

TECHNICAL SPECIFICATIONS

FOR

AVILA AVENUE STOP SIGN MODIFICATION

SITE WORK

PREPARED FOR:

AVE MARIA DEVELOPMENT, L.L.L.P.
2600 GOLDEN GATE PARKWAY
NAPLES, FLORIDA 34105

PREPARED BY:

PENINSULA ENGINEERING
2600 GOLDEN GATE PARKWAY
NAPLES, FLORIDA 34105



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FOR BIDDING PURPOSES ONLY

David J. Hurst, PE

License #60727

Certificate of Authorization No. 28275

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**SECTION 01095
REFERENCE STANDARDS & ABBREVIATIONS**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of the Contract, including General Conditions and Supplementary Conditions and other Division 1 Specifications apply to this Section.

1.02 DEFINITION

General: Basic Contract definitions are included in the General Conditions.

- A. Approved: The term approved, when used in conjunction with the Owner's Representative's action on the CONTRACTOR'S submittals, applications, and requests, is limited to the Owner's Representative's duties and responsibilities as stated in the Conditions of the Contract. A stamp reading "No Exceptions Taken" shall have the same intent as "Approved".
- B. Furnish: The term furnishes means supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- C. Indicated: The term indicated refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as shown, noted, scheduled, and specified are used to help the reader locate the reference. There is no limitation on location.
- D. Install: The term install describes operations at the Project site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- E. Installer: An Installer is the CONTRACTOR or another entity engaged by the CONTRACTOR, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in operations they are engaged to perform.
- F. Project Site: The space available to the CONTRACTOR for performing construction activities either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- G. Provide: The term provides means to furnish and install, complete and ready for the intended use.
- H. Regulations: The term regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- I. Trades: Using terms such as carpentry is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as carpenter. It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

1.03 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent

requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and where the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer to the Owner's Representative for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
- E. Abbreviations and Names: Trade association names, titles of general standards, and names and titles of government agencies are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AAN	American Association of Nurserymen.
AASHTO	American Association of State Highway and Transportation Officials.
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGC	Associated General Contractors of America
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AI	Asphalt Institute

AIA	American Institute of Architects
AIHA	American Industrial Hygiene Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction.
ALCA	Associated Landscape Contractors of America
ALI	Associated Laboratories, Inc.
ALSC	American Lumber Standards Committee
AMCA	Air Movement and Control Association
AMUC	Ave Maria Utility Company, LLLP
ANSI	American National Standards Institute.
AOAC	Association of Official Analytical Chemists
AOSA	Association of Official Seed Analysts
APA	American Plywood Association
API	American Petroleum Institute.
AREA	American Railroad Engineers Association
ARI	Air Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASA	Acoustical Society of America
ASA	American Standards Association.
ASC	Adhesive and Sealant Council
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating & Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials.
AWCMA	American Window Covering Manufacturers Association
AWG	American Wire Gage
AWI	Architectural Woodwork Institute

AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America
BIFMA	Business and Institutional Furniture Manufacturers Association
CAGI	Compressed Air and Gas Institute
CAUS	Color Association of the United States
CBM	Certified Ballast Manufacturers
CCC	Carpet Cushion Council
CDA	Copper Development Association
COE	Corps of Engineers (also listed as USACOE or ACOE)
CFR	Code of Federal Regulations
CGA	Compressed Gas Association
CISCA	Ceiling and Interior Systems Construction Assoc.
CISPI	Cast Iron Soil Pipe Institute
CPSC	Consumer Product Safety Commission
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard of NBS (U.S. Dept. of Commerce)
CTI	Ceramic Tile Institute
DCA	Department of Community Affairs
DEP	Department of Environmental Protection
DFPA	Douglas Fir Plywood Association
DHI	Door and Hardware Institute
DLPA	Decorative Laminate Products Association
DOC	U.S. Department of Commerce
DOT	Department of Transportation

DRI	Development of Regional Impact
ECSA	Exchange Carriers Standards Association
EIA	Electronic Industries Association
EIMA	Exterior Insulation Manufacturers Association
EJMA	Expansion Joint Manufacturers Association
EPA	Environmental Protection Agency
ERP	Environmental Resource Permit
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGMA	Flat Glass Marketing Association
FHA	Federal Housing Administration
FM	Factory Mutual Research Organization
FS	Federal Specifications
FSC	Forest Stewardship Council
FTI	Facing Tile Institute
GA	Gypsum Association
GSA	General Services Administration
HEI	Heat Exchange Institute
HI	Hydronics Institute
H.I.	Hydraulic Institute
HMA	Hardwood Manufacturers Association
HPMA	Hardwood Plywood Manufacturers Association
IBD	Institute of Business Designers
ICEA	Insulated Cable Engineers Association, Inc.
IEEE	Institute of Electrical and Electronic Engineers, Inc.
IESNA	Illuminating Engineering Society of North American
IGCC	Insulating Glass Certification Council
ILI	Indiana Limestone Institute of America
IMSA	International Municipal Signal Association

IRI	Industrial Risk Insurers
ISA	Instrument Society of America
ITE	Institute of Transportation Engineers
LEED™	Leadership in Energy and Environmental Design
LIA	Lead Industries Association, Inc.
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturer's Association
MCAA	Mechanical Contractors Association of America
MFMA	Maple Flooring Manufacturers' Association
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
MUTCD	Manual on Uniform Traffic Control Devices
NAAMM	National Association of Architectural Metal Manufacturers
NAIMA	North American Insulation Manufacturers Association
NAPA	National Asphalt Pavement Association
NBFU	National Board of Fire Underwriters
NBGQA	National Building Granite Quarries Association
NBS	National Bureau of Standards (U.S. Dept. of Commerce)
NCMA	National Concrete Masonry Association
NCRPM	National Council on Radiation Protection and Measurements
NCSPA	National Corrugated Steel Pipe Association
NEC	National Electrical Code (Published by NFPA)
NECA	National Electrical Contractors Association
NEII	National Elevator Industry, Inc.
NEMA	National Electrical Manufacturers Association
NETA	International Electrical Testing Association
N.F.P.A.	National Forest Products Association
NFPA	National Fire Protection Association

