

AIM ENGINEERING & SURVEYING, INC.
Lee County MSBTU: Cherry Estates Road Re-surfacing Project
Bid Schedule

March, 2018

Road Resurfacing

No.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	CONTRACT AMOUNT
101-1	Mobilization with pre-construction video	1	LS		\$ -
101-2	Survey (Layout & Record Drawing Survey)	1	LS		\$ -
102	Maintenance of Traffic with provisions for access	1	LS		\$ -
104	Erosion Control Program & NPDES Permit	1	LS		\$ -
110	Removal and Disposal of Ex. Concrete Pavement	2,500	SY		\$ -
160	Stabilized Subgrade (6") LBR 40, 98% Density	2,500	SY		\$ -
285	Limerock Base (6") LBR 100, 98% Density	2,625	SY		\$ -
327	Mill Ex. Asphalt Pavement (Removal & Disposal)	16,100	SY		\$ -
334	Asphaltic Concrete (1" SP 9.5) w/prime	18,600	SY		\$ -
425	Replace Inlet top & grate	4	EA		\$ -
710	Painted, Std., White, Solid 24" Stop Bar	120	LF		\$ -
M-1	Monitoring for vibrations	1	LS		\$ -
R-1	Restoration of work areas, incl. driveways, sod, landscaping, utility pads, etc.	1	LS		\$ -

Total

Alternate

A-1	N. end Binnacle Lane- Remove Conc. Pvm't. and Replace with (6-6-1) asphaltic flexible pavement	65	SY		\$ -
-----	--	----	----	--	------

Total with Alt.

Note:

Testing for Density, Materials and LBR shall be provided separately by others under Lee County contract.

Cherry Estates Road Re-surfacing Project

SCOPE OF WORK

This project involves the road re-surfacing and road re-construction for the Cherry Estates subdivision on Pine Island, Lee County, Florida. The work will comprise approximately, 18,600 SY of asphalt pavement wearing surface, 2,500 SY of base rock and 2,500 SY of subgrade. The existing asphaltic concrete paved roads being Binnacle Lane, Bounty Lane, Bowsprit Lane, Skipper Lane and Sloop Lane shall be milled and/or scraped to remove and dispose of the asphalt pavement down to top of base rock, regraded to improve drainage, compacted, primed and re-paved. An alternative bid item is included to remove 65 square yards of concrete pavement at the north end of Bounty Lane and replace with (6-6-1) subgrade, limerock base and asphaltic flexible pavement. Binnacle Lane and Bounty Lane are inverted crown roadways with four drainage inlets that require the top of inlet collar to be reconstructed with a new inlet grates. Harpoon Lane is currently constructed of rigid concrete pavement that shall be demolished and re-constructed of a flexible asphaltic concrete pavement, base and subgrade. Included with the project are pre-construction video, survey, maintenance of traffic with access provisions, stop bars and restoration requirements.

Cherry Estates

SPECIAL PROVISIONS

1. The road resurfacing and re-construction at Cherry Estates requires that the pavement be replaced to match existing conditions. The pavement shall connect to existing elements such as driveways, cul-de-sac islands, and saw-cut edges at the main road, Cherry Estates Parkway, which has been recently re-paved.
2. Mobilization shall include project conditions, sanitary facilities, establishing offsite staging areas for materials, vehicles and equipment, demobilization, water, electric, etc. A professional and detailed pre-construction video of site showing existing conditions in the roadways, haul routes, staging areas and the front yard improvements up to the homes.
3. The Contractor shall provide construction layout to properly re-surface roads and obtain professional surveying services from a licensed surveyor to provide a record survey documenting post construction pavement elevations.
4. The Contractor shall provide maintenance of traffic for safety along with provisions for access to residents and/or delivery persons for services, emergencies, etc. Including, notifications to residents, the post office and emergency services advising them of road construction schedules. Access to and from homes shall be available each morning before 9 AM and each evening after 4 PM.
5. The Contractor shall provide an erosion control program, obtain an NPDES Permit from the Florida Department of Environmental Protection and provide erosion control devices including monitoring, reporting and maintenance. Devices such as, silt fabric on inlets and floating turbidity curtains on pipe outfalls shall be utilized along with the application of water on roadways to minimize dust. The cost for the FDEP-NPDES permit application submittal is \$250.
6. The Contractor shall removal and disposal of the existing concrete pavement on Harpoon Lane. Reasonable effort shall be made to reduce vibrations, noise and dust. Vibration monitoring equipment and reporting shall be required during this construction activity.
7. The Contractor shall construct a 6" thick sub-base or stabilized subgrade of FDOT certified materials having a minimum LBR 40 and a minimum density of 98% using AASHTO T-180 standards. Compactive efforts shall be carefully monitored for excessive vibration. Vibration monitoring equipment and reporting shall be required during this construction activity.
8. The Contractor shall construct a 6" thick compacted limerock base of FDOT certified materials having a minimum LBR 100 and a minimum density of 98% using AASHTO T-180 standards. Compaction efforts shall be carefully monitored for excessive vibrations. Vibration monitoring equipment and reporting shall be required during this construction activity.
9. The Contractor shall mill and/or remove and dispose of the existing asphalt pavement on Binnacle Lane, Bounty Lane, Bowsprit Lane, Skipper Lane and Sloop Lane. Incidental to paving bid item, minor repairing of the existing base rock for preparation of paving is required. The roadways shall be primed/tack coated prior paving.

