriers shall be erected by the Contractor prior to creation of any hazardous condition and in conjunction with any necessary re-routing of traffic. The Contractor shall immediately remove, turn or cover any devices or barriers which do not apply to existing conditions. All traffic control devices shall conform to MUTCD standards and shall be clean and relatively undamaged. Damaged devices diminishing legibility and recognition, during either night or day conditions, are not acceptable for use.
- E. NO WAIVER OF LIABILITY: The Contractor shall conduct his operations in such a manner that no undue hazard will result due to the requirements of this article, and the procedures and policies described therein shall in no way act as a waiver of any of the terms of the liability of the Contractor or his surety.
- F. Contractor's Maintenance of Traffic Plan shall maintain continuous vehicular traffic on 49<sup>th</sup> Street and all intersecting side streets at all times.
- G. The Changeable Variable Message Sign shall be used as necessary. The location, message, and duration shall be as directed by Engineer.
- H. In addition to above, the Contractor shall comply with INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION SPECIAL CONDITIONS FOR RIGHT-OF-WAY CONSTRUCTION in Appendix C.

#### Item of Payment

Payment for the work specified in this item shall be made under:  
Bid Item No. 102-1 - Maintenance of Traffic – Per Lump Sum

## **SECTION - 104 - PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION**

### **PART 1 – GENERAL**

#### **1.1 SCOPE**

- A. This Section covers erosion control and the treatment of dewatering water and stormwater runoff from the construction site and work area. Pollution control measures shall prevent polluted or turbid waters from being discharged from the construction site or work area to undeveloped portions of the site or offsite, including but not limited to Multiple Separate Storm Sewer Systems (MS4s) and Waters of the State.
- B. The OWNER considers pollution from dewatering water and stormwater runoff from a construction site or work area to be a very serious offense. The CONTRACTOR is solely responsible for preventing pollution caused by dewatering water and stormwater runoff from the construction site or work area. Note that state regulations do not allow mixing stormwater and dewatering groundwater in the same release – separate and independent discharges are required.
- C. Pollution control measures specified herein represent minimum standards to be adhered to by the CONTRACTOR throughout the Project's construction. The OWNER reserves the right to require the CONTRACTOR to employ additional pollution control measures, when in the sole opinion of the OWNER, they are warranted. If site specific conditions require additional erosion and stormwater pollution control measures during any phase of construction or operation to prevent erosion or to control sediment or other pollution, beyond those specified in the Drawings, the Project's approved Stormwater Pollution Prevention Plan (SWPPP), or herein, implement additional best management practices as necessary, in accordance with [Chapter 4, "Best Management Practices for Erosion and Sedimentation Control" of the Florida Erosion and Sediment Control Inspector's Manual](#) and other references as may be applicable or required by regulatory permits.
- D. The OWNER may terminate this Contract if the CONTRACTOR fails to comply with this Section. Alternatively, the OWNER may halt the CONTRACTOR's operations until the CONTRACTOR is in full compliance with this Section. If the OWNER halts the CONTRACTOR's Work as a result of failure to comply with this Section, the Contract time clock will continue to run.
- E. In addition to these Specifications, comply with [Chapter 4 - "Best Management Practices for Erosion and Sedimentation Control"](#) and [Chapter 5 – "Best Management Practices for Dewatering" of the Florida Erosion and Sediment Control Inspector's Manual](#). In the event of a conflict between the referenced chapters and these Specifications, the more stringent requirement shall prevail.
- F, Submit to SJRWMD a "Notice to District of Dewatering Activity" (SJRWMD Form No. 40C-2.900(12)) prior to commencement of dewatering in accordance with F.A.C. 40C-2.042(9). Provide a copy of the Notice to Indian River County.

## 1.2 PERMITS

- A. The OWNER has obtained certain permits for this project and they are listed in [paragraph 6.08.B of the EJCDC Standard General Conditions of the Construction Contract \(General Conditions\)](#). Per [paragraph 6.08.C of the General Conditions](#), apply for and obtain all other required federal, state, and local permits, licenses, sampling, and tests.
- B. Provide copies of all approved permits to the OWNER and ENGINEER and comply with all conditions contained in all permits at no extra cost to the OWNER. If there is a conflict between any permit requirement and these Specifications or requirements between permits, the more stringent specification or requirement shall govern.
- C. Pay for all required water quality sampling and laboratory tests.

## 1.3 GENERAL

- A. Do not begin any other construction work until the pollution control and treatment system has been constructed in accordance with approved plans, permits, and these Specifications; and the installed system has been examined by the OWNER for compliance.
- B. From time to time, the OWNER or ENGINEER will inspect the pollution control and treatment system and may take effluent samples for analysis by a testing laboratory selected and paid for by the OWNER. If at any time, the OWNER or ENGINEER determines that the pollution control and treatment system is not in compliance with the approved system, the OWNER or ENGINEER will shut the portion of the project down that is not in compliance, and it shall remain shut-down until the pollution control and treatment system is properly constructed or repaired, and complies with the approved pollution control and treatment system plans, specifications, contract documents, and permits.
- C. Schedule construction to minimize erosion and stormwater runoff from the construction site. Implement erosion control measures on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased. In addition to other temporary erosion control measures that may be implemented, application of polyacrylamide is required on all such disturbed areas within 7 days after the construction activity in that portion of the site has temporarily or permanently ceased, unless final landscaping has been installed. Polyacrylamide application shall be as specified herein. Include polyacrylamide application in the Project's SWPPP.
- D. Inspect each pollution control system at least once per day and after each rainfall event. Clean and maintain each pollution control system as required until the system is no longer needed. If a water quality violation occurs, immediately cease all work contributing to the water quality violation and correct the problem. Immediately report

all water quality violations to the OWNER. Immediately report the discharge of any hazardous substance to the State Warning Point at 800-320-0519 or 850-413-9911.

- E. Discharge shall not violate State or local water quality standards in receiving waters, nor cause injury to the public health or to public or private property, nor to the Work completed or in progress. The receiving point for water from construction operations shall be approved by the applicable owner, regulatory agency, and the ENGINEER. The receiving point shall be shown on the Project SWPPP.
- F. Promptly repair all damage at no cost to the OWNER.

#### 1.4 SUBMITTALS

- A. Shop Drawings: Submit shop drawings of the proposed pollution control and treatment systems in accordance with [Section 1340](#).
- B. Approved Stormwater Pollution Prevention Plan.
- C. “Contractor’s Affidavit Regarding Erosion Control and Treatment of Dewatering Water and Stormwater From Construction Activities”

#### 1.5 STORMWATER TREATMENT AND EROSION CONTROL SYSTEM RESPONSIBILITY

- A. Prepare a site-specific design of the erosion and stormwater pollution control system. Install and maintain all erosion and stormwater pollution control devices under the supervision of a State Certified Stormwater, Erosion, and Sedimentation Control Inspector. Maintain the erosion and stormwater pollution control devices until in the ENGINEER’s sole opinion, the devices are no longer necessary (such time not to extend past the date the OWNER formally accepts the project as complete). Before beginning construction, submit to Indian River County, Florida Department of Environmental Protection (FDEP) and other applicable regulatory agencies for review and approval, a Stormwater Pollution Prevention Plan (SWPPP), prepared by the certified erosion control subcontractor. Construction shall not begin until the SWPPP has been approved by Indian River County, FDEP, and all applicable regulatory agencies. Submit the approved SWPPP to the ENGINEER before beginning construction. Include in the SWPPP, the “Contractor’s Affidavit Regarding Erosion Control and Treatment of Dewatering Water and Stormwater From Construction Activities” (located at the end of this Section).

#### 1.6 “POLLUTION” AND CERTAIN UNCONTESTABLE POLLUTION EVENTS DEFINED

- A. With respect to this Section and as may be further defined in paragraphs [1.6.B](#), [1.6.C](#), and [1.6.D](#), “pollution” is the presence in off-site waters of any substances, contaminants, or manmade or human-induced impairment of off-site waters or alteration of the chemical, physical, biological, or radiological integrity of off-site water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property. Pollutants to be removed include

but are not limited to, sediment and suspended solids, solid and sanitary wastes, phosphorus, nitrogen, pesticides, oil and grease, concrete truck washout, stucco mixer washout, curb machine washout, washout from other construction equipment, construction chemicals, and construction debris.

- B. When the Discharge is Directly Into an Existing Water Body An existing water body (including ditches and canals) is defined to be polluted by the CONTRACTOR's operations when at any time, the turbidity of the water immediately downstream of the CONTRACTOR's discharge point(s) is at least 29 nephelometric turbidity units (NTUs) higher than the turbidity of the background water upstream of the discharge point(s). [See Fla. Administrative Code 62-302.530] Exception: When the discharge is directly into or through an outfall discharging into "Outstanding Florida Waters," designated by Florida Statute 403.061(27), the turbidity of the discharged water cannot exceed the turbidity of the immediate receiving water. The ENGINEER or OWNER shall determine the locations where the turbidity is measured.
- C. When the Discharge is not Directly Into an Existing Water Body In some instances, dewatering water or stormwater runoff from the construction site or work area may reach a water body indirectly, such as by overland flow. If the discharge water's TSS and turbidity measurements exceed pre-construction background values by 20 percent for TSS and 29 NTUs for turbidity, then the discharge is defined to be polluted.
- D. When Pollution Always Occurs The discharge from a construction site or work area is defined to be polluted whenever the pH of the discharge is less than 6.5 or greater than 8.5, or whenever any of the following is present in the discharge water:
- (1) Hazardous waste or hazardous materials in any quantity,
  - (2) Any petroleum product or by-product in any quantity,
  - (3) Any chemical in any quantity, or
  - (4) Concentrated pollutants.
- E. Above paragraphs 1.6.B, 1.6.C, and 1.6.D do not in any way, limit the types of conditions in which pollution may be determined to occur.

## 1.7 PENALTIES FOR NONCOMPLIANCE WITH THIS SECTION

- A. In addition to the OWNER's specific remedies, if erosion or pollution is caused by dewatering water or stormwater runoff from the construction site, the OWNER may report the violations to Indian River County Stormwater Enforcement, SJRWMD, FDEP, Indian River Farms Water Control District (or other F. S. Chapter 298 Drainage District, as appropriate), and other pertinent regulatory or enforcement agencies.

## PART 2 - MATERIALS AND INSTALLATION

### 2.1 GENERAL

- A. Polyacrylamide: As required in Paragraph 1.3.C, place polyacrylamide (PAM) on bare ground to reduce the potential for erosion and cover it with hay, jute, or mulch. PAM

may also be used in water bodies to remove turbidity. In all cases, use the anionic form of polyacrylamide that does not stick to fish gills. For PAM information and its proper application, a contact is Applied Polymer Systems, Inc., (678) 494-5998, [www.siltstop.com](http://www.siltstop.com).