NHLA	National Hardwood Lumber Association
NIST	National Institute of Standards and Technology
NLGA	National Lumber Grades Authority
NOFMA	National Oak Flooring Manufacturers Association
NPA	National Particleboard Association
NPCA	National Paint and Coatings Association
NRCA	National Roofing Contractors Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDA	Preliminary Development Agreement
PDI	Plumbing and Drainage Institute
PE	Professional Engineer
REA	Rural Electrification Administration
RFCI	Resilient Floor Covering Institute
RMA	Rubber Manufacturing Association
RPLS	Registered Professional Land Surveyor
SDI	Steel Deck Institute
SDP	Site Development Permit
SFPA	Southern Forest Products Association
SFWMD	South Florida Water Management District
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPRI	Single Ply Roofing Institute
SRA	Stewardship Receiving Area
SSA	Stewardship Sending Area

SSPC	Steel Structures Painting Council
SSPMA	Sump and Sewage Pump Manufacturers Association
SWI	Steel Window Institute
SWPA	Submersible Wastewater Pump Association
TCA	Tile Council of America
TIMA	Thermal Insulation Manufacturers Association
TPI	Truss Plate Institute
UL	Underwriters Laboratory, Inc.
USDA	U. S. Department of Agriculture
USGBC	U. S. Green Building Council
USPS	U. S. Postal Service
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Wall covering Manufacturers Association
WIC	Woodwork Institute of California
WLPDIA	Western Lath, Plaster, Drywall Industries Association
WRI	Wire Reinforcement Institute
WSC	Water Systems Council
WSFI	Wood and Synthetic Flooring Institute
WWPA	Western Wood Products Association
W.W.P.A.	Woven Wire Products Association

Part 2 – PRODUCTS (Not Used)

Part 3 – EXECUTION (Not Used)

END OF SECTION 01095

**SECTION 01300
SHOP DRAWINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop Drawing submittal procedures.

1.02 PROCEDURES

- A. Deliver six copies of Submittals to OWNER at address listed on cover sheet of Specifications.
- B. Transmit each item under OWNER Accepted Form. Identify Project, CONTRACTOR, Subcontractor, and major supplier. Identify pertinent Drawing Sheet and Specification Section number as appropriate. Identify deviations from Contract Documents. Approve all Submittals prior to forwarding to OWNER by stamping and signing approval stamp. Provide space for CONTRACTOR and OWNER review stamps.
- C. After OWNER review of Submittal, revise and resubmit as required, identifying changes made since previous Submittal.
- D. Distribute copies of reviewed Submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
- E. Prior to any Submittals, a Schedule of Shop Drawings must be submitted and approved by OWNER.

PART 2 PRODUCTS

2.01 SHOP DRAWING SUBMITTAL

- A. Items required by the Drawings and/or Specifications.
- B. Drainage structures.

PART 3 EXECUTION

Not Used

END OF SECTION 01300

**SECTION 01410
TESTING SERVICES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Responsibilities of the CONTRACTOR, OWNER, and Testing Laboratory regarding specified tests.
- B. Report Specifications.

1.02 SELECTION AND PAYMENT

- A. Unless otherwise stated in the Contract Documents, the OWNER will select and pay for the services of an independent testing laboratory to perform tests required by the technical specifications.
- B. Cost of retest due to failures shall be paid for by the CONTRACTOR in the form of a deduction from the contract amount.
- C. Utilization of a testing laboratory shall in no way relieve the CONTRACTOR of any obligation to perform work in accordance with the requirements of the Contract Documents.

1.03 SCHEDULING TESTS

- A. The OWNER will furnish the name of the testing laboratory to the CONTRACTOR at the Preconstruction Conference.
- B. The CONTRACTOR shall be responsible for scheduling each test by notifying the designated laboratory 24 hours prior to the time the test is to be taken.
- C. The specific requirements including the type and amount of testing shall be in accordance with the technical specifications or as otherwise stated in the Contract Documents.
- D. Ample time shall be allowed for the testing process by the CONTRACTOR, since an extension of time will not be allowed for testing delays or retest due to failures.

1.04 QUALITY ASSURANCE

- A. All tests shall be performed by qualified personnel under the direction and control of a Professional DESIGNER registered in the State of Florida and specializing in Geotechnical or Material analysis as applicable.
- B. In addition to the tests required by the Contract Documents, the OWNER's Representative may direct the testing laboratory to take any other tests or material inspections that he feels necessary to achieve the quality of construction that is specified in the Contract Documents.

1.05 LABORATORY RESPONSIBILITIES

- A. Perform inspection, sampling, and testing in accordance with the Contract Documents.
- B. Provide qualified personnel to perform all phases of required services and cooperate with OWNER's Representative and CONTRACTOR in the performance of those services.
- C. Ascertain compliance of materials and related procedures with requirements of the Contract Documents.
- D. Promptly notify the CONTRACTOR and the OWNER's Representative of any irregularities or non-conformance of work, materials, or product.

- E. Perform additional inspections or tests requested by the OWNER's Representative.
- F. Attend pre-construction conferences and progress meetings.

