

Planting Notes:

- 1. Three planting options are provided to allow flexibility for the property owner. Only one planting option schedule needs to be followed.
- 2. Planting density based spacing requirements: 1" caliper trees @ 15' on center, whips with shelter @ 11' on center.
- 3. 1" caliper trees should be staggered along the perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing. 2.5" caliper trees shall be planted along the property boundary within 10' of boundary edge and approximately 60' apart.
- 4. Planting may be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance
- 5. Multiflora rose/heavy brush removal/control may be required prior to installation of planting.
- 6. All whips are required to be installed with tree shelters per Howard County FCA requirements. 7. Planting units defined by the spacing requirements established in the FCA Manual. One plant
- unit is defined as 1 seedling or whip without shelter. The Manual states that 700 seedlings/whips without shelters are required per acre, or 350 whips w/shelters, or 200 1" caliper trees, or 100 2" caliper trees. By conversion it has been determined that a seeding or whip without shelter = 1 unit, whip with shelter = 2 units, 1"caliper tree = 3.5 units and 2" caliper tree = 7 units. The use of plant units simplifies the plant density calculations when mixing stock size.

FOREST CONSERVATION EASEMENTS

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention and reforestation areas of the subject property.

SITE DATA TABULATION (AREA OF DEVELOPMENT)

	TOTAL AREA OF DEVELOPMENT	3.53±	AC.
<u>.</u>	AREA OF 100 YEAR FLOODPLAIN	NA	
3.	NET AREA OF SITE		AC.
ŀ.	TOTAL FOREST ON NET AREA	0.00±	AC.
5.	TOTAL FOREST AREA IN EASEMENT	N/A	
5.	TOTAL AFFORESTATION AREA IN EASEMENT	0.71±	AC.

FOR BEARINGS AND DISTANCES OF FOREST CONSERVATION BOUNDARIES SEE RECORD PLAT

FOREST CONSERVATION WORKSHEET CASH PROPERTY

NET TRACT AREA:

- A. Total tract area ..
- B. Land dedication acres (parks, county facility, etc.) ...
- C. Land dedication for roads or utilities (not being constructed by this plan) .. D. Area to remain in commercial agricultural production/use ...
- E. Other deductions (specify)
- F. Net Tract Area
- LAND USE CATEGORY: (from Trees Technical Manual)

Input the number "1" under the appropriate land use, limit to only one entry.

	ARA	MDR	IDA	HDR	MPD	CIA
	0	1	0	0	0	0
G. Afforestation	Threshold		•		20%	xF=
H. Conservation	Threshold				25%	xF=
EXISTING FORES	ST COVER:					
1 Evicting forest	cover			<u></u> .		

Existing forest cover. J. Area of forest above afforestation threshold.

K. Area of forest above conservation threshold

BREAK EVEN POINT:

L. Forest retention above threshold with no mitigation= M. Clearing permitted without mitigation.

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared O. Total area of forest to be retained .

PLANTING REQUIREMENTS:

- P. Reforestation for clearing above conservation threshold= Q. Reforestation for clearing below conservation threshold=
- R. Credit for retention above conservation threshold S. Total reforestation required .
- Total afforestation required . U. Credit for landscaping (may not exceed 20% of "S")=
- V. Total reforestation and afforestation required ...

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 $J = 100 \text{ dwg} / 7036 - 5 \text{ applemental dwg. SHT} 3, 2/17/2016, 10:40.04, AM, bdodson.}$

CHIEF, DEVELOPMENT ENGINEERING DIVISION

3-2-16

3.2.16

NOTE: THIS SUBDIVISION IS UTILIZING OPTION 'A' OF APPENDIX 'L'.

REFORESTATION NOTES

A. Planting Plan and Methods

Plant species selection was based on our knowledge regarding plant communities in Maryland's Piedmont Plateau and information provided in the soil survey on typical vegetation for the soil type on the planting site. Species selection was also based on our knowledge of plant availability in the nursery industry.

Reforestation will be accomplished through a mixed planting of whips and branched transplants. Container grown stock is recommended but bareroot stock may be used to help control afforestation costs. If bareroot stock is used the root systems of all plants will be dipped in an anti-desiccant gel prior to planting to improve moisture retention in the root systems.

Prior to planting the proposed Forest Conservation Easements all multiflora rose in the planting area shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications, as needed. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

B. Planting and Soil Specifications

Plant material will be installed in accordance with the Planting Detail and Planting Specifications shown on the Forest Conservation Plan.

Amendments to existing soil will be in accordance with the Planting Specifications shown on the Forest Conservation Plan. Soil disturbance will be limited to individual planting locations.