**B. Staked Silt Fences:**

1. General: Use silt fences to control runoff from the construction site where the soil has been disturbed.
2. Installation: Install per the manufacture's recommendations and as specified herein. In general, install the silt fence in a manner that allows it to stop the water long enough for the sediment to settle while the water passes through the silt fence fabric. All supporting posts shall be on the down-slope side of the fencing. Place the bottom of the fabric 6-inches minimum, under compacted soil to prevent the flow of sediment underneath the fence. Place silt fences away from the toe of slopes. Otherwise, work shall conform to Section 104 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
3. Product: All material shall be new and unused. Use FDOT Types III through IV silt fences where large sediment loads are anticipated, where slopes are 1:2 (vertical: horizontal) or steeper, or as directed by the ENGINEER; otherwise use FDOT Type II silt fence.

**C. Turbidity Barriers:**

1. General: Use turbidity barriers to control sediment contamination of rivers, lakes, ponds, canals, etc.
2. Installation: Install per the manufacturer's recommendations and per Section 104 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction unless directed otherwise by the ENGINEER.
3. Product: All material shall be new and unused. The turbidity barrier shall be a pervious barrier and the fabric color shall be yellow. Use staked turbidity barriers in water less than one-foot deep. Use floating turbidity barriers in water one-foot or deeper.

**D. Sedimentation Control From Dewatering or Pumping Operations Using Filter Bags:**

1. Filter bags shall be manufactured using a polypropylene non-woven geotextile and sewn by a double-needle machine, using a high strength nylon thread. The bag shall have a fill spout large enough to accommodate a 4-inch pump discharge hose. Straps shall be attached to the bag to secure the hose and prevent pumped water from escaping without being filtered.
2. Installation: Install in accordance with the manufacturer's specifications. Use as many filter bags as required, at no additional cost to the OWNER. Legally dispose of the bags offsite, at no cost to the OWNER. If the bags are placed on aggregate to facilitate filtration efficiency, do not use limerock aggregate – use non-calcareous rock.
3. Product: The filter bag shall be supplied with lifting straps.
  - a. "DIRTBAG 53 or 55 as applicable," supplied by ACF Environmental, Inc. (1-800-448-3636).



- b. "DANDY DEWATERING BAG" supplied by Dandy Products, (1-800-591-2284).
- c. Or equivalent.

E. Curb Inlet Protection:

- 1. Filter stormwater before it enters curb inlets.
- 2. Installation: Install in accordance with the manufacturer's specifications. Use as many of the specified filtration devices as required, at no additional cost to the OWNER.
- 3. Product: All materials shall be new and unused. The length of the curb inlet filtration device shall be at least 2-feet longer than the curb inlet opening.
  - a. "GUTTERBUDDY," supplied by ACF Environmental, Inc. (1-800-448-3636).
  - b. Or equivalent.

F. Catch Basin Protection:

- 1. Filter stormwater before it enters catch basins (drop inlets). The filter "sack" shall be manufactured from woven polypropylene geotextile and sewn by a double-needle machine, using a high strength nylon thread. The sack shall be manufactured to fit the opening of the catch basin or drop inlet and it shall have the following features: two dump straps attached at the bottom to facilitate emptying; lifting loops as an integral part of the system to be used to lift the sack from the basin; and a colored restraint chord approximately halfway up the sack to keep the sides away from the catch basin walls. The colored restraint chord shall also serve as a visual means of indicating when the sack should be emptied.
- 2. Installation: Install in each catch basin in accordance with the manufacturer's specifications. Use as many of the specified filtration devices as required, at no additional cost to the OWNER.
- 3. Product: All materials shall be new and unused.
  - a. "SILTSACK" (regular flow), supplied by ACF Environmental, Inc. (1-800-448-3636).
  - b. "FloGuard+PLUS," supplied by Kristar Enterprises, Inc. (1-800-579-8819).
  - c. Or equivalent.

- G. Construction Site Egress Driveways: Minimize the transport of sediment and soil from the construction site or work area by vehicle wheels. Construct a crushed rock driving surface at the vehicle exit point(s). Locate the site egress driveways a minimum of 25 feet from all drainage inlets or pipes. Provide an area large enough to remove the sediment and soil from vehicle wheels before the vehicle leaves the construction site or work area. Provide wash-down stations as required to wash vehicle tires and retain all washwater on-site. Do not use limerock.

H. Rock and Stone for Erosion Control and Pollution Control and Treatment:

- 1. Crushed Limerock: Limerock shall not be used under any circumstance.

2. Acceptable Material: FDOT #4 non-calcareous aggregate, washed and meeting the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 901.

- I. Hay Bales: Hay bales shall not be used.

### PART 3 - EXECUTION

- A. Design, construct, and maintain the pollution control and treatment system to minimize erosion and capture and remove pollutants from the construction site and from all other areas disturbed by construction activities.
- B. Apply polyacrylamide in strict accordance with the polyacrylamide manufacturer/supplier's recommendations and specifications.
- C. REPAIR ALL EROSION DAMAGE – At no additional cost to the OWNER and regardless of the state of completion of the Work, immediately clean all dirt and debris from all pipes and drainage structures; and repair all flooding, washouts, and all other erosion damage to the Work. This responsibility shall not end until Final Acceptance of the Work by the OWNER. Included is damage caused by erosion of any kind (e.g. wind, waves, stormwater runoff, hurricanes, etc.) including Acts of God. Restore all erosion damaged areas to design grades and elevations. Also, refer to [General Conditions 6.13.B](#).

### Item of Payment

Payment for the work specified in this item shall be made under:  
Bid Item No. 104-1 – Prevention, Control, and Abatement of Erosion and Water  
Pollution- Per Lump Sum

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**PERMITTEE’S AFFIDAVIT REGARDING POLLUTION**

This sworn statement is submitted to Indian River County for the following project (list project name and site address): **49<sup>th</sup> STREET MILLING AND RESURFACING (58<sup>TH</sup> AVENUE TO 31<sup>ST</sup> AVENUE), VERO BEACH, FLORIDA 32967**

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Personally before me the undersigned authority, appeared

\_\_\_\_\_, who upon oath duly administered, stated as follows:

1. This sworn statement is submitted by the PERMITTEE,

\_\_\_\_\_,  
whose business address is \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

and (if applicable) its Federal Identification No.(FEIN) is \_\_\_\_\_.

2. My name is \_\_\_\_\_ and my relationship to the entity named above is \_\_\_\_\_.

*(If signing as Owner’s Agent, attach Letter of Authorization to Sign from Owner)*

3. Permittee understands and agrees that in addition to complying with the terms and conditions of the Stormwater Management System Permit issued by Indian River County, Permittee is responsible for complying with the terms and conditions of the following as applicable to the site:

- (a) State of Florida Generic Permit for Stormwater Discharge From Large and Small Construction Activities (for projects one acre or larger),
- (b) Stormwater Pollution Prevention Plan (regardless of project size),
- (c) St. Johns River Water Management District permit(s) (regardless of project size),
- (d) Florida Department of Environmental Protection permit(s) (regardless of project size),
- (e) All other permits required for this project not specifically listed herein, and
- (f) All Codes and Ordinances of Indian River County.

4. Permittee understands and agrees that “pollution” as defined by Florida Statutes Chapter 403.031(7) includes: “. . . the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or manmade or human-induced impairment of

air or waters or alteration of the chemical, physical, biological, or radiological integrity of air or water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation unless authorized by applicable law.”

5. Permittee understands and agrees that in addition to the definition set forth in Item 4 above, “pollution” is also defined by Florida Administrative Code 62-302.530 and as may be further defined in the Indian River County permit(s).
6. Permittee understands that Indian River County requires the design, installation, and maintenance of proper erosion control measures at all times during construction until complete stabilization is achieved at the project site. Permittee understands that this requirement is for this project regardless of the project size.
7. Permittee understands that there are civil and criminal penalties for pollution listed in Florida Statutes Ch. 403.141 and Ch. 403.161 and that there are other penalties listed in Indian River County’s permits, including but not limited to, Indian River County issuing a Cease and Desist Order for the project. Permittee understands that it may be liable for these and other penalties if offsite pollution occurs as a result of activities associated with the Project.
8. Transfer of Ownership or County Issued Permits:
  - (a) Transfer of Interest in Real Property: Within twenty-one (21) days of any transfer of ownership or control of the real property at which the permitted activity, facility, or system is located or authorized, the Permittee shall notify in writing, both the Indian River County Engineering Division and the Indian River County Stormwater Division of the transfer. Permittee shall provide the name, mailing address, and telephone number of the transferee and a copy of the instrument effectuating the transfer. Said notification is in addition to notifying the County Attorney’s Office as required by County Code.
  - (b) Transfer of a County Permit. To transfer a County issued permit, Permittee must provide (1) the information required in Item 8(a); (2) a written statement from the proposed transferee that it will be bound by all terms and conditions of the permit; and (3) a new “Permittee’s Affidavit” form properly executed by the transferee. Upon proper receipt of these items the County shall transfer the permit to the transferee.
  - (c) Permittee is encouraged to request a permit transfer prior to the sale or legal transfer of the real property at which a permitted facility, system, or activity is located or authorized. However, the transfer shall not be effective prior to the sale or legal transfer.
  - (d) An “Illicit Discharge Sign” must be present at the site at the time of transfer. Replacement or additional signs may be obtained from the Indian River County Public Works Department at a cost of \$30.00 per sign.

Under penalty of perjury, Permittee declares that it has read the foregoing affidavit and the facts stated in it are true.

FURTHER AFFIANT SAYETH NAUGHT

Permittee: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_  
*(If signing as Owner's Agent, attach Letter of Authorization to Sign from Owner)*

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Work Telephone: \_\_\_\_\_

Mobile Telephone: \_\_\_\_\_

Email Address: \_\_\_\_\_

\*\*\*\*\*

The foregoing instrument was subscribed and sworn to before me this \_\_\_ day of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_, who is personally known to me or has produced \_\_\_\_\_ as identification and who did take oath.