1.06 LABORATORY REPORTS

- A. After each inspection or test, promptly submit a laboratory report to the OWNER, the OWNER's Representative, and the CONTRACTOR.
- B. The report shall include the following:
 - 1. Date of report.
 - 2. Project title and number.
 - 3. Date, time, and location of each sample extraction or inspection.
 - 4. Identification of material and method of test.
 - 5. Results of tests.
 - 6. Evaluation of conformance to Contract specifications.
 - 7. Notification of retest requirement due to test failure.

1.07 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke or alter the requirements of the Contract Documents.
- B. Laboratory may not approve or accept any portion of the work.
- C. Laboratory may not assume any duties of the CONTRACTOR.
- D. Laboratory has no authority to stop the work.

1.08 CONTRACTOR RESPONSIBILITIES

- A. Submit proposed mix designs and samples of proposed materials to the designated laboratory as required by the Contract Documents or as requested by the OWNER's Representative.
- B. Provide access to the site for any tests or inspections.
- C. Provide labor and facilities to obtain, handle, store, and cure test samples and to facilitate material inspection.
- D. Cooperate with laboratory personnel to maximize the efficiency of the testing procedure by periodically updating the construction schedule and adhering to the 24 hour advance notice requirement for tests.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 BASIS OF PAYMENT

- A. In accordance with Article 1.02 SELECTION AND PAYMENT this Section.

END OF SECTION 01410

**SECTION 01510
TEMPORARY UTILITIES AND CONTROLS**

PART 1 GENERAL

1.01 REQUIREMENTS

- A. Furnish, install, maintain and remove temporary utilities required for construction. See other sections for additional utilities coordination.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with Federal, State and local codes and regulations and with utility company requirements.
- C. Comply with County Health Department Regulations.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL

- A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

- A. Arrange with utility company and OWNER to provide service required for power and lighting, and pay all costs for service and for power used in the construction, testing and trial operation prior to final acceptance of the work by the OWNER as stipulated by the DESIGNER.
- B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting are available throughout the construction by the use of construction type power cords.
- C. Provide adequate artificial lighting for all areas of work when natural light is not adequate for work, and for areas accessible to the public.

2.03 TEMPORARY HEAT AND VENTILATION

- A. Provide temporary heat and ventilation as required to maintain adequate environmental conditions to facilitate progress of the work, to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage due to temperature or humidity.
- B. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.
- C. Portable heaters shall be standard approved units complete with controls.
- D. Pay all costs of installation, maintenance, operation and removal, and for fuel consumed.
- E. Provide connections to existing facilities, extend and supplement with temporary units as required to comply with requirements. Pay all costs of installation, maintenance, operation and removal.

2.04 TEMPORARY TELEPHONE SERVICE

- A. Arrange with local telephone service company.
- B. Pay all costs for installation, maintenance and removal, and service charges.

2.05 TEMPORARY WATER

- A. Provide and pay for all required water for construction and consumptive purposes.
- B. CONTRACTOR may utilize existing on-site water supply system for water needed for construction purposes. However, all water used shall be coordinated with the utility company.

2.06 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. Service, clean and maintain facilities and enclosures.

2.07 EROSION AND PROPERTY CONTROL

- A. Flow of drains and sewers maintained: Adequate provisions shall be made for the flow of sewers, drains and water courses encountered during construction, and the lines and structures which may have been disturbed shall be immediately restored to their original condition at the expense of the CONTRACTOR.
- B. Property Protection: Trees, grass, fences, signboards, poles and all other property shall be protected unless their removal is authorized; and any property damage shall be satisfactorily restored by the CONTRACTOR and at the expense of the CONTRACTOR.
- C. Provide all means necessary for prevention, control and abatement of erosion, siltation and water pollution resulting from construction until final acceptance by OWNER. Provide for mulching, sodding, sandbagging, berms, slope drains, sedimentation structures, or other devices necessary to meet City of Naples, County, State and Federal regulation.

2.08 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish; periodically dispose of off-site.
- B. Clean interior areas prior to start of finish work, maintain areas free of dust and other contaminants during finishing operations.

2.09 CHEMICALS, HAZARDOUS WASTES, AND PETROLEUM PRODUCTS

- A. All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with manufacturer's instructions or government regulations as applicable. The CONTRACTOR shall legally dispose of and clean the project site of all chemicals, hazardous wastes, and petroleum products placed or used on the site by the CONTRACTOR.

PART 3 EXECUTION

3.01. REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required as determined by the DESIGNER.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore permanent facilities used for temporary services to specified condition.

END OF SECTION 01510

**SECTION 01600
MATERIAL AND EQUIPMENT**

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Products.
- B. Transportation and Handling.
- C. Storage and Protection.
- D. Product Options.
- E. Substitutions.
- F. Systems Demonstration.

1.02 PRODUCTS

- A. Only new materials and equipment shall be incorporated in the work. All material and equipment furnished by CONTRACTOR shall be subject to inspection and approved by DESIGNER.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.

1.03 TRANSPORTATION AND HANDLING

- A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.04 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with weather-tight enclosure as recommended by manufacturer. Provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.
- E. Materials which in the opinion of the DESIGNER have become so damaged as to be unfit for the use intended or specified shall be removed from the site of the work. CONTRACTOR shall receive no compensation for the damaged material or its removal.

1.05 PRODUCT OPTIONS

- A. Products specified by reference standards or by description only: Any product meeting those standards.
- B. Products specified by naming one or more manufacturers with a provision for substitutions: Submit a request for substitution for any manufacturer not specifically named.

1.06 SUBSTITUTIONS

- A. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- B. Request constitutes a representation that CONTRACTOR:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.
- C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- D. DESIGNER will determine acceptability of proposed substitution, and will notify CONTRACTOR of acceptance or rejection in writing within a reasonable time.