10. The Contractor shall construct a pavement wearing surface of Super Pave Asphaltic Concrete (minimum 1" thick SP 9.5) connecting to existing driveways. Binnacle Lane and Bounty Lane shall be shaped with an inverted crown cross-slope and Bowsprit Lane, Harpoon Lane, Skipper Lane and Sloop Lane shall be shaped with a normal crown cross-slope of 2%, where practical.
11. The Contractor shall replace the inlet tops & grates on Binnacle Lane and Bounty Lane with a poured in-place steel reinforced concrete collar anchored to the inlet base. A traffic bearing cast iron grate shall be included and fitted to the concrete collar. The grate shall have openings placed perpendicular to the street alignment to minimize bike riding accidents. A shop drawing shall be submitted in advance of construction for review and approval.
12. The Contractor shall provide a painted, standard, white solid 24" stop bar at the street intersections similar to the existing conditions.
13. The Contractor shall be responsible for restoration of all disturbed areas, including driveways, sod, landscaping, utility pads, utility equipment, mailboxes, etc. Miscellaneous, homeowner items, such as bricks, borders, etc., along the edge of pavement shall not require restoration. Damaged caused by the Contractor shall be restored to equal or better condition.
14. The Contractor shall cooperate with the testing laboratory retained by Lee County to provide density, material and LBR testing services. The expense for all failing tests shall be the responsibility of the Contractor.
15. Roads shall be repaved within two weeks of being milled.
16. A continued progression of the work is required to minimize inconvenience to the community. Progress meetings shall be conducted on frequent basis to assure prompt attention to project and restoration of roadways.
17. A project schedule shall be maintained and provided to the County and the residents.
18. The re-constructed roadway shall be paved within two weeks of final base rock work.
19. Project work hours shall be limited to weekdays, excluding holidays, from 8 AM to 5 PM.

Lee County MSBTU: Cherry Estates Road Re-surfacing Project
 Bid Schedule

Road Resurfacing

No.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	CONTRACT AMOUNT
101-1	Mobilization with pre-construction video	1	LS		\$ -
101-2	Survey (Layout & Record Drawing Survey)	1	LS		\$ -
102	Maintenance of Traffic with provisions for access	1	LS		\$ -
104	Erosion Control Program & NPDES Permit	1	LS		\$ -
110	Removal and Disposal of Ex. Concrete Pavement	2,500	SY		\$ -
160	Stabilized Subgrade (6") LBR 40, 98% Density	2,500	SY		\$ -
285	Limerock Base (6") LBR 100, 98% Density	2,625	SY		\$ -
327	Mill Ex. Asphalt Pavement (Removal & Disposal)	16,100	SY		\$ -
334	Asphaltic Concrete (1" SP 9.5) w/prime	18,600	SY		\$ -
425	Replace Inlet top & grate	4	EA		\$ -
710	Painted, Std., White, Solid 24" Stop Bar	120	LF		\$ -
M-1	Monitoring for vibrations	1	LS		\$ -
R-1	Restoration of work areas, incl. driveways, sod, landscaping, utility pads, etc.	1	LS		\$ -

Total

Alternate

A-1	N. end Bounty Lane- Remove Conc. Pvm't. and Replace with (6-6-1) asphaltic flexible pavement	65	SY		\$ -
-----	--	----	----	--	------

Total with Alt.