\_\_\_\_\_  
Notary Public State of Florida at Large

My Commission expires: \_\_\_\_\_

+++END OF SECTION+++

**SECTION - 110 - CLEARING AND GRUBBING**

The work specified in this item shall conform to Section 110 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction with the following modifications:

- A. Prior to any clearing and grubbing, the contractor will stake the right-of-way. Unimproved areas shall be cleared of trees, logs, stumps, brush, vegetation, rubbish and other perishable or objectionable matter within limits shown on the plans excepting for certain trees and shrubs shown on the plans or as directed by the Engineer which are to remain undisturbed and protected. Stumps and roots between slope stakes in cuts and in embankments 3 feet or less in depth shall be removed to a depth of 18 inches below subgrade. No stumps, roots, or perishable matter of any description shall remain under concrete slabs or footing, including pavement and sidewalks.
- B. No trees shall be removed or relocated until the Engineer or his representative has marked all trees to be saved, after a review of the project site with the Contractor's representative.
- C. Where the final pavement or structural work will be close to existing trees, the Contractor shall exercise care in the vicinity of the trees. Further, the Contractor shall saw cut along the edge of the outside limits of the stabilization, structure subgrade or sidewalk to a minimum depth of 4 feet below the finish grade and paint with a commercial grade pruning paint the ends of all sawn roots. If directed by the Engineer or where shown on the drawings, work shall be done by hand in order to protect the trees.
- D. The Contractor shall exercise care when working in the vicinity of all trees to remain so as to not damage or remove major root structures. The Contractor shall not pull hair or major root structures. All severed roots shall be sawn clean and paint with pruning paint. Stumps, roots, etc., shall be completely removed and disposed of by the Contractor. Undesirable, dead, and/or damaged trees (as so designated by the Engineer) shall be removed.
- E. All trees to be removed shall be disposed off site; burning will be strictly prohibited.
- F. All trees or shrubs which are to remain shall be preserved and protected by the Contractor. Where the removal of valuable trees or shrubs specifically for transplanting is required, this work shall be done in cooperation with the Owner and at no additional expense to the Owner.
- G. All items to be removed shall be excavated to their full depth. All culverts removed from residential driveway entrances within the right-of-way shall become the property of the respective homeowner. Those homeowners not desiring the culverts may donate them to the County free of charge. (See Paragraph C, Special Provisions) The Contractor shall transport the culverts to the County's storage yard. All metal castings for catch basins, manholes, or other structures shall be carefully removed

and stored in the County's Storage Yard if they are deemed salvageable by the Engineer. The excavated materials shall be removed from the job site and disposed in a location designated or approved by the Owner. Any culverts, structures or any material excavated or removed from the project site under clearing and grubbing deemed unsalvageable by the Engineer shall be disposed of in a legal manner by the Contractor. Where required, suitable material as approved by the Engineer shall then be backfilled and compacted to restore the original contour of the ground. The fill material shall be backfilled and compacted in accordance with Section 120 of these specifications.

- H. No additional payment will be made, nor will additional work, or change orders be authorized for work needed to remove, relocate, protect, or otherwise account for in the construction of the work depicted in the plans, for any feature, or item that would be apparent from a careful inspection of the site and review of the plans, even though such feature or item is not specifically called out in the plans. It is therefore essential the contractor make such inspection and review.
- I. The unit price bid for this item shall include the cost of all labor, tools, and equipment necessary to excavate, remove, and dispose of those items as directed by the Engineer and where designated on the Drawings. The cost of restoration and backfill and compaction for the specific area of removal shall also be included under this item.

#### Item of Payment

Payment for the work specified in this item shall be made under:  
Bid Item No. 110-1-1 - Clearing and Grubbing – Per Lump Sum

### **SECTION – 120 - EXCAVATION AND EMBANKMENT**

- A. Earthwork, including earthwork for drives outside the right-of-way limits, shall be paid for as embankment. Cost shall include all work specified in this section and Section 120 of the FDOT Standard Specifications for Road and Bridge Construction. Such price and payment shall specifically include all cost of any roadway, lateral ditch or canal, and final dressing operations.
- B. Earthwork quantities shall be considered as in-place material with no shrinkage or expansion factors.
- C. Subsoil Excavation - Any excavation below the proposed bottom elevation of the select fill, isolated swale bottom locations, isolated locations for pipe installations and as approved by the engineer shall be paid for as subsoil excavation. Approximately 2.0 ft of subsoil excavation is required in sublateral canals. Cost of replacement embankment shall be included in cost of subsoil excavation. Contractor shall coordinate with county representative prior to any subsoil excavation.

- D. Embankment - General Requirements for Embankment Materials: The following is added after the first paragraph of Subarticle 120-7.2:
- Roadway Design Standard Index No. 505, Embankment Utilization Details is modified by the addition of the following:
- Any stratum or stockpile or soil which contains obvious pockets of highly organic material may be designated as muck or unsuitable for construction of subgrade by the Owner.
- Backfill material containing more than 2.0% by weight of organic material, as determined by FM 1-T 267 and by averaging the test results for three randomly selected samples from each stratum or stockpile of a particular material, shall not be used in construction of the reinforced volume. If an individual test value of the three samples exceeds 3.0%, the stratum or stockpile will not be suitable for construction of the reinforced volume.
- No A-8 material permitted in embankment.
- E. Payment shall be made under:
- Bid Item No. 120-1 – Excavation, Regular (Roadway) – Per Lump Sum  
 Bid Item No. 120-6 - Embankment (Compacted in Place) - Per Cubic Yard

### **SECTION – 160 - STABILIZING**

- A. Section 160 is modified by the addition of the following:
- "The stabilization thickness indicated on plans shall be considered a minimum thickness. Thickness will vary to conform to the lines, and grades shown in the plans."  
 Minimum L.B.R. = 40 - No under-tolerance.
- B. Payment shall be made under:
- Bid Item No. 160-4 - Type B Stabilization 12" Shoulder (LBR-40) - Per Square Yard

### **SECTION – 285 – OPTIONAL BASE COURSE**

- A. Sub Article 285-4 is modified by the addition of the following:
- Base material, thickness and requirements are described in the construction plans. Only one type of alternate base material shall be used. No additional payment will be made for base thickness in excess of the specified thickness
3. B. Payment shall be made under:
- Bid Item No. 285-709 – Optional Base Group 9 (10" Limerock) LBR 100 Two Lifts - Per Square Yard



### **SECTION – 327 - MILLING OF EXISTING ASPHALT PAVEMENT**

The work specified in this item shall conform to Section 327 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

#### **Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 327-70-6 – Milling Existing Asphalt Pavement (1-1/2" Avg. Depth) –  
Per Square Yard

### **SECTION – 334 - SUPERPAVE ASPHALT PAVEMENT**

The work specified in this item shall conform to Section 334 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

Sub article 334-8.1 through 334-8.3 – Basis of Payment shall be deleted in its entirety.

Sub article 334-8.4 – Payment shall be amended as follows:

#### **Item of Payment**

Bid Item No. 334-1-53 – Superpave Asphaltic Concrete (1-1/2" Thick) (Traffic C) (Widening) - SP 12.5 – Per Square Yard  
Bid Item No. 334-1-53A – Superpave Asphaltic Concrete (0"-3" Thick) (Overbuild) Type SP-12.5 (Traffic C, PG 76-22) – Per Ton

### **SECTION- 337 - ASPHALT CONCRETE FRICTION COURSE**

The work specified in this item shall conform to Section 337 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

Sub article 337-12.1 through 337-12.3 – Basis of Payment shall be deleted in its entirety.

Sub article 337-12.4 – Payment shall be amended as follows:

#### **Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 337-7-83 – Asphalt Concrete Friction Course FC12.5 (PG 76-22, PMA) (1-1/2" Thick) (Traffic C) – Per Square Yard

### **SECTION 339 – MISCELLANEOUS ASPHALT**

The work specified in this section shall conform to Section 339 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

#### **Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 339-1 – Miscellaneous Asphalt 2" Thick Under Guardrail – Per Ton

**SECTION 425 - INLETS, MANHOLES AND JUNCTION BOXES**

The work specified in this section shall conform to Section 425 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

**Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 425-6 – Valve Box Adjustment – Per Each

**SECTION 520 - CONCRETE GUTTER, CURB ELEMENT AND TRAFFIC SEPARATOR**

The work specified in this item shall conform to Section 520 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

**Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 520-1-10 – Concrete Curb and Gutter (Type “F”) – Per Linear Foot

**SECTION 536 – GUARDRAIL**

The work specified in this item shall conform to Section 536 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

**Item of Payment**

Payment for the work specified in this item shall be made under:  
Bid Item No. 536-1-1 – Guardrail – Roadway General TL-3 – Per Linear Foot  
Bid Item No. 536-85-26 Guardrail End Treatment Type CRT – Per Each

**SECTION - 570 – PERFORMANCE TURF**

The work specified in this item shall conform to Section 570 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

- A. Description: Sod for the project shall be of the variety that is common to the area and of a variety approved by the Engineer. This work shall also include mowing, to be mowed at maximum 6" height with a mulching mower.
- B. Work Included: Scope of Work: The work specified in this section consists of the establishing of a stand of grass, within the project, right-of-way, easements, and other areas indicated on the Drawings, by furnishing and placing grass sod. Also included are fertilizing, watering and maintenance as required to assure a healthy stand of grass. Two applications of fertilizer will be required with the initial application being fertilizer and the second application being “weed and feed”.

- C. **Guarantee:** All sodded areas shall be guaranteed for one year after date of final acceptance.
- Replacement of Defective Sod:** Any dead sod or sod showing (less than 95% of a square) indication of probable non survival or lack of health and vigor, or which do not exhibit the characteristics to meet specifications, shall be replaced within two weeks of notice from Owner or Engineer. All replacement sod shall be furnished/installed at no additional cost to the Owner and shall be guaranteed for three months. All replacement shall meet original specifications.
- The Contractor shall notify the Owner and Engineer ten days prior to the end of the guarantee period and such guarantee shall be extended until notification is received.
- At the end of the guarantee period, all sod that is dead or in unsatisfactory growth shall be replaced within two weeks.
- D. **Fertilizer:** Commercial fertilizers shall comply with the Indian River County Fertilizer Ordinance 2013-012 and Supplement Ordinance 2013-014 (see Appendix B).
- E. **Water for Grassing:** Contractor shall provide the water used in the sodding operations as necessary to meet the requirements of Article 570-3.6.
- F. **Preparation of Ground:** The area over which the sod is to be placed shall be scarified or loosened to a depth and then raked smooth and free from debris. Where the soil is sufficiently loose and clean, the Owner, at his discretion, may authorize the elimination of ground preparation.
- G. **Application of Fertilizer:** Before applying fertilizer, the soil pH shall be brought to a range of 6.0 - 7.0.
- Contractor shall apply two (2) applications. The initial shall be fertilizer and the second application shall be "weed and feed".
- The fertilizer shall be spread uniformly over the sodded area at the rate of 436 pounds per acre, or 10 pounds per 1,000 square feet, by a spreading device capable of uniformly distributing the material at the specified rate.
- Contractor shall apply applications as per manufacturer's specification. All tickets from bags shall be handed over to the County Inspector.
- On steep slopes, where the use of a machine for spreading or mixing is not practicable, the fertilizer shall be spread by hand and raked in and thoroughly mixed with the soil to a depth of approximately 2 inches.
- H. **Placing Sod:** The sod shall be placed on the prepared surface, with edges in close contact and shall be firmly and smoothly embedded by light tamping with appropriate tools.
- Where sodding is used in drainage ditches, the setting of the pieces shall be staggered so as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas, the offsets of individual strips shall not exceed 6 inches. In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a featheredge effect.
- Where sodding is placed abutting paved shoulder, the contractor is to ensure that the finished sod elevation is 1½" below paved shoulder.