1.07 SYSTEMS DEMONSTRATION

- A. Prior to final inspection, demonstrate operation of each system to DESIGNER and OWNER.
- B. Instruct OWNER's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance data as the basis of instruction.

END OF SECTION 01600

**SECTION 02704
MAINTENANCE OF TRAFFIC**

PART 1 GENERAL

1.01 SCOPE

- A. Work specified in this Section consists of maintaining traffic within limits of the project for the duration of the construction period, including any temporary suspensions of the work. It shall include construction and maintenance of any detour facilities, providing of necessary facilities for access to residences, businesses, etc., along the project, furnishing, installing and maintaining of traffic control and safety devices during construction, control of dust, 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 required for the safety and convenience of the public, as well as for minimizing public nuisance; all as specified in this Section.
- B. Sections Not Requiring Traffic Maintenance: In general, CONTRACTOR will not be required to maintain traffic over those portions of the project where no work is to be accomplished, or where construction operations will not affect existing roads. CONTRACTOR, however, shall not obstruct nor create a hazard to any traffic during construction, and shall be responsible for repair of any damage to existing pavement or facilities caused by his operations.
- C. Beginning Date of CONTRACTOR's Responsibility: The CONTRACTOR's responsibility for maintenance of traffic shall begin on the day he starts work on the project or on the first day contract time is charged, whichever is earlier.

1.02 SPECIFICATIONS AND STANDARDS

- A. The Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), Part VI is the minimum standards for Traffic Control for Highway Construction Maintenance, and Utility Operations. It sets 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 workers 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.
- B. In addition to the MUTCD stated above, more specific criteria are established in the latest edition of the Florida Department of Transportation booklet "Roadway and Traffic Design Standards". The 600 series of indexes under "Traffic Control Through Work Zones" in this booklet shall govern all "Traffic Control Plans" or safety procedures for this project.
- C. All references to "FDOTSPEC" shall mean the latest edition of the "Florida Department of Transportation Standard Specifications for Road and Bridge Construction".

PART 2 PRODUCTS

2.01 MATERIALS

- A. Traffic Control devices shall meet the requirements of (Sections 971, 990, 993, 994, 995, and 996) of the FDOT Standard Specifications for Road and Bridge Construction, latest edition.

PART 3 EXECUTION

3.01

REQUIREMENTS

- A. Maintenance of Roadway Surfaces: All lanes used for maintenance of traffic, including those on detours and temporary facilities, shall be adequately maintained, with a substantial surface under all weather conditions. Lanes shall be kept reasonably free of dust and, when necessary to accomplish this, sprinkled with water or other approved dust palliative applied. Lanes on which traffic is to be maintained shall be constructed of materials compatible to local conditions, and provided with drainage facilities necessary to maintain an adequately substantial, relatively smooth riding surface under all weather conditions.
- B. Number of Traffic Lanes:
- Except as otherwise specified in the Contract Documents, the CONTRACTOR shall maintain one lane of traffic in each direction. Two lanes of traffic in each direction shall be maintained at existing four (or more) lane cross roads, where necessary to avoid undue traffic congestion. Unless otherwise specified, the width of each lane used for maintenance of traffic shall be at least as wide as the traffic lanes existing in the area prior to commencement of construction. Traffic control and warning devices shall not encroach on lanes used for maintenance of traffic.
- The CONTRACTOR may be allowed to restrict traffic to one-way operation for short periods of time provided that adequate means of traffic control are effected and traffic is not unreasonably delayed. When a construction activity requires restricting traffic to one travel way, the CONTRACTOR shall provide two flagpersons for each restricted location and for the entire duration of the restriction. The flagpersons should have visual contact with each other. When visual contact is not possible, the CONTRACTOR shall equip flaggers with two-way radios, use flag-carrying, official or pilot vehicle(s), or use traffic signals.
- C. Crossings and Intersections:
- Adequate accommodations for intersecting and crossing traffic shall be provided and maintained and, except where specified permission is given, no road or street crossing the project shall be blocked or unduly restricted.
- D. Access for Property Owners:
- The CONTRACTOR shall not isolate property owners from their property. Access shall be provided to all properties whenever construction interferes with the existing means of access.
- The materials used to provide and maintain these accesses shall be limerock, shell or other approved base material. This material may be purchased from a commercial source or acquired from on-site excavation, such as an existing roadbed that is to be removed provided the use of such existing materials is approved by the OWNER in advance of its use.
- E. Protection of the Work from Damage by Traffic: Where traffic would be injurious to a base, surface course or structure, constructed as a part of the work, all traffic shall be maintained outside the limits of such areas until the potential for damage no longer exists.

3.02

TRAFFIC CONTROL

- A. Traffic Control Plan:

When the project includes a Traffic Control Plan, the CONTRACTOR shall conform to all requirements of that Plan; or he may submit to the governing government agency an alternative plan or modification to the plan at the Preconstruction Conference.

The CONTRACTOR shall submit to the governing government agency a plan in accordance with the standards specified in Article 1.02 (in this Section) required by the applicable government agency prior to working within a public Right-Of-Way.

In no case may the CONTRACTOR begin work using a Traffic Control Plan until such plan has been approved in writing by the applicable governmental agency. Modifications to the Traffic Control Plan that become necessary shall also be approved in writing before implementation.

The Traffic Control Plan shall indicate conditions and setups for each phase of the CONTRACTOR's activities in written form along with a plan view to illustrate the phases of activities and other pertinent details. The plan shall include the type and location of all signs, lights, barricades, striping, and other applicable warning devices to be used for the safe passage of pedestrians and vehicular traffic through the project and for the protection of the workers.