Note:

Testing for Density, Materials and LBR shall be provided separately by others under Lee County contract.

Cherry Estates

APPENDIX A



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

19-APR-2016
Project 16-33-4535

**LEE COUNTY
MSTBU SERVICES**
1500 Monroe Street, 4th Floor
Fort Myers, FL 33901

Attention: Mr. Randy Harris

SUBJECT: Report of Pavement Coring
Cherry Estates
St. James City, Pine Island, Lee County, Florida

Dear Randy:

As requested, we cored the pavement in the Cherry Estates residential community at twenty-four (24) locations; four (4) cores on each of the six roads of interest. The approximate locations of the pavement cores are shown on the attached Coring Location Plan, which is an aerial photograph of the site obtained from Google Earth Pro®. A 4-inch O.D. diameter core barrel was used to obtain samples of the asphalt and concrete for thickness. The base and subgrade soils were sampled using a handheld bucket auger after the pavement cores were removed. The hand auger was advanced into the subgrade to an approximate depth of 12 inches below the bottom of base material or concrete. The base and subgrade soils were visually examined in the field. The fieldwork results are summarized on the attached Report of Pavement Components, which provide the pavement type and thickness, base material and thickness (if present), stabilized subgrade thickness and corresponding estimated Limerock Bearing Ratio (LBR) value at each pavement core location.

Based on the pavement cores obtained, the asphalt thickness ranged from 3/4-inch to 1-1/2-inches on Sloop Lane, Skipper Lane and Bowsprit Lane, core locations C-1 thru C-8 and C-13 thru C-16, and appeared to be a single layer. The asphalt thickness ranged from 1-7/8-inches to 2-1/8-inches on Bounty Lane and Binnacle Lane, core locations C-17 thru C-24, and appeared to consist of two asphalt layers. Core locations C-9 thru C-12 were performed on Harpoon Lane, which is a concrete road. The concrete thickness ranged from 3-1/2-inches to 6-inches. Where the asphalt cores had surface cracking, the crack typically extended to depths ranging from 1/8-inch to 3/8-inch; with the exception of cores C-5, C-16 and C-24. At core location C-24 the crack extended 1-inch and at cores C-5 and C-16 the crack extended through full thickness of the asphalt core.

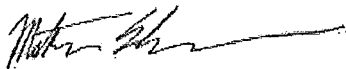
The base course was observed to be a Limerock (LBR 100) material at core locations C-1 through C-8. The Limerock thickness ranged from 5-1/2-inches to 10-inches. The base course was observed to be Bank Run Shell (LBR 100) below the existing asphalt pavement at core locations C-15 and C-16. The Bank Run Shell thickness ranged from 6-1/4-inches to 8-inches. At core locations C-13, C-14 and C-17 thru C-24 the base material consisted of Shell Stabilized base (LBR 70). The Shell Stabilized base thickness is estimated to be approximately 6-inches; however, at these locations the Shell Stabilized base gradually transitions to a stabilized subgrade material as the shell content diminishes with depth and the actual transition line between base and stabilized subgrade was not discernible. Base material was not encountered under the existing concrete pavement on Harpoon Lane. The concrete bears on a fine sand subgrade (LBR 30).

Hand auger borings were performed at each core location into the subgrade soils extending to an approximate depth of 12-inches below the base course material. Samples obtained were visually classified in the field. In general, the subgrade is composed of fine sands (SP) containing varying amounts of gravel-size shell fragments. Based on visual classification, the estimated LBRs ranged from 30 to 40 as noted on the attached Report of Pavement Components.

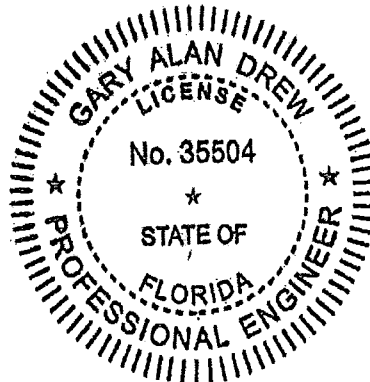
We appreciate the opportunity to be of service to you on this project. Please contact the undersigned if you have any questions.