On slopes greater than 3:1, the Contractor shall prevent the sod from sliding by means of wooden pegs driven through the sod blocks into firm earth, at suitable intervals.

Sodding shall not be performed when weather and soil conditions are, in the Engineer's opinion, unsuitable for proper results.

Sod shall be placed around all structures, equipment pads, etc.

I. Watering: The areas on which the sod is to be placed shall contain sufficient moisture, as determined by the Engineer, for optimum results. After being placed, the sod shall be kept in a moist condition to the full depth of the rooting zone for at least 2 weeks. Thereafter, the Contractor shall apply water as needed until the sod roots and starts to grow for a minimum of 60 days (or until final acceptance, whichever is latest).

J. Maintenance: The Contractor shall, at his expense, maintain the sodded areas in a satisfactory condition until final acceptance of the project. Such maintenance shall include repairing of any damaged areas and replacing areas in which the establishment of the grass stand does not appear to be developing satisfactorily.

Replanting or repair necessary due to the Contractor's negligence, carelessness or failure to provide routine maintenance shall be at the Contractor's expense.

The Contractor shall maintain the sodded area up to the final acceptance date as directed by the Engineer. Grass height shall not exceed 6" without mowing. Clippings shall be removed from sidewalk.

K. Article 570-9. The first two paragraphs under this Article are deleted and the following is added:

The contract unit price for performance turf shall include the costs of sod, fertilizer (2 applications), sidewalk sweeping after mowing, mowing, pegging disposal of clippings, water, tools, equipment, labor and all other incidentals necessary.

### Item of Payment

Payment shall be made under:

Bid Item No. 570-1-2 – Performance Turf (Sod) (Bahia) - Per Square Yard

### **SECTION - 700 – HIGHWAY SIGNING**

A. Signing for traffic control shall conform to the requirements of the Standard Specifications, Manual on Uniform Traffic Control Devices, Supplemental Specifications, Roadway and Traffic Design Standards, manufacturer's specifications.

B. Traffic Signs: All existing signs which are the property of the Owner shall be transported to the Indian River County Road and Bridge Maintenance Yard by the Contractor during construction if they are within the construction limits. Care shall be exercised by the Contractor during removal, storage and relocation so as not to damage the signs. If any damage occurs, as determined by the Owner's Engineer or Resident Construction Inspector, the sign shall be replaced by the Contractor with no compensation.

Item of Payment

Payment for the work specified in this item shall be made under:  
 Bid Item No. 700-1-5 - Single Post Sign (Relocate) – Per Assembly  
 Bis Item No. 700-1-5A – Single Post Sign (Bike Lane) – Per Assembly

**SECTION - 706 - RETROREFLECTIVE PAVEMENT MARKERS AND BITUMINOUS ADHESIVE**

The work specified in this item shall conform to Section 706 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

- A. All reflective pavement markers shall be 4" x 4".

Item of Payment

Payment for the work specified in this item shall be made under:  
 Bid Item No. 706-3 – R.P.M. Bi-Directional Amber/Amber – Per Each

**SECTION - 711 - THERMOPLASTIC PAVEMENT MARKINGS**

- A. Pavement markings for traffic control shall conform to the requirements of the Standard Specifications, Manual on Uniform Traffic Control Devices, Supplemental Specifications, Roadway and Traffic Design Standards, manufacturer's specifications.

Item of Payment

Payment shall be made under:

- Bid Item No. 711-4 – Bicycle Lane Markings, Thermoplastic - Per Each
- Bid Item No. 711-11-123 – Solid Traffic Stripe (12" White) Thermoplastic (Crosswalk) - Per Linear Foot
- Bid Item No. 711-11-125 – Solid Traffic Stripe (24" White) Thermoplastic - Per Linear Foot
- Bid Item No. 711-11-141 – Skip Traffic Stripe (6" White 2' – 4') Thermoplastic – Per Gross Mile
- Bid Item No. 711-11-141A – Skip Traffic Stripe (6" White 6' – 10') Thermoplastic – Per Gross Mile
- Bid Item No. 711-11-170 – Turn Arrows, Thermoplastic (White) – Per Each
- Bid Item No. 711-11-224 – Solid Traffic Stripe (18" Yellow), Thermoplastic – Per Linear Foot
- Bid Item No. 711-11-241 – Skip Traffic Stripe (6" Yellow 6' – 10'), Thermoplastic – Per Gross Mile
- Bid Item No. 711-16-101 – Solid Traffic Stripe (6" White) Thermoplastic – Per Gross Mile
- Bid Item No. 711-16-201 – Solid Traffic Stripe (6" Yellow), Thermoplastic – Per Gross Mile

**SECTION - 999 - RECORD / AS-BUILT DRAWINGS**

- A. During the construction operation, the CONTRACTOR shall maintain records of all deviations from the approved Project Plans and Specifications and shall prepare therefrom "RECORD" drawings showing correctly and accurately all changes and deviations from the work made during construction to reflect the work as it was actually constructed.
- B. The Record/As-Built survey shall be performed and subsequent plans prepared by a Professional Surveyor and Mapper, registered in the state of Florida and certified to the standards set forth in Chapter 472, Florida Statutes and Chapter 5J-17.050 Florida Administrative Code (Florida Minimum Technical Standards).
- C. Field measurements of vertical or horizontal dimensions of constructed improvements shall be obtained so that the constructed facility can be delineated in such a way that the location of the construction may be compared with the construction plans. Clearly shown by symbols, notations, or delineations, those constructed improvements located by the survey.
- D. All vertical information (elevations) provided on the Record Drawings shall be referenced to the North American Vertical Datum of 1988 (NAVD 88) unless otherwise specified by the Project Engineer.
- E. The horizontal information provided on the Record Drawings shall be referenced to the State of Florida, State Plane Coordinate System, Florida East Zone as established by Global Positioning System (GPS) which meets or exceeds Third Order Class I Accuracy Standards according to current publication of the Federal Geodetic Control Committee (FGCC) procedures.
- F. All Record/As-Built drawings shall be prepared in digital format (ACAD Civil 3D 2013) and shall utilize the digital design drawings as prepared by the Project Engineer as a base for the Record/As-Built drawings. It is the responsibility of the Surveyor to request these files from the Contractor or Project Owner in order to produce the Record/As-Built drawing set.
- G. ALL improvements proposed to be constructed as shown on the approved construction plans shall be field measured upon completion and shown on the Record/As-Built survey. Any improvements that appear in both plan and profile views shall show the Record/As-Built information in both views.
- H. The following items are required to be shown on all Indian River County project Record/As-Built drawings submitted to the County:

**DRAINAGE:**

Right-of-way Swale/Drainage – All culvert inverts, elevations and station offsets; inlet grate and bottom elevations; swale beginning and end bottom elevations; and highs and lows along top of bank. Size of swale.

1. Pipe Culvert/PVC Sleeves – All inverts, pipe size, stations and offsets.
2. Outfalls – All pipe inverts, pipe size, elevations and station offsets, weir box elevations, weir elevation, bleeder elevation and sizes.
3. Roadway/Off Site Drainage – All inverts, elevations and station offsets; manhole top elevation; grate top elevations.
4. Retention Ponds – Provide perimeter elevations, grade breaks, depths and calculated pond areas at control elevation and grade breaks above and below water surface. Show as-built of typical cross section as shown on design plan.

### **ROADWAY:**

1. Stations and offsets related to controlling baseline and elevations of all structures, side street and major driveway radius returns (edge of pavement), bends and/or change in direction of roadway alignment, minimum of 1000' intervals along roadway alignment.
2. Elevations along Profile Grade Line (PGL), of all edge of pavements on each side of Profile Grade Line (PGL), at medians at the high/low and PVI points along Profile Grade Line (PGL).
3. All final Elevations to be plotted on PGL AND Plan & Profile sheets as applicable.
4. Elevations of edge of pavement and flow line at curb inlets and on the adjacent edge of pavement at curb inlets.

### **WATER, FORCE, AND RECLAIMED WATER MAINS:**

1. Show size and type of material used to construct mains.
2. Show horizontal location and elevation of all tees, crosses, bends, terminal ends, valves, fire hydrants, air release valves, and sampling points, etc., by distances from known reference points.
3. Show location, size and type of material of all sleeves and casing pipes.
4. Elevation and horizontal location of all storm sewers, gravity sewers including laterals, force mains, water mains, etc. which are crossed; including clearance dimension at all conflicts or crossings.
5. Top of pipe elevation and horizontal location of all water and force main stub-outs.
6. Horizontal location of all services at the property lines.
7. Horizontal and vertical location of pipe including size of all mains and ground elevation shall be obtained at one-hundred (100) foot intervals. Contractor shall place temporary PVC stand pipes (tell-tales) at each of the one-hundred (100) foot intervals and at all fittings and conflicts/crossings to facilitate the record drawing survey. The tell-tale pipes shall be constructed of 2-inch PVC pipe, shall be placed on the top of the pipes to be surveyed, and shall be removed by the Contractor after completion of the field survey by the "As-Built" Professional Surveyor.
8. Location of fire lines.
9. Dedicated easement locations, identified by O.R. Book and Page Number.

**GRAVITY SEWER:**

1. Manholes: Elevation of top rim, bottom elevation and invert of each influent and effluent line.
2. Show distance between manholes center-to-center and horizontal location by baseline station and offset.
3. Show material size and type used to construct sewer mains.
4. Show length (center of manhole to end of stub) distances from known reference points or baseline offsets, and elevation of stub-outs.
5. Show which services have twenty (20) foot length of DIP at water main crossings.
6. Show station and offset location of sanitary services at property line. Particular care in dimensioning needed in special situations, i.e., cul-de-sacs and locations where services are not perpendicular to wye.
7. Show invert elevation of sanitary service at property line.
8. Any and all necessary dedicated easement locations, identified by O.R. Book and Page Number.

**PUMP / LIFT STATION:**

Record Drawings shall show elevations for the top and bottom and diameter of wet well along with invert of effluent line. Record Drawings should also indicate the make, model number, horsepower, impeller and condition point of pumps selected and installed, shape of wet well, location of control panel, location of pump out connection, float level settings, any deviation from the plans, and serial number(s) of the pump(s).

**SURVEY CONTROL**

1. Install/re-establish: It shall be the contractor's responsibility to hire a Professional Surveyor and Mapper as defined per Chapter 472, Florida Statutes, to replace any horizontal and vertical control shown on the engineering plans that was destroyed during construction.
2. New roadway alignment control points (survey baseline or controlling line and all points as indicated on the plans or control sheet) upon final roadway completion. Include all intersections and side streets. State plane coordinates and elevations for all control points.
3. If shown on plans or not: Any Public Land Corner or Governmental Survey Control point(s), vertical control (bench marks), property corners destroyed and/or disturbed during the scope of the project shall be properly re-established as per standards as set forth within Florida Statutes, Administrative code and Minimum Technical Standards for that type of survey. All said surveying mentioned above shall be performed under the direct supervision of a registered Professional Surveyor and Mapper in the state of Florida and certified accordingly. Said Governmental agency(s) shall be notified in writing of disturbance and re-establishments.