The CONTRACTOR shall be responsible for performing daily inspections of the equipment and installations on the project. The inspections shall continue through weekends and holidays, and a periodic inspection of lights and reflective panels shall be performed during the night hours. All equipment and devices not conforming with the approved standards shall be replaced during the inspection period.

Regardless of the Traffic Control Plan utilized, it shall be the CONTRACTOR's responsibility to notify the applicable governmental agency of any condition in the work zone which may require modification of the Traffic Control Plan.

B. Traffic Control Devices, Warning Devices and Barriers:

Installation and Maintenance: The responsibility for installation and maintenance of adequate traffic control devices, warning devices and barriers for the protection of the traveling public and workers as well as to safeguard the work area in general shall rest with the CONTRACTOR. 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. The CONTRACTOR shall make the applicable governmental agency aware of any scheduled operation which will affect traffic patterns or safety, sufficiently in advance of commencing such operation to permit his review of the plan for installation of traffic control devices, warning devices or barriers proposed by the CONTRACTOR. The CONTRACTOR shall assign one of his employees the responsibility of maintaining the position and condition of all traffic control devices, warning devices and barriers throughout the duration of the contract. The CONTRACTOR shall supply the applicable governmental agency with the phone number and name of his assigned employee or employees that is available on a 24 hour basis. Traffic control devices, warning devices, and barriers shall be kept in the correct position, properly directed, clearly visible and clean, at all times. Damaged, defaced or dirty devices or barriers shall immediately be repaired, replaced or cleaned as applicable by the CONTRACTOR.

Flagger: The CONTRACTOR shall provide trained flaggers to direct traffic where one-way operation in a single lane is in effect and in other situations as may be required by the standards established in Article 1.02 (this Section).

Existing Pavement Markings: Where a detour changes the lane use or where normal vehicle paths are altered during construction, all existing pavement markings that will be in conflict with the adjusted vehicle paths shall be removed. Over-painting will not be allowed. The removal may be accomplished by any method that will not materially damage the surface texture of the pavement and which will eliminate the previous marking pattern regardless of weather and light conditions. All pavement markings that will be in conflict with "next phase of operations" vehicle paths shall be removed as described above, prior to opening to traffic.

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 Section, 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 of his surety.

C. Work Zone Pavement Markings:

This work shall consist of furnishing and installing work zone pavement markings for maintenance of traffic in construction areas in accordance with these specifications and in reasonably close conformity with the lines and details shown on the plans or established by the standards in Article 1.02 (this Section).

Centerlines, lane lines, edge lines, stop bars and turn arrows in work zones will be required in accordance with Section 6D of the MUTCD with the following additions:

1. Edge lines are required when a paved shoulder four feet or greater in width exists along the edge of a lane.
2. Edge lines will also be required on all detours, where vehicle paths are altered from normal operations and where a lane is narrowed from its normal width for any reason.
3. Work zone pavement markings, including arrows and messages, shall be in place prior to the end of the day when the road is open to traffic.
4. Work zone pavement markings will be designated in the plans or by the OWNER or governmental agency as removable or non-removable.

Removable work zone pavement markings shall consist of materials which can be taken up by hand without the use of additional equipment such as burners, sand blasting, etc. An example of this category of markings is reinforced plastic film (Tape). Non-removable work zone pavement markings shall consist of any markings that are not classified as removable. Use of Removable or Non-Removable work zone Pavement Markings shall be as follows:

Finished Pavement

1. All stripes representing final pavement markings shall be Non-Removable.
2. All stripes in an area where the traffic pattern will be altered prior to project acceptance shall be Removable.
3. All striping representing final markings shall be in the final location unless excepted in writing by the OWNER.

Intermediate Pavement Course

1. All stripes in areas of pavement which will be covered with a subsequent course of pavement prior to altering of the traffic pattern within such area shall be Non-Removable.
2. All stripes in an area where the traffic pattern will be altered prior to placing of the subsequent paving course within such area shall be Removable.

Existing Pavement

1. All stripes in areas of pavement which will be removed or overlaid with new pavement prior to altering of the traffic pattern within such area shall be Non-Removable.
2. All stripes in areas of pavement where the traffic pattern will be altered prior to removal or overlaying of such area shall be Removable.

Materials: Paint shall conform to 971-12 as applicable in the FDOTSPEC. Glass beads shall conform to 971-14 in the FDOTSPEC except that the percent of rounds shall be at least 75 percent.

Construction Methods:

1. Non-Removable Pavement Markings (Paint or Preformed Pavement Marking Film) placed on the finished pavement surface shall be aligned so as to assure coverage by the permanent traffic stripes.
2. Removable Pavement Markings (Reinforced Plastic Film) placed on the finished pavement surface may vary from the alignment of permanent traffic stripes.

3. All work zone pavement markings shall be installed in accordance with the manufacturer's recommendations, except that paint shall be applied in accordance with Section 710 of the FDOTSPEC. The pavement surface shall be dry at the time of work zone pavement marking application. All dirt, debris, loose particles and heavy oil residues shall be removed from the road surface application areas immediately prior to the installation of pavement markings.
4. Removable and Non-Removable pavement marking film shall be applied with a mechanical applicator to provide pavement lines which are neat, accurate and uniform. The mechanical applicator shall be equipped with a film cut-off device and with measuring devices which automatically and accumulatively measures the length of each line actually placed within an accuracy tolerance of ± 2 percent. Pavement marking films (tape) shall be rolled or tamped to facilitate adhesion to the road surface. Tape may be placed by hand on short sections 500 feet or less provided that it is done in a neat accurate manner.
5. When removable pavement markings are no longer required, they shall be removed just ahead of the permanent pavement markings.