Very truly yours,

Ardaman & Associates, Inc.
Florida Certificate of Authorization
No. 00005950



Matthew R. Elmore, E.I.
Project Engineer



This document has been digitally signed and sealed by:

Gary A Drew
2016.04.19 16:08:22
-04'00'

Printed copies of this document are not considered signed and sealed. The signature must be verified on the electronic documents.

Gary A. Drew, P.E. No. 35504
Vice President/Branch Manager

MRE:GAD/mre:egs

Attachments:

Ardaman & Associates Report of Pavement Components
Coring Location Map – Figure 1



Ardaman & Associates, Inc.

ARDAMAN & ASSOCIATES, INC.
REPORT OF PAVEMENT COMPONENTS

PROJECT: Cherry Estates FILE NO: 16-33-4535 DATE CORED: 13-APR-2016 & 14-APR-2016

REPORTED TO: Lee County TECHNICIAN(S): C. Wooten/J. Griffey

LOCATION	PAVEMENT TYPE	PAVEMENT THICKNESS (in.)	CRACK DEPTH (in.)	BASE THICKNESS (in.) & (TYPE ²)	STABILIZED SUBGRADE THICKNESS (in.) (ESTIMATED LBR ¹)
C-1	Asphalt	1	1/4	6 (LR)	12 (LBR 40)
C-2	Asphalt	1	1/8	6-1/4 (LR)	12 (LBR 40)
C-3	Asphalt	7/8	0	6 (LR)	12 (LBR 40)
C-4	Asphalt	1-1/2	0	5-1/2 (LR)	12 (LBR 40)
C-5	Asphalt	1	Full Depth	10 (LR)	12 (LBR 30)
C-6	Asphalt	1-1/8	3/8	9-1/2 (LR)	12 (LBR 30)
C-7	Asphalt	7/8	1/8	9-1/4 (LR)	12 (LBR 30)
C-8	Asphalt	3/4	1/8	9-1/4 (LR)	12 (LBR 30)
C-9	Concrete	3-1/2	0	0	12 (LBR 30)
C-10	Concrete	6	0	0	12 (LBR 30)
C-11	Concrete	4-1/2	0	0	12 (LBR 30)
C-12	Concrete	4-1/2	0	0	12 (LBR 30)
C-13	Asphalt	1	0*	6 (SS)	12 (LBR 35)
C-14	Asphalt	7/8	0*	6 (SS)	12 (LBR 35)
C-15	Asphalt	1	1/4	8 (BRS)	12 (LBR 30)
C-16	Asphalt	1-3/8	Full Depth	6-1/4 (BRS)	12 (LBR 30)
C-17	Asphalt	2	1/4	6 (SS)	12 (LBR 40)
C-18	Asphalt	2	1/8	6 (SS)	12 (LBR 40)
C-19	Asphalt	1-7/8	1/4	6 (SS)	12 (LBR 40)
C-20	Asphalt	1-7/8	1/8	6 (SS)	12 (LBR 40)
C-21	Asphalt	1-7/8	3/8	6 (SS)	12 (LBR 40)
C-22	Asphalt	2-1/8	1/4	6 (SS)	12 (LBR 40)
C-23	Asphalt	2	1/8	6 (SS)	12 (LBR 40)
C-24	Asphalt	2-1/8	1	6 (SS)	12 (LBR 40)

¹Estimated LBR based on visual observation and classification of subgrade soils obtained. Soils observed to be fine sands (SP) with an estimated LBR of 30 to 40 as noted above.

²Base rock type based on visual observation. LR is Limerock material with an estimated LBR of 100. BRS is Bank Run Shell base with an estimated LBR of 100. SS is Shell Stabilized base with an estimated LBR of 70.

*No pavement crack observed; however, 0.25 inches of pavement surface raveling was observed.