**RECORD/AS-BUILTS DRAWINGS FORMAT - SUBMITTAL**

- A. ENGINEER will supply the CONTRACTOR with the electronic file of the approved construction plans for the input of the As-Built (record) information.
- B. CONTRACTOR shall deliver seven (7) certified sets of Record/As-Builts with Electronic Drawing files prepared in AutoCAD Civil 3D 2013 AND PDF format or in current version as agreed by the ENGINEER.
- C. CONTRACTOR's surveyor shall review, sign and seal As-Builts or Record drawing(s). Said drawing(s) shall clearly state type of survey, positional tolerances, adhere and be certified to by a registered Professional Surveyor and Mapper in the state of Florida, any standards set forth by Florida Statutes, Administrative code and Minimum Technical Standards for As-Built/Record surveys.
- D. All Record/As-Built drawings are subject to review and approval by County Surveyor.

**ACCURACY**

The CONTRACTOR will be held responsible for the accuracy and completeness of Record Drawings and Electronic As-Builts and shall bear any costs incurred in finding utilities as a result of incorrect data furnished by the CONTRACTOR.

**COMPLETION OF WORK**

Upon Substantial Completion of the Work, deliver Record Drawings/As-Built Drawings to ENGINEER. Final payment will not be made until satisfactory record documents are received and approved by ENGINEER.

**AERIAL PHOTOGRAPH**

The CONTRACTOR shall provide aerial photographs of the project every 30 days during construction. The photographs shall be done in a manner to show the construction progress for the entire length of the project. The photographs can be angled and not prepared to a particular scale, however, must be detailed enough to identify the work in detail.

**Item of Payment**

Payment for the work specified in this item shall be made under: Bid Item No.  
999 – Record Drawings/As-Builts – Per Lump Sum

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**Board of Professional Surveyors and Mappers****Record As-Built Survey Checklist**

Lic. Name \_\_\_\_\_ Date: \_\_\_\_\_

Project Name: **49TH STREET MILLING AND RESURFACING**  
**(58<sup>TH</sup> AVENUE TO 31<sup>ST</sup> AVENUE)**Project No.: **IRC-1414****Chapter 61G17-6 Minimum Technical Standards F.A.C.****61G17-6.003 General Survey, Map, and Report Content Requirements**

- (1) REGULATORY OBJECTIVE: The public must be able to rely on the accuracy of measurements and maps produced by a surveyor and mapper. In meeting this objective, surveyors and mappers must achieve the following minimum standards of accuracy, completeness, and quality:**
- (a) Accuracy of survey measurements based on the type of survey and expected use.**
- (b) Measurements made in accordance with the United States standard, feet or meters.**
- (c) Records of measurements maintained for each survey (check field notes.)**
- (d) Measurement and computation records dated.**
- (e) Measurement and computation records substantiate the survey map.**
- (f) Measurement and computation records support accuracy statement (closure calculations or redundant measurements, if applicable.)**
- (2) Other More Stringent Requirements:**
- (a) Met more stringent requirements set by federal, state, or local governmental agencies.**
- (3) Other Standards and/or Requirements that Apply to All Surveys, Maps, and/or Survey Products:**
- (a) REGULATORY OBJECTIVE: In order to avoid misuse of a survey and map, the surveyor and mapper must adequately communicate the survey results to the public through a map, report, or report with an attached map.**
- (b) Survey map or report identified the responsible surveyor and mapper and contain standard content. In meeting this objective, surveyors and mappers must meet the following minimum standards of accuracy, completeness, and quality:**
- (c) Type survey stated on map and report:**
- |                                   |                                    |
|-----------------------------------|------------------------------------|
| <b>As-Built Survey</b>            | <b>Hydrographic Survey</b>         |
| <b>Boundary Survey</b>            | <b>Mean High Water Line Survey</b> |
| <b>Condominium Survey</b>         | <b>Quantity Survey</b>             |
| <b>Construction Layout Survey</b> | <b>Record Survey</b>               |
| <b>Control Survey</b>             | <b>Specific or Special Purpose</b> |

**Survey****Topographic Survey**

- (d) Name, certificate of authorization number, and street and mailing address of the business entity on the map and report.
- (e) Name and license number of the surveyor and mapper in responsible charge.
- (f) Name, license number, and street and mailing address of a surveyor and mapper practicing independent of any business entity on the map and report.
- (g) Survey date (date of data acquisition.)
- (h) Revision date for any graphic revisions (when survey date does not change.)
- (i) Map and report statement “Survey map and report or the copies thereof are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.”
- (j) Insurance statement in ¼” high letters “The survey depicted here is not covered by professional liability insurance” if there is no professional liability insurance.
- (k) Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
- (l) All computed data or plotted features shown on survey maps supported by accurate survey measurements unless clearly stated otherwise.
- (m) Bearings, distances, coordinates, and elevations shown on a survey map shall be substantiated by survey measurements unless clearly stated otherwise.
- (n) Bearing reference (well established and monumented line)
- (o) A designated “north arrow”
- (p) Stated scale or graphic scale
- (q) Abbreviations in legend or notes.
- (r) Special conditions and any necessary deviation from the standards noted upon the map or report.
- (s) Responsibility for all mapped features stated on the map or report
- (t) Map or report clearly states the individual primarily responsible for the map or report when mapped features have been integrated with others.
- (u) Map Accuracy.
  - (1) Vertical Feature Accuracy:
    - (a) Vertical Control: Field-measured control for elevation information shown upon survey maps or reports shall be based on a level loop or closure to a second benchmark.
    - (b) Closure in feet must be accurate to a standard of plus or minus .05 ft. times the square root of the distance in miles.

- (c) All surveys and maps or reports with elevation data shall indicate the datum and a description of the benchmark(s) upon which the survey is based.
  - (d) Minor elevation data may be obtained on an assumed datum provided the base elevation of the datum is obviously different than the established datum.
- (2) Horizontal Feature Accuracy:**
- (a) Horizontal Control: All surveys and maps or reports expressing or displaying features in a publicly published coordinate system shall indicate the coordinate datum and a description of the control points upon which the survey is based.
  - (b) Minor coordinate data may be obtained and used on an assumed datum provided the numerical basis of the datum is obviously different than a publicly published datum.
  - (c) The accuracy of control survey data shall be verified by redundant measurements or traverse closures. All control measurements shall achieve the following closures:  
 Commercial/High Risk Linear: 1 foot in 10,000 feet;  
 Suburban: Linear: 1 foot in 7,500 feet;  
 Rural: Linear: 1 foot in 5,000 feet;
  - (d) When statistical procedures are used to calculate survey accuracies, the maximum acceptable positional tolerance, based on the 95% confidence level, should meet the same equivalent relative distance standards as set forth in 61G17- 6.003(3)(p)(2.) F.A.C.
  - (e) Intended Display Scale: All maps or reports of surveys produced and delivered with digital coordinate files must contain a statement to the effect of: "This map is intended to be displayed at a scale of 1/\_\_\_ or smaller".

#### **61G17-6.004 Specific Survey, Map, and Report Requirements**

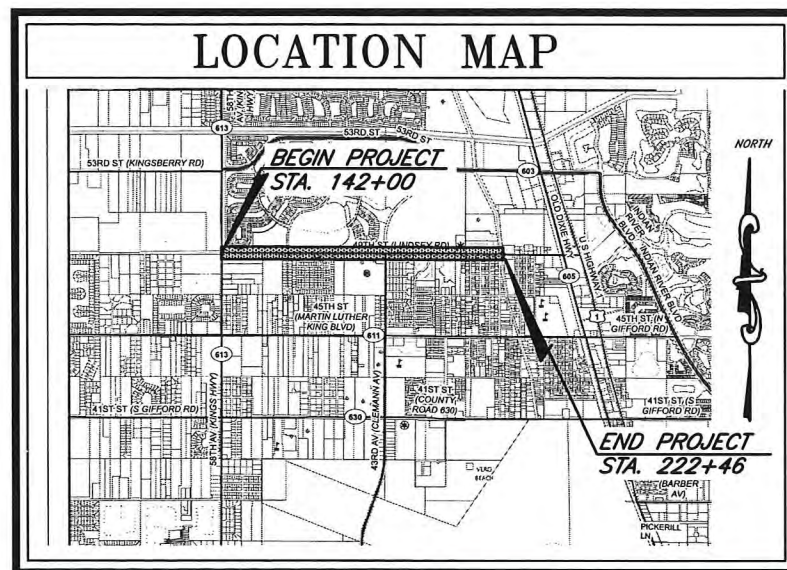
- (1) As-Built/Record Survey:**
- (a) Obtained field measurements of vertical or horizontal dimensions of constructed improvements so that the constructed facility can be delineated in such a way that the location of the construction may be compared with the construction plans.
  - (b) Clearly shows by symbols, notations, or delineations, those constructed improvements located by the survey.
  - (c) All maps prepared shall meet applicable minimum technical standards.
  - (d) Vertical and horizontal accuracy of the measurements made shall be such that it may be determined whether the improvements were constructed consistent with planned locations.

**(END OF SECTION)**

# INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS

## 49TH STREET MILLING AND RESURFACING (58TH AVENUE TO 31ST AVENUE)

PROJECT NO. IRC-1414  
F.M. NO. 436850-1-54-01



S-20,21,22 T-32 R-39  
LENGTH OF PROJECT  
9120 L.F. (1.73 MILES)



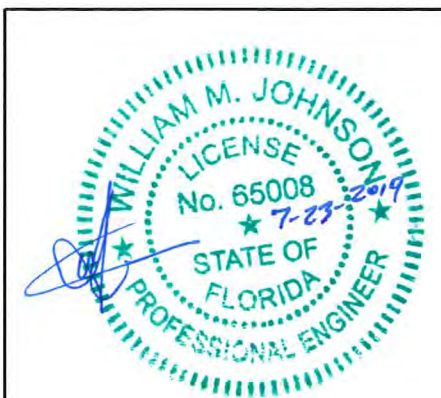
PREPARED BY  
INDIAN RIVER COUNTY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION  
1801 27TH STREET, VERO BEACH, FL. 32960  
ASSISTANT PUBLIC WORKS DIRECTOR: JAMES W. ENNIS, P.E., PMP  
ENGINEER OF RECORD: WILLIAM M. JOHNSON, P.E.