3.03 DETOURS

- A. Where Required: CONTRACTOR shall construct and maintain detour facilities wherever it becomes necessary to divert traffic from any existing roadway or bridge, or wherever construction operations block the flow of traffic. The location of all detours will require prior approval of the OWNER.
- B. Standards of Construction: Detours are to be constructed and maintained in such a manner so they will be capable of carrying traffic required in all conditions of weather. CONTRACTOR shall provide the detour with all facilities necessary to meet this requirement.
- C. Furnishing of Materials: CONTRACTOR shall provide all materials for the construction and maintenance of all detours, except that where the plans show a surplus of excavated material, the CONTRACTOR may obtain material from the limits of construction to the extent that the material obtained does not exceed the net surplus amount. No separate payment will be made for materials obtained from on-site or off-site to construct detours.
- D. Construction Methods: In general, requirements of the Specifications pertaining to construction and material details shall not apply to detour construction. CONTRACTOR shall select and use construction methods and materials that will provide a stable and safe detour facility. Supplemented by maintenance, detour facility shall have durability to remain in good condition for the entire period the detour is required.
- E. Removal of Detours: Unless otherwise indicated in the plans, temporary detours are to be removed when no longer needed and before the contract is completed. All materials from the detour will become the property of the CONTRACTOR and are to be disposed of by him, except for materials which might be loaned to the CONTRACTOR by the OWNER with the stipulation they be returned. CONTRACTOR is responsible for restoration of all disturbed areas upon completion of the detour's use.

3.04 BASIS OF PAYMENT

- A. Maintenance of Traffic:

Where no separate pay item for Maintenance of Traffic is established in the Contract Documents, the cost of all such work specified in this Section shall be included in the prices for the other pay items which are included in the contract and no additional compensation will be allowed.

When an item of Maintenance of Traffic is included in the Contract Documents, the lump sum price and payment for such item shall be full compensation for all work and costs specified in this Section except as may be specifically covered for payment under other items.

B. Special Detours:

Where no separate pay item for a Detour(s) is established in the Contract Documents, the cost of constructing, maintaining, and removing detour facilities as required or specified shall be included in the Maintenance of Traffic pay item (if established) or included in the prices for other pay items which are included in the contract and no additional compensation will be allowed.

When a detour facility is specifically detailed in the plans or is otherwise described or detailed as a special item, and an item for separate payment is included in the proposal, the work of constructing, maintaining and subsequently removing such detour facilities will be paid for separately. The contract lump sum price for each such detour shall be full compensation for providing all detour facilities shown on the plans and all costs incurred in carrying out all requirements of this Section for general maintenance of traffic within the limits of the detour, as shown on the plans. When the plans show more than one detour, each detour shall be paid for separately, at the contract lump sum price for each.

C. Driveway and Business Access:

Unless otherwise specified in the Contract Documents, the cost of labor, materials, and equipment required to provide and maintain temporary access to property owners shall be included in the Maintenance of Traffic pay item (if established) or included in the prices for the other pay items which are included in the Contract Documents and no separate payment will be allowed.

D. Dust Control:

Unless otherwise specified in the Contract Documents, the cost of labor, materials, and equipment required to keep travel lanes reasonable free of dust shall be included in the item of Maintenance of Traffic, Detour, or otherwise shall be incidental to the Contract and no separate payment will be allowed.

END OF SECTION 02704

**SECTION 02705
RESTORATION AND GENERAL REQUIREMENTS**

PART 1 GENERAL

1.01. SCOPE

- A. The work specified in this Section consists of restoring existing surfaces or any improvements such as but not limited to pavement, curb and gutter, sidewalk, structures, signs, or landscaping damaged during construction.

1.02. SPECIFICATIONS AND STANDARDS REFERENCE

- A. Any reference to a supplementary specification or standard such as ASTM, AWWA, AASHTO, is intended to be a reference to the latest edition of that specification or standard.
- B. All references to "FDOTSPEC" shall mean the latest edition of the "Florida Department of Transportation Standard Specifications for Road and Bridge Construction".
- C. Specifications Sections:

 Section - 02703 - TRENCHING AND BACKFILLING

PART 2 PRODUCTS

2.01. MATERIALS

- A. Flexible Pavement: Comply with requirements of Sections 901, 902, 911, 914, 916, and 917 of the FDOTSPEC.
- B. Concrete Pavement, Driveway, Sidewalk, Curb & Gutter: Comply with requirements of Sections 901, 902, 921, 923, 924, 925, and 930 of the FDOTSPEC.
- C. Grassing: Comply with requirements of Section 981, 982, 983, 985, and 987 of the FDOTSPEC.

PART 3 EXECUTION

3.01. GENERAL

- A. Existing property damaged during construction shall be restored to a condition at least equal to the original condition of the property, unless otherwise specified in the Contract Documents.
- B. Existing roadway or drainage improvements damaged within a roadway or drainage Right-Of-Way or easement shall be restored in accordance with the requirements of the State, County, and City agencies having jurisdiction thereof.

3.02. UNDERGROUND FACILITIES

- A. Existing underground utilities and drainage systems damaged during construction shall be immediately repaired to the specifications of the owner of the damaged system. Where the utility owner elects to make said repairs under his direction, the CONTRACTOR shall pay for such repair costs directly.
- B. Where damage to existing underground utilities is anticipated due to unavoidable conflicts, the CONTRACTOR shall construct his work so as to cause the least amount of interruption of service as possible.

3.03. TRENCHING AND BACKFILLING

- A. Any trenching and backfilling required to satisfy the requirements of this section shall be in accordance with Specification Section - 02703- TRENCHING AND BACKFILLING.

3.04. PAVEMENT CUTS

- A. On dead end streets, collector streets, and high traffic streets, trenching and pipe laying shall be performed in such a manner that at least one-way traffic is maintained at all times.
- B. All trench lines across existing pavements, driveways, sidewalks, curbs, etc. shall be saw cut in straight parallel lines prior to trench excavation.
- C. CONTRACTOR shall exercise care to minimize amount of pavement, sidewalk, driveways, and curbing to be removed.