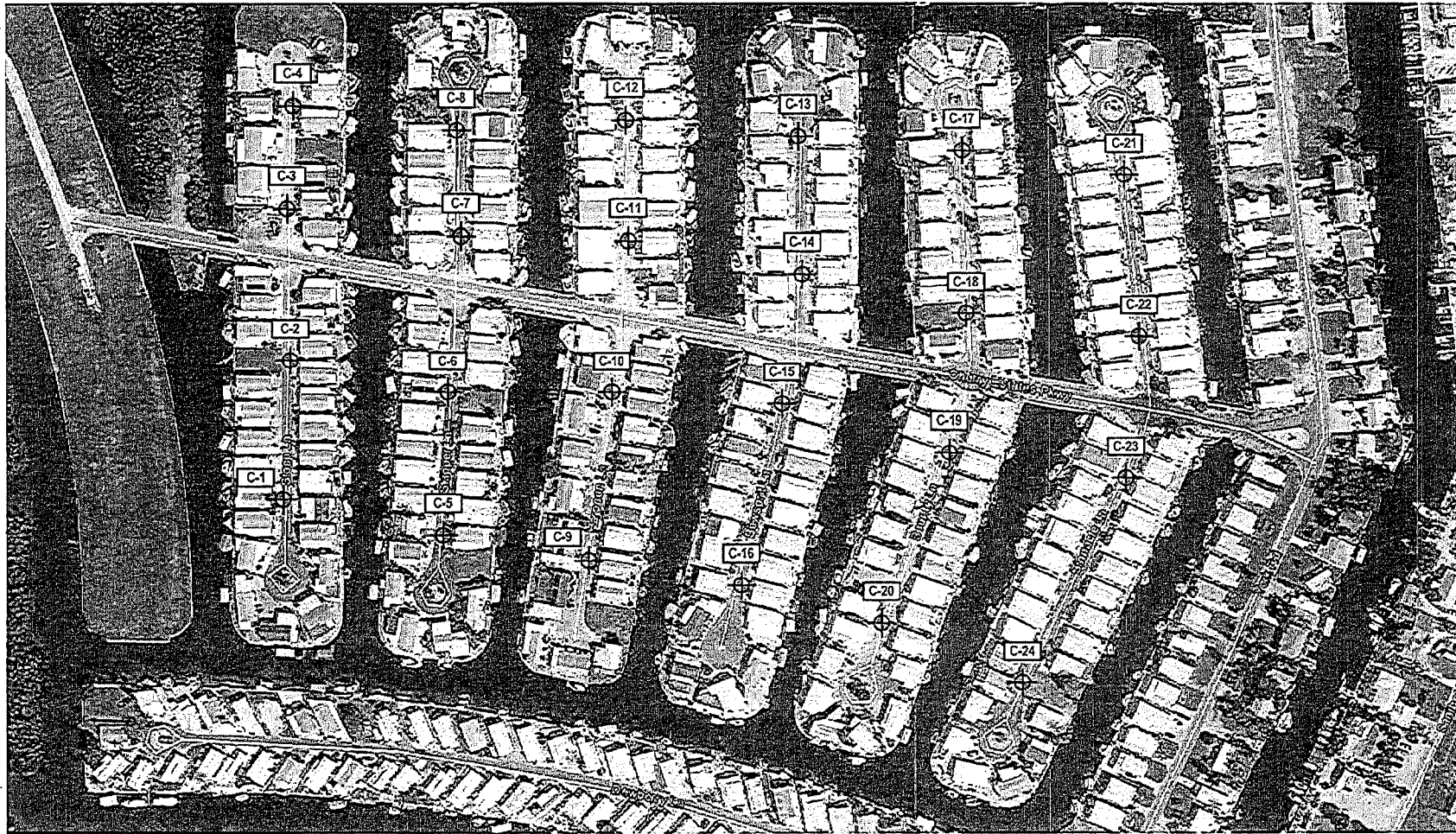
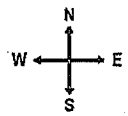



FIGURE 1
CORING LOCATION PLAN

SOURCE: GOOGLE EARTH PRO



 Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants		
Report of Pavement Cores Cherry Estates St. James City, Pine Island, Lee Co., FL		
Drawn By:	Checked By:	Date:
ME	GD	4/18/16
File No.	Approved By:	Figure No.
16-33-4535	Gary Drew, P.E.	1

Cherry Estates

TECHNICAL SPECIFICATIONS

The Contractor shall provide all labor, materials, equipment and incidental work to accomplish the Scope of Work and the items listed on the Bid Schedule for a complete project in accordance with the Special Provisions and the FDOT specifications. The basis of measure and payment shall be as shown on the bid schedule for field measured quantities.

INCLUSION OF FDOT SPECIFICATIONS-

The latest edition of the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction together with all FDOT supplements thereto shall apply to and form a part of this Contract as it is fully written herein. Where a FDOT Section is cited that contains reference to other Sections, they shall also be included as though written therein. In Case of conflict between the referenced FDOT Specifications and the Bid and Contract Documents, the Bid and Contract Documents shall govern.