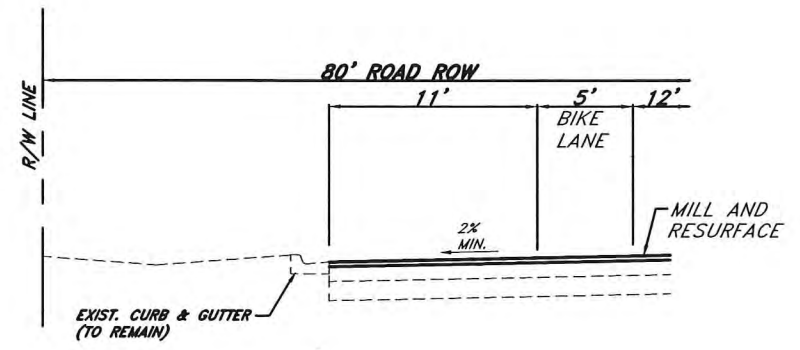
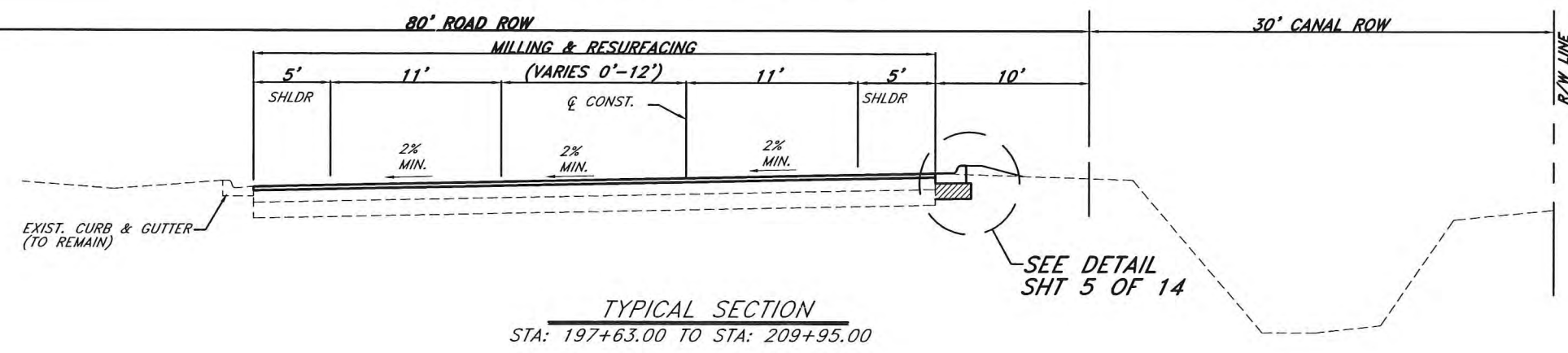
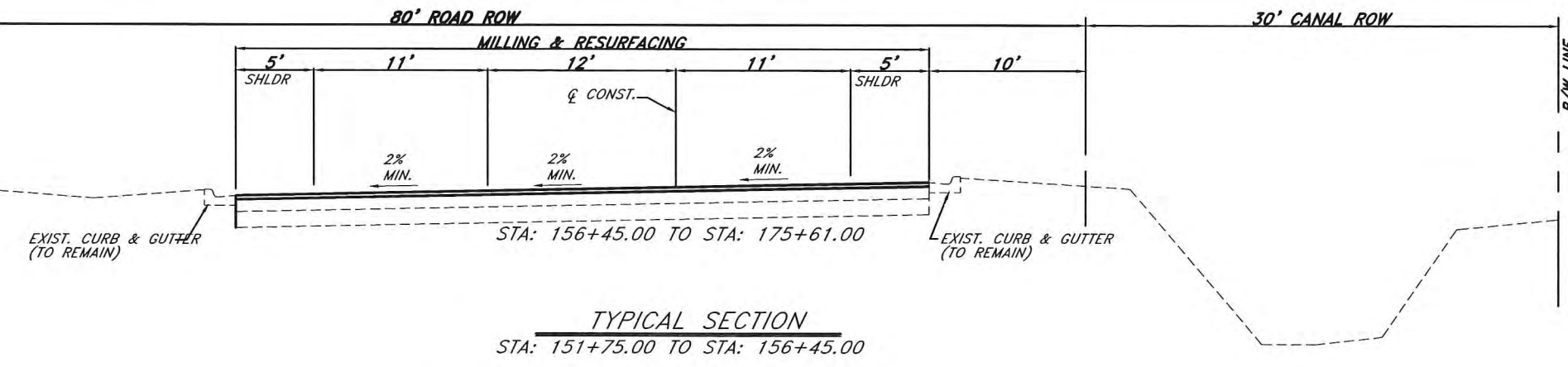
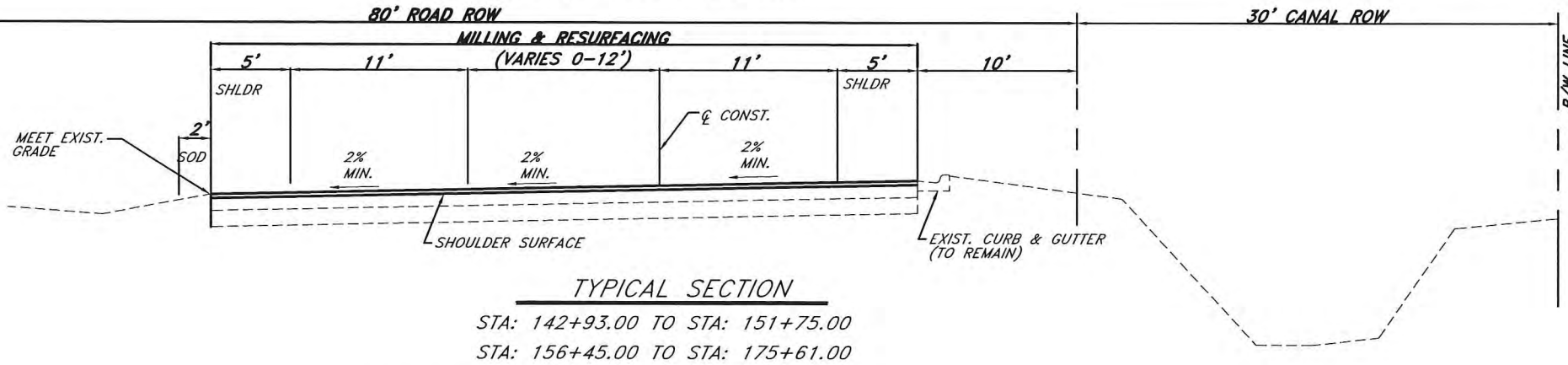
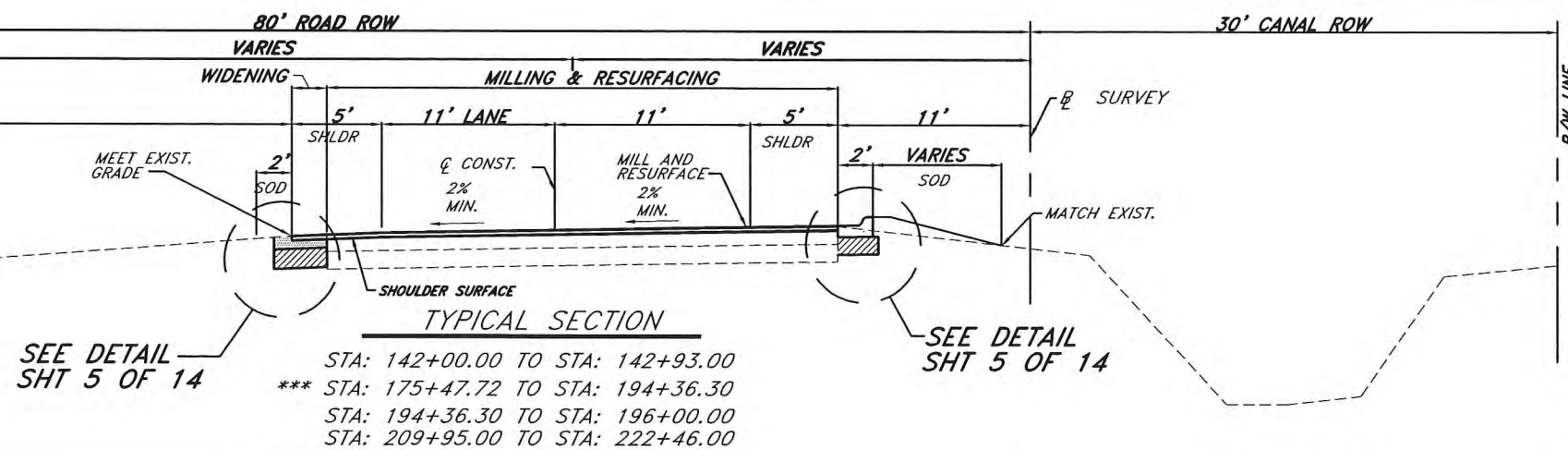
SHEET INDEX	
1.	COVER SHEET
2.	STANDARD ABBREVIATIONS
3.	GENERAL NOTES
4.	TYPICAL SECTIONS <span style="float: right;">1</span>
5.	DETAILS
6.	SUMMARY OF QUANTITIES
7-14	ROADWAY PLANS/ PAVEMENT MARKINGS <span style="float: right;">1</span>
15-16	SWPPP DETAILS

PLAN REVISION SUMMARY
Addendum #1 Revised sheets 4, 5, 6, and 14

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS (BOOKLET DATED 2017) AND SUPPLEMENTS THERETO. UNLESS OTHERWISE NOTED ON PLANS.

**GOVERNING SPECIFICATIONS:**  
THE FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATION FOR ROAD & BRIDGE CONSTRUCTION, DATED JULY 2017, SUPPLEMENTS THERETO, AND SPECIAL PROVISIONS THERETO IF NOTED IN THE CONTRACT SPECIFICATIONS FOR THIS PROJECT.