3.05. CONCRETE PAVEMENT, CURB & GUTTER, ETC.

- A. Concrete pavement, driveway, sidewalk, and curb & gutter damaged during construction shall be restored to the same dimensions as that removed or as specified in the Contract Documents. All such restoration shall be in accordance with the applicable Sections 346, 350, 520, and 522 of FDOTSPEC.
- B. Prior to placing concrete, the subgrade shall be compacted to at least 98% of the maximum density determined by the "Modified Proctor Density" (ASTM D-1557).

3.06. FLEXIBLE PAVEMENT

- A. Stabilized subgrade damaged during construction shall be restored in accordance with Section 160 of FDOTSPEC. The restored stabilized subgrade shall have a minimum bearing value of LBR-40, and be compacted to at least 98% of the maximum density determined by the "Modified Proctor Density" (ASTM D-1557).
- B. Limerock or shell base damaged during construction shall be restored in accordance with Sections 200, 204, and 230 respectively of FDOTSPEC. The minimum density of the restored base shall be 98% of the maximum density determined by the "Modified Proctor Density" (ASTM D-1557). After completion of the base course, a bituminous prime coat shall be applied in accordance with Section 300 of FDOTSPEC when applicable prior to placement of asphalt surface course.
- C. Asphalt Surfaces damaged during construction shall be replaced with a similar surface in accordance with Section 330 of FDOTSPEC. The material used shall be the same type and the thickness of that damaged, except that the minimum thickness shall be one inch. In the case of multiple layers, each layer or course of the damaged asphalt surface shall be reconstructed to duplicate the original.

3.07. LANDSCAPING & MISCELLANEOUS

- A. Trees and bushes damaged during construction shall be removed and replaced with equal size and type by the CONTRACTOR at his expense unless otherwise specified in the Contract Documents.
- B. Grassed areas damaged during construction shall be repaired with the same type sod unless otherwise specified in the Contract Documents.
- C. Sodding and grassing and mulching operations shall begin within a maximum of three weeks after utility installation, except in cases of front and back slopes which shall be done immediately following installation completion. Any yards or part of right-of-way in front of private property, that has a grass mat, shall be re-sodded with like sod. CONTRACTOR shall maintain disturbed areas until acceptable vegetation is re-established.

- D. Areas without established grass mats in front of vacant lands shall be restored by seeding and mulching. The grass mat shall be restored to the required design or finished grade to permit proper drainage.
- E. Unimproved areas such as an open field or lot having its surface disturbed during construction shall be graded to duplicate the existing conditions and seeded and mulched unless otherwise specified in the Contract Documents.
- F. Any damage to an existing irrigation system caused by the construction operations shall be repaired by the CONTRACTOR prior to the installation of sod, seed, or other landscaping unless otherwise specified in the Contract Documents.
- G. Mailboxes, railroad ties, or any other miscellaneous items damaged during construction shall be repaired to the satisfaction of the OWNER unless otherwise specified in the Contract Documents.

3.08. DENSITY TESTS

- A. Density tests shall be performed in accordance with Specification Section - 01410 of the technical specifications except that the CONTRACTOR shall pay for all tests related to restoration work.
- B. Field density tests shall be required for each layer of fill, stabilized subgrade, limerock base, and asphalt surface in accordance with the frequency listed below unless otherwise authorized by the OWNER.
 - * Transverse Trench Crossing - one/location/layer
 - * Longitudinal Trench - one/300 LF/layer
 - * Pavement Repair - one/1000 SY/layer
- C. Concrete shall be tested for slump, air content, and compressive strength every 50 cubic yards for continuous pours. For smaller volume work, the same tests shall be taken for each separate pour. A minimum of 4 sample cylinders shall be made when testing for compressive strength.

3.09. GENERAL REQUIREMENTS

- A. Maintenance of Service - CONTRACTOR shall provide facilities and be responsible for protection of all structures, buildings and utilities, underground, on the surface, or above ground, against trenching, dewatering or any other activity connected with Work covered by this modifications of existing utilities, CONTRACTOR shall provide for maintaining continuous water electric, telephone, gas, sewage and other utilities, to all present customers of such utilities unless approval is obtained in writing from the utility company or OWNER for the interruption of such services.
- B. Existing Facilities - Underground structures shown on the Plans are according to the best available information, but it shall be the responsibility of the CONTRACTOR to acquaint himself with the exact location and to avoid conflict with all existing facilities. Where underground structures are damaged, they shall be immediately repaired to the specifications of the OWNER of the utility. If the OWNER of the utility elects to make such repairs with his own forces, CONTRACTOR shall make arrangements as to protect the OWNER from all damages. Where such conflicts are unavoidable, every effort shall be made to construct the work so as to cause as little interference as possible with services rendered by the structure disturbed.
- C. Utility Installation Permits - CONTRACTOR shall obtain necessary permits for construction across public and private property, streets, railroads, telephone lines, power lines, etc. CONTRACTOR shall abide by all rules, regulations and requirements of the OWNER of such property in regard to construction under this Contract, including giving of notices, provisions for inspection and employment of such methods of construction as may be required. Costs of any permits shall be incidental to construction and reflected in unit prices bid.