C. Guarantee Requirements

A 90 percent survival rate of the reforestation plantings will be required after one growing season. All plant material below the 90 percent survival threshold will be replaced at the beginning of the second growing season. At the end of the second growing season, a 75 percent survival rate will be required. All plant material below the 75 percent survival threshold will be replaced by the beginning of the next growing

D. Security for Reforestation

5-Aug-02

3.53

0.00

0.00

0.00

0.00

3.53

0.88

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.71

0.00

0.71

Section 16-1209 of the Howard County Forest Conservation Act requires that a developer shall post a security (bond, letter of credit, etc.) with the County to insure that all work is done in accordance with the FCP.

MANAGEMENT PLAN

Howard County requires a two year management plan be prepared as part of the forest conservation plan. The plan goes into effect upon acceptance of the certification of completion by the County.

The following items will be incorporated into the plan:

A. Fencing and Signage

Permanent signage indicating the limits of the retention/reforestation area shall be maintained.

B. General Site Inspections/Maintenance of Plantings

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the afforestation plantings. Appropriate measures will be taken to rectify any problems which may arise.

In addition, maintenance of the afforestation plantings will involve the following

- Watering All plant material shall be watered twice a month during the 1st growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May-September,
- 2. Removal of invasive exotics and noxious weeds. Old field successional species will be retained.
- Identification of serious plant pests and diseases, treatment with
- appropriate agent. Pruning of dead branches.
- After 12 and 24 months, replacement of plants, if required, in accordance with the Guarantee Requirements shown on the FCP.

C. Education

The developer will provide appropriate materials to property owners informing them of the location and purpose of the afforestation area. Materials may include site plans and information explaining the intent of the forest conservation law.

D. Final Inspection

FOREST CONSERVATION NOTES:

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

SUPER SILT FENCE PROPOSED.

SHALL HAVE SIGNS EVERY 50'.

PROPOSED DEVELOPMENT.

planting of B&B stock is not recommended.

- Planting/Soil Specifications Installation of bareroot/plug plant stock shall take place between March 15 - April 20: b&b/container stock March 15 -May 30 or September 15 - November 15. Fall
- Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines
- or equivalent. Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plant shall be
- fertilized with Osmocote 8-6-12. Plant material shall be transported to the site in a targed or covered truck. Plants shall be kept moist prior to planting.
- The contractor shall remove all non-organic debris associated with the planting operation from the site.

Sequence of Construction

- Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- Upon completion of the planting, signage shall be installed as shown.
- Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

- Maintenance of plantings shall last for a period of (3) years.
- Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second
- growing season, once a month during May-September, if needed. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide. Old field successional species
- will be retained. Plants shall be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the
- appropriate agent. Dead branches will be pruned from plantings.

Guarantee Requirements

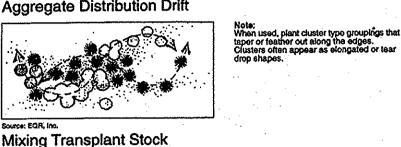
A 75 percent survival rate of forestation plantings will be required at the end of two growing seasons. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. Wild trees arising from natural regeneration may be counted up to 50 percent towards the total survival number if they are healthy, native species at least 12 inches tall.

Education of New Occupants

The developer shall provide educational information to all property owners within the new development/home about the proper use of forest conservation areas.

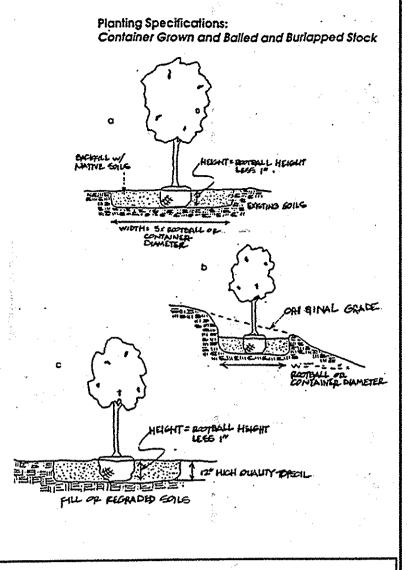
Final Inspection and Release of Obligations

- At the end of the post-construction management and protection period the developer shall submit a certification to the County that all forest conservation areas have remained intact or have been restored to appropriate condition, that the stipulated survival rates have been achieved, and that any permanent protection measures required by the plan are in place. Upon review and acceptance, the County will inform the developed of their release the development of future obligations related to the Forest Conservation Act.
- **Typical Forest Tree Distribution Patterns** SPECIES 1 (A) SPECIES 2 Naturally occurring populations of trees tend to be found in informal groupings. A cluster of trees is really a mosaic of different species groups. The objective of an afforestation/reforestation plan is to select the appropriate species and distribution pattern for a chose site that mimic natural **Aggregate Distribution Drift**



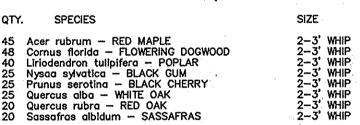
-- Protective Fencing *A Smaller Stock Source: Adapted from Forest Conservation Manual, 199

Planting Distribution Patterns



Seeding and Whip Planting Specification

FOREST CONSERVATION EASEMENT (0.71 ACRES± = 248 TREES REQ.)