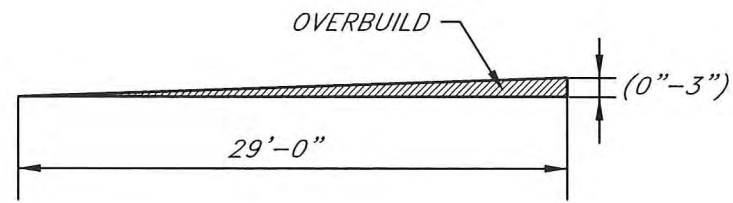




- MILLING**  
MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (1 1/2")
- RESURFACING**  
FRICTION COURSE TYPE FC-12.5 (1 1/2") (TRAFFIC C)
- SHOULDER WIDENING**  
OPTIONAL BASE GROUP 9 (10" LIMEROCK LBR100) WITH TYPE SP-12.5 STRUCTURAL COURSE (TRAFFIC C) (1 1/2") AND FRICTION COURSE FC-12.5 (1 1/2") (TRAFFIC C)
- OVERBUILD**  
OVERBUILD WITH SP 12.5 STRUCTURAL COURSE (0" - 3") (TRAFFIC C)

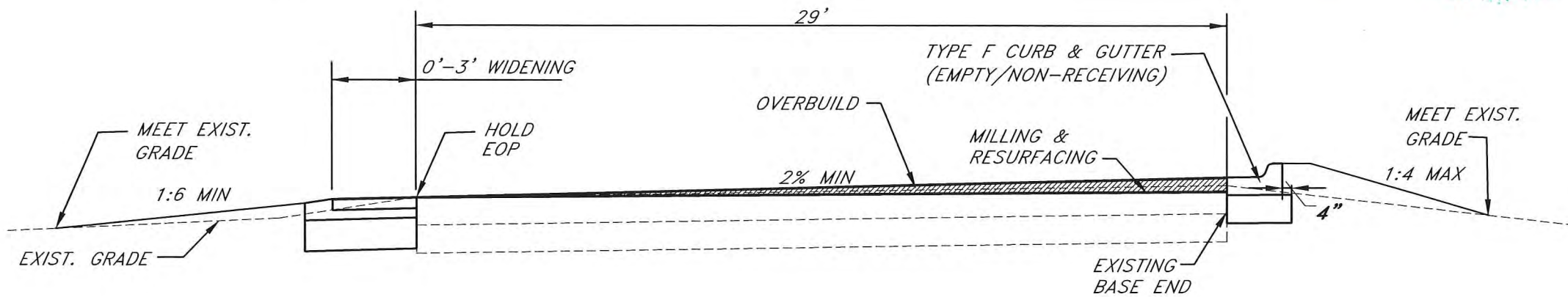
**NOTES:**  
 \*\*\* MILLING AND RESURFACING EXCEPTION STATION 175+47.74 TO STATION 194+36.30 TO BE CONSTRUCTED BY OTHERS.  
 - PROVIDE BICYCLE LANE PAVEMENT MARKING, CURB & GUTTER, THROUGHOUT PROJECT LIMITS, INCLUDING MILLING AND RESURFACING EXCEPTION AREA.

NO.	REVISION	DATE	BY	INDIAN RIVER COUNTY 1801 27TH STREET VERO BEACH, FL 32960 (772) 567-8000	DESIGNED BY: W. JOHNSON P.E. DRAWN BY: M. L. HELLER APPROVED BY: W. JOHNSON P.E.	SECTION: 26-77 TOWNSHIP: 32S RANGE: 39E	FIELD BOOK	DATE: 6-12-19 PROJECT NUMBER IRC-1414	49TH STREET MILLING AND RESURFACING FROM 58TH AVENUE TO 31ST AVENUE TYPICAL SECTIONS	SHEET 4 OF 16
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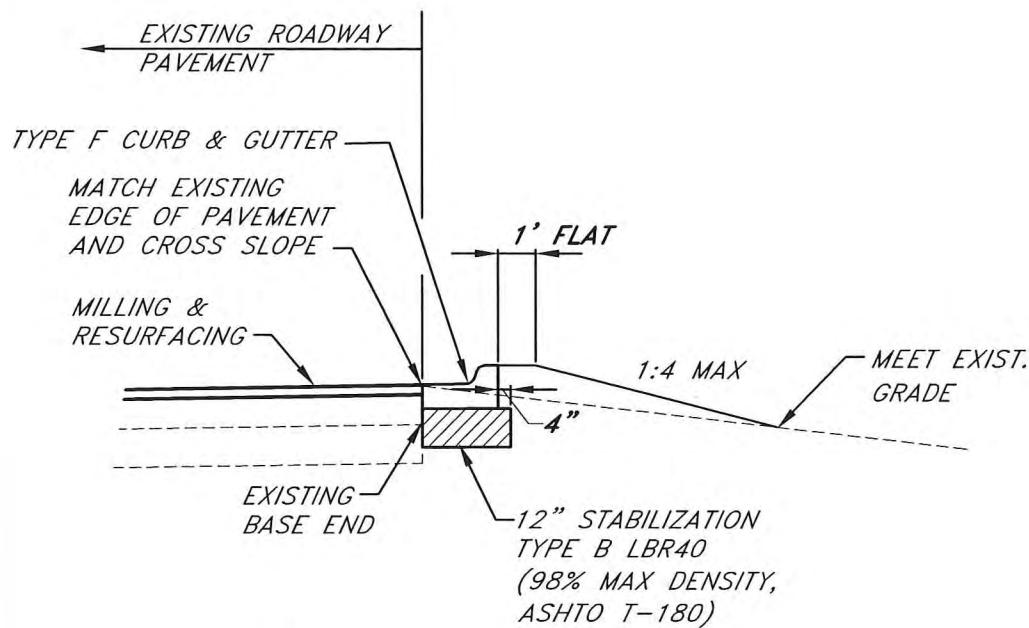
**OVERBUILD DETAIL**

NTS



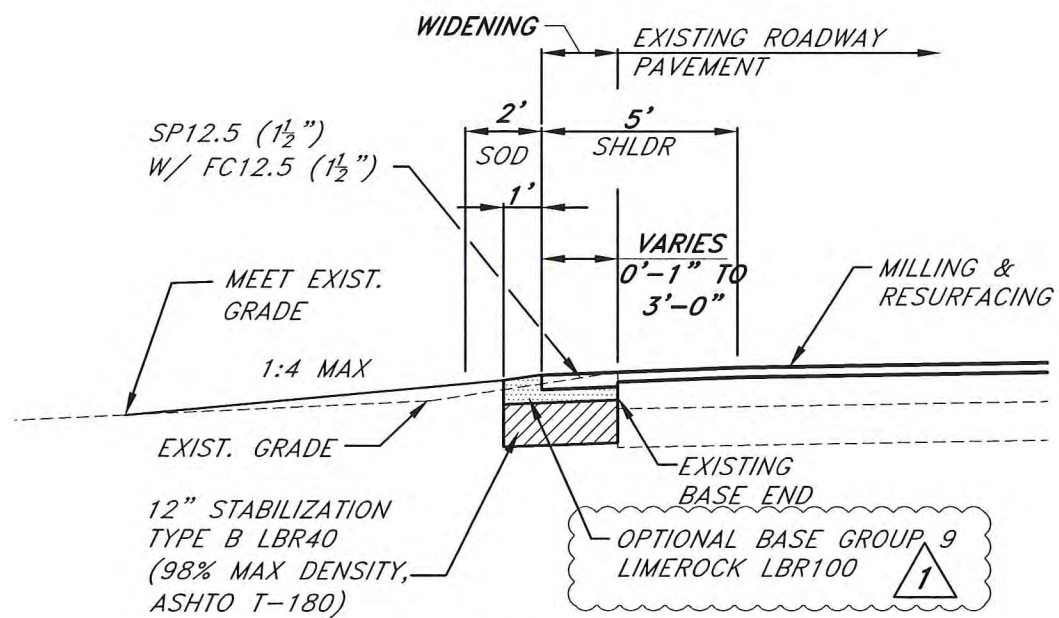
**SLOPE CORRECTION DETAIL**

1"=5'



**CURB & GUTTER DETAIL**

1"=5'

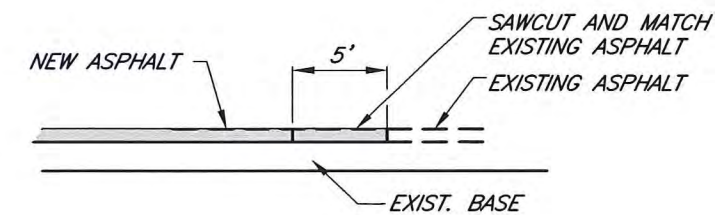


**SHOULDER WIDENING DETAIL**

1"=5'

**OVERBUILD**

EXISTING PAVEMENT CROSS SLOPES		
STATION	EXIST SLOPE	TARGET SLOPE
143+00	3.80%	2.00%
144+00	1.90%	2.00%
145+00	1.65%	2.00%
146+00	2.36%	2.36%
163+00	2.40%	
164+00	1.85%	2.00%
194+00	2.00%	2.00%
195+00	1.82%	2.00%
196+00	2.15%	2.00%
197+00	2.00%	2.00%
198+00	1.03%	2.00%
206+00	3.40%	
207+00	1.70%	3.10%
208+00	2.80%	
211+00	3.00%	3.00%
212+00	1.90%	3.10%
213+00	3.15%	3.15%
214+00	2.31%	3.15%
215+00	2.95%	3.00%
216+00	1.93%	2.50%
217+00	2.00%	2.00%
218+00	2.00%	2.00%
219+00	1.96%	2.00%
220+00	2.50%	2.50%
221+00	2.40%	2.40%
222+00	1.70%	2.00%



**BUTT JOINT DETAIL**

1"=10'

NO.	REVISION	DATE	BY	INDIAN RIVER COUNTY
1	REVISED BASE GROUP IN DETAIL	7/22/19	MLH	1801 27TH STREET VERO BEACH, FL 32960 (772) 567-8000

INDIAN RIVER COUNTY DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION

DESIGNED BY: W. JOHNSON P.E.	SECTION: 20-77	FIELD BOOK:	DATE: 6-12-19
DRAWN BY: M. L. HELLER	TOWNSHIP: 32S	PAGE:	PROJECT NUMBER: IRC-1414
APPROVED BY: W. JOHNSON P.E.	RANGE: 39E		

49TH STREET MILLING AND RESURFACING FROM 58TH AVENUE TO 31ST AVENUE DETAILS

ks\ENGINEERING DIVISION PROJECTS\1414-49th St\_58th Ave to 31st Ave\3-Design\Draw\Addendum\1414-COVER.dwg, 7/22/2019 8:32:49 AM, mheller