- D. Work in State Rights-of-Way - Construction in State rights-of-way shall comply with the State of Florida Department of Transportation (FDOT) Utility Accommodation Guide.
- E. Work in County/City Rights-of-Way - Construction in County/City rights-of-way shall comply with the utility accommodation manual for the agency having jurisdiction.
- F. Clearing of Excavation Corridor - Only items necessary to provide adequate work space including space for hubs, batter boards, and equipment shall be removed within the right-of-way, easement, or designated construction corridor. Trees, shrubbery, poles, mail boxes, and other items not to be removed shall be protected from damage during construction. When necessary to cut tree roots and branches, such cutting shall be performed with saws in a neat and workmanlike manner.

3.10 BASIS OF PAYMENT

- A. There shall be no separate payment for any work defined in this section. The cost of any such restoration work shall be included in the various work items that necessitate the restoration unless otherwise specified in the Contract Documents. Any reference to unit price payment in the FDOTSPEC shall not be applicable.

END OF SECTION 02705

**SECTION 02911
ASPHALTIC CONCRETE**

PART 1 GENERAL

1.01 SCOPE

- A. The work specified in this Section consists of the construction of asphalt base courses, asphaltic concrete surfaces, asphaltic concrete friction courses, the application of prime and tack coats and the preparation of hot bituminous mixtures used in base and surface courses.

1.02 SPECIFICATION AND STANDARDS REFERENCE

- A. Where supplementary specifications or standards such as ASTM, AWWA, AASHTO, etc., are referenced, such references shall be the latest edition.
- B. All referenced to "FDOTSPEC" shall mean the latest edition of the " Florida Department of Transportation Standard Specifications for Road and Bridge Construction".

PART 2 PRODUCTS

2.01 CERTIFICATION OF MATERIALS

- A. Prior to award of the Contract, CONTRACTOR shall submit proof from a State Certified Testing Laboratory that the materials and mixes meet FDOTSPEC. OWNER may require additional tests from time to time and CONTRACTOR shall furnish said tests. Costs of said tests shall be incidental to construction and borne by the CONTRACTOR.

2.02 ASPHALT BASE COURSES

- A. Asphalt Base Courses shall meet the requirements of FDOTSPEC Section 234, except as modified.

2.03 PRIME AND TACK COATS

- A. Prime and Tack Coats shall meet the requirements of FDOTSPEC Section 300, except as modified.

2.04 TYPE S-I, S-II, AND S-III ASPHALTIC CONCRETE

- A. Type S-I, S-II, and S-III Asphaltic Concrete shall meet the requirements of FDOTSPEC, Section 334, except as modified.

2.05 ASPHALTIC CONCRETE FRICTION COURSES

- A. Asphaltic Concrete Friction Courses shall meet the requirements of FDOTPSEC Section 337, except as modified.

PART 3 EXECUTION

3.01 ASPHALT PLANT

- A. The plant and methods of operation for preparing all plant-mixed hot bituminous mixtures for base and surface courses shall meet the requirements of FDOTSPEC Section 320.

3.02 CONSTRUCTION EQUIPMENT

- A. The equipment to be used in the construction of the asphalt pavements and bases shall meet the requirements of FDOTSPEC Section 320.

3.03 GENERAL CONSTRUCTION REQUIREMENTS

- A. The general construction procedures for plant-mixed hot bituminous pavements and bases shall meet the requirements of FDOTSPEC Section 330.
- B. The construction of asphalt base courses shall meet the requirements of FDOTSPEC Section 234.

3.04 PAYMENT

- A. Paid at the Contract Lump Sum price. Partial payments will be calculated by the amount of work completed based on the approved schedule of values and applications for payment.

END OF SECTION 02911

**SECTION 02924
PAVEMENT MARKING, STRIPING, AND SIGNS**

PART 1 GENERAL

1.01 SCOPE

- A. This Section specifies pavement traffic painting, marking, striping, and signing shown on the Plans or called for in the Specifications. In general, all pavement traffic painting, marking, striping, and signing shall comply with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, hereafter referenced "FDOTSPEC" and the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration, hereafter referenced as "MUTCD".

1.02 SPECIFICATION AND STANDARDS REFERENCE

- A. Where supplementary specifications or standards such as FDOTSPEC, MUTCD, etc., are referenced, such references shall be the latest edition.

PART 2 PRODUCTS

2.01 SIGN PANELS AND POSTS

- A. Sign panels shall be aluminum. All sign posts shall be frangible aluminum and have a standard extruded aluminum sign bracket clamped to the post 12 inches below grade. Bracket size shall match post diameter.

2.02 SIGN BLANKS AND FACES

- A. Regulatory and Warning signs as defined in the MUTCD shall be "High Intensity" reflectorized grade.
- B. Street Name and guide signs as defined in the MUTCD shall be "Standard reflectorized grade".
- C. CONTRACTOR shall submit documentation from the sign suppliers which identifies the reflector grade of each sign. All materials shall meet the requirements of FDOTSPEC.

2.03 SIGN HARDWARE

- A. Signs shall be attached to posts with vandal resistant nuts and carriage bolts with washers. Vandal resistant nuts shall be Tufnut, Tamper-Pruf, Vandal-Pruf or approved equal. Nuts and bolts shall be manufactured from high strength aluminum. Button head bolts shall not be used.

2.04 PAVEMENT STRIPING AND PAINTING

- A. Thermoplastic Striping & Marking - Thermoplastic pavement striping shall be reflective and meet the requirements of FDOTSPEC, Section 711.
- B. Painted Striping & Marking - Painted striping shall be by reflectorized and meet the requirements of FDOTSPEC, Section 710.

2.05 REFLECTIVE PAVEMENT MARKERS

- A. Reflective pavement markers and their installation shall meet the requirements of FDOTSPEC, Section 706.

PART 3 EXECUTION

3.01 BASIS OF PAYMENT

- A. Paid at the Contract Lump Sum price. Partial Payments will be calculated by the amount of work completed based on the approved schedule of values and applications for payment.

END OF SECTION 02924