Mulching newly planted seedings is suggested as it helps the soil retain mosture and it protects the seedi

** PLANTINGS TO BE SPACED 11 FOOT CENTERS - PLANTINGS SHOULD BE INSTALLED IN ROWS TO FACILITATE FUTURE MAINTENANCE. WHERE POSSIBLE ROWS SHOULD BE MADE ALONG CONTOUR.

QTY. SPECIES

PER COUNTY REQUIREMENTS, TREE SHELTERS SHOULD BE USED.

LANDSCAPING NOTES

PLANS AND CERTIFICATES."

Design: AM/JCO Draft:

PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS AS SHOWN ON THESE

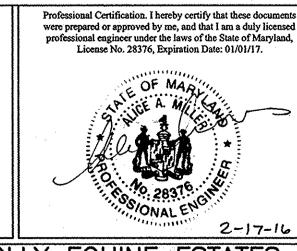
- 2) TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM PAVEMENT AND MUST BE A
- MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN, IF APPLICABLE.
- 3) TREE MUST BE PLANTED A MINIMUM OF TEN (10) FEET FROM A DRIVEWAY APRON.
- 4) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. THE LANDSCAPING FOR THIS PROJECT IS SHOWN WITHIN THE SUPPLEMENTAL PLANS FOR F-16-012, AND HAS BEEN DESIGNED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY SHALL BE PROVIDED WITH THE DEVELOPER'S AGREEMENT, IN THE AMOUNT OF \$14,520 FOR 40 SHADE TREES, 8 MITIGATION TREES AND 4 SHRUBS FOR TRASH PAD SCREENING.
- Four specimen trees have been identified for removal on this plan (ST-1, ST-2, ST-8 AND ST-9). SHOULD THESE TREES BE PRESERVED, AND/OR IF ANY CONSTRUCTION IS EXPECTED TO IMPACT THE CRITICAL ROOT ZONE OF ANY SPECIMENT TREES, ROOT PRUNING ALONG THE PROPOSED LIMITS OF DISTURBANCE SHALL BE PROVIDED TO REDUCE IMPACTS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- B) AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH IN LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OR REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL

REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE

www.bei-civilengineering.com

Check: AM

BENCHMARK \ ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644



EQUINE ESTATES LOTS 1-3 AND BUILDABLE PRESERVATION PARCEL 'A' ZONED: RC-DEO JONAS W. CASH TAX MAP 23 - GRID 14 PARCEL 30 JOAN C. CASH 3rd ELECTION DISTRICT 3925 FOLLY QUARTER ROAD ELLICOTT CITY, MARYLAND 21042 410-531-2680

HOWARD COUNTY, MARYLAND TITLE: FOREST CONSERVATION DETAILS AND LANDSCAPE SCHEDULES / NOVEMBER 2015

PROJECT NO. 2100 SCALE: AS SHOWN DRAWING 3 OF 3

F-16-012

CATEGORY ADJ	ACENT TO: PE	RIMETER	TRASH PA
LANDSCAPE TYPE		1 A	
LINEAR FEET OF PERIMETER		2378'	
CREDIT FOR EXISTING VEGETA (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO	
CREDIT FOR WALL, FENCE OR (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	BERM	NO	1
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SI SHRUBS		40 	- - - 4
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SL SHRUBS (10:1 SUBSTITUTIO BELOW IF NEEDED)	PBSTITUTE) TUTE)	40 _ _	- - 4

1. FINANCIAL SURETY FOR THE PLANTING SHALL BE POSTED AS PART OF THE

DEVELOPERS AGREEMENT FOR THIS SITE DEVELOPMENT PLAN IN THE AMOUNT

SUBJECT TO PROTECTIVE COVENANTS AS CONTAINED IN THE DEED OF FOREST

. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL

4. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE

2. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS

CONSERVATION EASEMENT RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MD, WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.

THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE.

PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION

FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS

OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.

OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS

EQUIPMENT CLEANING AREA, ETC. SHALL OCCUR WITHIN THE FOREST

SCHEDULE A

PERMITTED BY HOWARD COUNTY DPZ. NO STOCKPILES, PARKING AREAS,

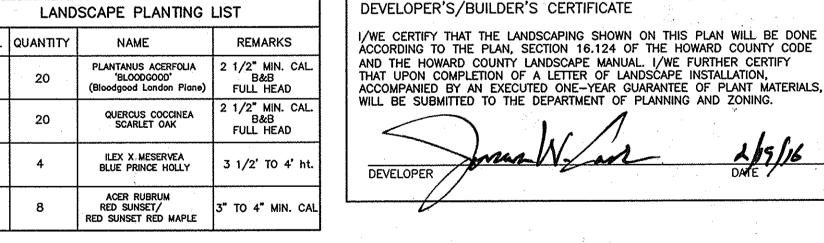
OF \$15,464 FOR 0.71 ACRES OF ON-SITE REFORESTATION.

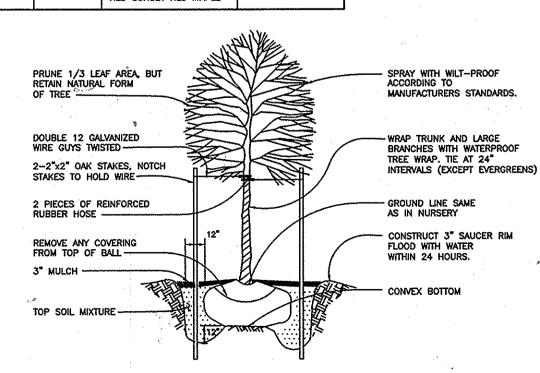
EASEMENT ARE ALLOWED.

CONSERVATION FASEMENT.

LANDSCAPE PLANTING LIST							
SYMBOL	QUANTITY	NAME	REMARKS				
\odot	20	PLANTANUS ACERFOLIA 'BLOODGOOD' (Bloodgood London Piane)	2 1/2" MIN. CAL. B&B FULL HEAD				
(20	QUERCUS COCCINEA SCARLET OAK	2 1/2" MIN. CAL. B&B FULL HEAD				
*	4	ILEX X MESERVEA BLUE PRINCE HOLLY	3 1/2' TO 4' ht.				
\oplus	8	ACER RUBRUM RED SUNSET/ RED SUNSET RED MAPLE	3" TO 4" MIN. CA				

Cornus florida AND Prunus serotina).





TREE PLANTING DETAIL

NOT TO SCALE

6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES

DURING ANY CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL

FCE RETENTION BOUNDARIES WHICH OCCUR WITHIN 50 FEET OF THE

PROPOSED LIMITS OF DISTURBANCE THAT DOES NOT ALREADY HAVE A

8. THERE IS NO 100-YEAR FLOODPLAIN LOCATED IN THE AREA OF

7. PERMANENT SIGNAGE SHALL BE PLACED 50'-100' APART ALONG THE

BOUNDARIES OF ALL FOREST CONSERVATION EASEMENTS. THIS SIGNAGE SHALL

STAY IN PERPETUITY. THE FOREST EASEMENT AREA CLOSEST TO THE HOUSE

9. THE FOREST CONSERVATION WATERSHED FOR THIS PROJECT IS THE PATUXENT

10. THERE ARE NO RARE, THREATENED OR ENDANGERED SPECIES LOCATED ON THIS SITE. THERE IS A STREAM AND ASSOCIATED WETLANDS ON THE NORTH

HISTORIC STRUCTURES LOCATED ON THIS SITE. THERE ARE SPECIMEN TREES

LOCATED ON THIS SITE AS SHOWN ON THE PLAN AND SPECIMEN TREE CHART.

11. PLANTING IS NOT ALLOWED WITHIN 20' FEET OF THE BGE TRANSMISSION

EASEMENT. THE PLANTINGS IN THE 25' OF THE PLANTING AREA CLOSEST TO

THE TRANSMISSION LINE EASEMENT ARE RESTRICTED TO ONLY NATIVE SPECIES

THAT HAVE MATURE HEIGHTS OF 40' MAXIMUM ARE PERMITTED (Acer rubrum,

PORTION OF THIS PROPERTY. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO

DNÉ QUALIFIED PROFESSIONAL

FUTURE DUMPING, MACHINERY OR STORAGE OF MATERIALS, CUTTING OR DISTURBANCE OF VEGETATION OR SOIL IN THIS AREA IS STRICTLY PROHIBITED Howard County Code, Title 16 Subtitle 12 VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT For more information or t port violations, please call Howard County Department of Recreation and Parks, Natural Resources Division 410-313-4725 TTY 410-313-4665 r#r oward ounty MARYLAND

---- 2-1/2**"** -----

FOREST CONSERVATION

AREA

TREES FOR YOUR

Materials: Number 3690 Scotchcal

2.640 R=0.0626MARKER - SECTION VIEW

MARKER DETAIL

REFLECTIVE

SHEETING

R SPECIFIED

DECAL SPECIFICATIONS

FCE CARSONITE MARKER