**SUMMARY OF QUANTITIES**

Item No.	Description	Unit	Quantity
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-1	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	LS	1
110-1-1	CLEARING AND GRUBBING	LS	1
120-1	EXCAVATION, REGULAR (ROADWAY)	LS	1
120-6	EMBANKMENT (COMPACTED IN PLACE)	CY	300
160-4	TYPE B STABILIZATION 12" SHOULDER (LBR-40)	SY	2,325
285-709	OPTIONAL BASE GROUP 9 (10" LIMEROCK) LBR100	SY	1,523
327-70-6	MILLING EXISTING ASPHALT (1-1/2" AVERAGE DEPTH)	SY	28,235
334-1-53	SUPERPAVE ASPALTIC CONCRETE (1-1/2" THICK) TRAFFIC C (WIDENING) TYPE SP-12.5	SY	858
334-1-53A	SUPERPAVE ASPALTIC CONCRETE (0"-3" THICK) (OVERBUILD) TYPE SP-12.5 (TRAFFIC C, PG 76-22)	TN	851
337-7-83	ASPALT CONCRETE FRICTION COURSE TYPE F.C. 12.5 (PG 76-22, PMA) (1-1/2" THICK) TRAFFIC C	SY	29,093
339-1	MISCELLANEOUS ASPHALT 2" THICK UNDER GUARDRAIL	TN	14
425-6	VALVE BOX ADJUSTMENT	EA	17
520-1-10	CONCRETE CURB AND GUTTER (TYPE F)	LF	1,728
536-1-1	GUARDRAIL - ROADWAY GENERAL TL-3	LF	350
536-85-26	GUARDRAIL END TREATMENT - TYPE CRT	EA	4
570-1-2	PERFORMANCE TURF - SOD (BAHIA)	SY	3,500
700-1-5	SINGLE POST SIGN (RELOCATE)	AS	3
700-1-5A	SINGLE POST SIGN (BIKE ROUTE)	AS	4
706-3	REFLECTIVE PAVEMENT MARKERS BI-DIRECTIONAL AMBER/AMBER	EA	602
711-4	BICYCLE LANE MARKING, THERMOPLASTIC (WHITE)	EA	20
711-11-123	SOLID TRAFFIC STRIPE (12" WHITE) THERMOPLASTIC (CROSSWALK)	LF	136
711-11-125	SOLID TRAFFIC STRIPE (24" WHITE) THERMOPLASTIC	LF	221
711-11-141	SKIP TRAFFIC STRIPE (6" WHITE 2'-4') THERMOPLASTIC	GM	0.164
711-11-141A	SKIP TRAFFIC STRIPE (6" WHITE 6'-10') THERMOPLASTIC	GM	0.044
711-11-170	TURN ARROWS, THERMOPLASTIC (WHITE)	EA	18
711-11-224	SOLID TRAFFIC STRIP (18" YELLOW) THERMOPLASTIC	LF	651
711-11-241	SKIP TRAFFIC STRIP (6" YELLOW 6'-10') THERMOPLASTIC	GM	0.027
711-16-101	SOLID TRAFFIC STRIPE (6" WHITE) THERMOPLASTIC	GM	2,210
711-16-201	SOLID TRAFFIC STRIPE (6" YELLOW) THERMOPLASTIC	GM	3,114
999-1	RECORD DRAWINGS/AS-BUILTS	LS	1
	1		

**PAY ITEM FOOTNOTES**

102-1 INCLUDES TEMPORARY PAVEMENT, TEMPORARY PAINT STRIPING, BARRIER WALLS, VERTICAL PANELS, ATTENUATORS, TEMPORARY STRIPING, SIGNS, MESSAGE BOARDS, BARRICADES, PERMANENT RELOCATION OF SCHOOL SIGNS AND ALL OTHER TRAFFIC INCIDENTAL ITEMS REQUIRED FOR THE MAINTENANCE OF TRAFFIC. ALL TEMPORARY PAVEMENT STRIPING IS TO BE REMOVED PRIOR TO FINAL STRIPING. VARIABLE CHANGING MESSAGE SIGN SHALL BE IN PLACE 2 WEEKS PRIOR TO ALL ROAD CLOSINGS, COST SHALL BE INCLUDED IN THE MAINTENANCE OF TRAFFIC PAY ITEM. COST SHALL INCLUDE AN MOT PLAN PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.

104-1 COST SHALL INCLUDE ALL NPDES PERMITTING FEES.

110-1-1 INCLUDES BUT NOT LIMITED TO VEGETATION & TOPSOIL REMOVAL SAW CUT AND/OR REMOVAL OF EXISTING PAVEMENT, ASPHALT OR CONCRETE, CURB OR SIDEWALK, THE REMOVAL OF EXISTING GUARDRAIL AND THE REMOVAL OF EXISTING PIPES CULVERTS, HEADWALLS AND/OR STRUCTURES. WHERE EXISTING PIPES ARE REMOVED AND THE EXISTING STRUCTURE REMAINS, THE RESULTING HOLE SHALL BE FORMED AND FILLED WITH CONCRETE. THE CONTRACTOR SHALL COMPLY WITH THE STATE OF FLORIDA TRENCH SAFETY ACT. INCIDENTAL CONSTRUCTION COSTS INCLUDING, AS-BUILT SURVEYING AND DRAWING PREPARATION, SURVEY STAKING, AND UTILITY COORDINATION ARE INCLUDED IN THE UNIT COST OF RELATED ITEMS.

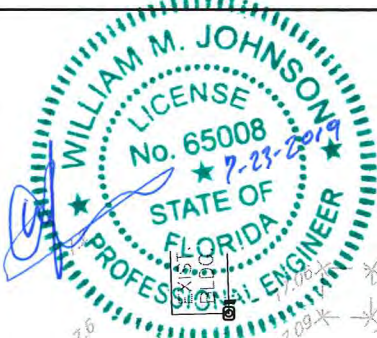
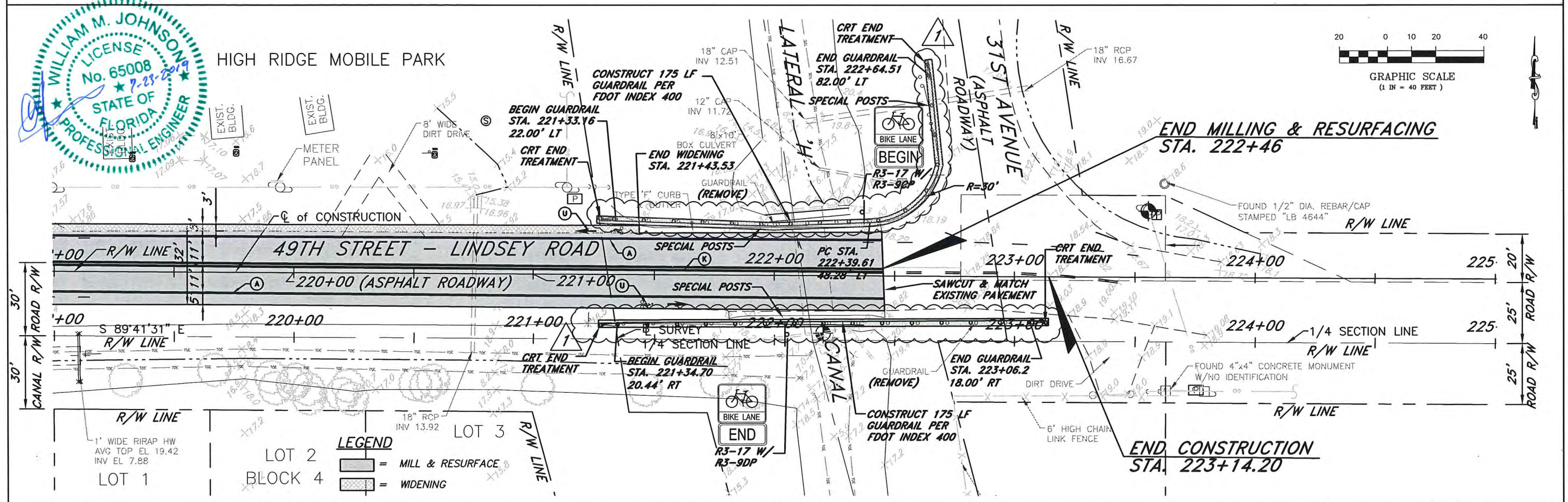
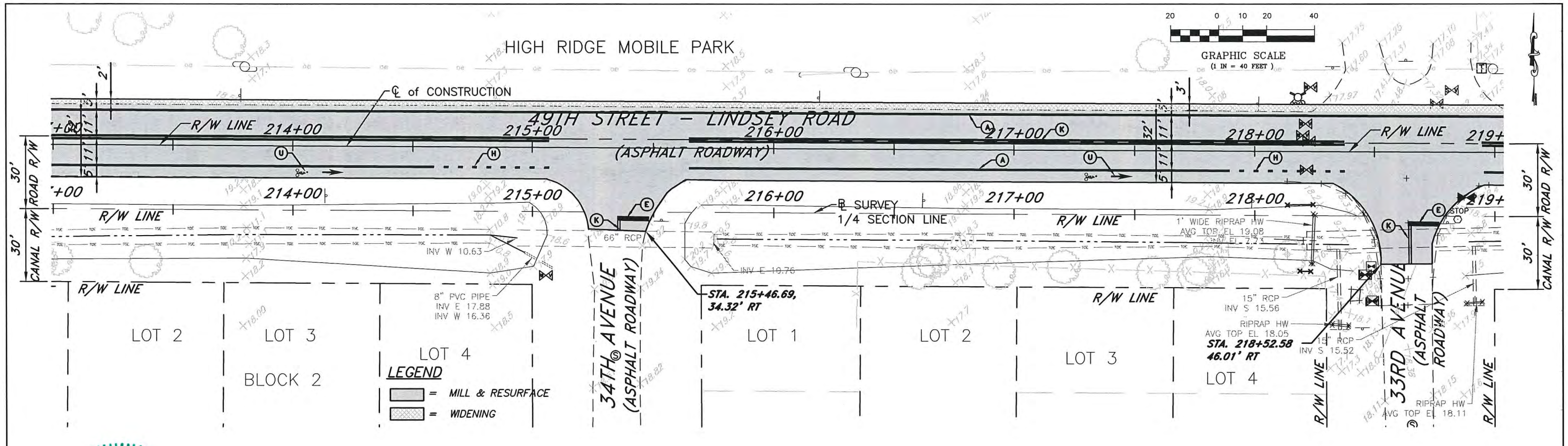
120-1 INCLUDES AREA PROPOSED STABILIZED SHOULDER AND THE RIGHT OF WAY WHERE SIDE SLOPES, SWALE GRADING, ASPHALT AND BASE REMOVAL, AND DITCH GRADING ARE TO BE CONSTRUCTED TO CONFORM TO THE PROPOSED GRADES AND CROSS SECTIONS. THIS ITEM DOES NOT INCLUDE UNDISTURBED AREAS AND/OR PIPE BACKFILL.

327-70-6 - THE COST SHALL INCLUDE THE HAULING OF THE MILLINGS TO THE ADDRESS SPECIFIED IN SECTION 01009, 1.1 (C) OF THE CONTRACT DOCUMENTS. INDIAN RIVER COUNTY WILL RETAIN OWNERSHIP OF THE MILLINGS.

520-1-10 SHALL INCLUDE DROP CURB OPENING AS DETAILED IN F.D.O.T. STANDARD INDEX #300.







NO.	REVISION	DATE	BY	INDIAN RIVER COUNTY 1801 27TH STREET VERO BEACH, FL 32960 (772) 567-8000	 DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	DESIGNED BY: W. JOHNSON P.E.	SECTION: 20-22	FIELD BOOK:	DATE: 6-12-19	49TH STREET MILLING AND RESURFACING PAVEMENT MARKINGS STA 219+00 TO STA 225+00	SHEET 14 OF 16
1	ADD MISC. ASPHALT UNDER GUARDRAIL	7/22/19	MLH			APPROVED BY: W. JOHNSON P.E.	TOWNSHIP: 32S	PAGE:	PROJECT NUMBER IRC-1414		

ks\ENGINEERING DIVISION PROJECTS\1414-49th St\_58th Ave to 31st Ave\3-Design\Draw\Addendum\1414-MODEL.dwg, 7/23/2019 10:32:56 AM, mheller