

# NBR and SANS revisions

**Presented by  
Videsh Boodu**



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# THE LAW

## NBR

# NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT NO. 103 OF 1977



# THE LAW

NBR

IS MADE UP OF  
THREE PARTS

NATIONAL BUILDING  
REGULATIONS AND  
BUILDING STANDARDS  
ACT NO. 103 OF 1977



# THE LAW

1. Building Standards Act, No. 103 of 1977
2. National Building Regulations
3. Review Board Regulations

IS MADE UP OF  
THREE PARTS



# THE LAW

1. Building Standards Act, No. 103 of 1977

2. National Building Regulations

3. Review Board Regulations

## HAS BEEN AMENDED IN

1. **1982** by Standards Act 30 of 1982,
2. **1984** by National Building Regulations and Building Standards Amendment Act 36 of 1984,
3. **1989** by National Building Regulations and Building Standards Amendment Act 62 of 1989,
4. **1995** by National Building Regulations and Building Standards Amendment Act 49 of 1995, and
5. **1996** by Mine Health and Safety Act 29 of 1996
6. **2008** by Standards Act 8 of 2008



# THE LAW

1. Building Standards Act, No. 103 of 1977
2. National Building Regulations
3. Review Board Regulations

## THE FUTURE:

These include some of the Task Team discussions prior to the document following the normal path to the Minister.

1. The Three Parts are to be Separated.



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2. Section 7 (the subjective portion) is to be Removed (or amended)



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3. The Qualifications of The BCO could Possibly be Amended.





# THE LAW

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1. The Three Parts are to be Separated.
2. Section 7 (the subjective portion) is to be Removed (or amended)
3. The Qualifications of The BCO could Possibly be Amended.
4. All Buildings will be Subject to the Law (National Key Points, Tribal / Rural, Government Buildings & Informal Settlements)



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## THE FUTURE:

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1. The Three Parts are to be Separated.
2. Section 7 (the subjective portion) is to be Removed (or amended)
3. The Qualifications of The BCO could Possibly be Amended.
4. All Buildings will be Subject to the Law (National Key Points, Tribal / Rural, Government Buildings & Informal Settlements)
5. Discussions were Held in regards to Formalising Existing Illegal Buildings - The Happy Letter (with conditions)



# THE REGULATIONS

1. Building Standards Act, No. 103 of 1977
2. National Building Regulations
3. Review Board Regulations

## THE HISTORY:

1. **12<sup>th</sup> October 1990** The Minister of the DTI makes the Regulations.
2. **8<sup>th</sup> March 1991** Regulations come into Operation.
3. **30<sup>th</sup> May 2008** Further amendments come into Operation.
4. **9<sup>th</sup> September 2011** Amendment to include Regulations for the requirements for Energy Usage in Buildings (Part XA)

# THE "DEEMED TO SATISFY" SANS 10400

## SANS 10400 IS MADE UP OF:

1	SANS 10400-A	The application of the NBR Part A: General principles and requirements	2016 Ed 3.1
2	SANS 10400-B	The application of the NBR Part B: Structural design	2012 Ed 3
3	SANS 10400-C	The application of the NBR Part C: Dimensions	2016 Ed 3.1
4	SANS 10400-D	The application of the NBR Part D: Public safety	2016 Ed 3.1
5	SANS 10400-F	The application of the NBR Part F: Site operations	2017 Ed 3.1
6	SANS 10400-G	The application of the NBR Part G: Excavations	2017 Ed 3.1
7	SANS 10400-H	The application of the NBR Part H: Foundations	2012 Ed 3
8	SANS 10400-J	The application of the NBR Part J: Floors	2016 Ed 3.1
9	SANS 10400-K	The application of the NBR Part K: Walls	2015 Ed 3.1
10	SANS 10400-L	The application of the NBR Part L: Roofs	2011 Ed 3
11	SANS 10400-M	The application of the NBR Part M: Stairways	2018 Ed 3.1
12	SANS 10400-N	The application of the NBR Part N: Glazing	2012 Ed 3.1
13	SANS 10400-O	The application of the NBR Part O: Lighting and ventilation	2011 Ed 3
14	SANS 10400-P	The application of the NBR Part P: Drainage	2010 Ed 3
15	SANS 10400-Q	The application of the NBR Part Q: Non-water-borne means of sanitary disposal	2017 Ed 3.1
16	SANS 10400-R	The application of the NBR Part R: Stormwater disposal	2012 Ed 3
17	SANS 10400-S	The application of the NBR Part S: Facilities for persons with disabilities	2011 Ed 3
18	SANS 10400-T	The application of the NBR Part T: Fire protection	2011 Ed 3
19	SANS 10400-V	The application of the NBR Part V: Space heating	2018 Ed 3.1
20	SANS 10400-W	The application of the NBR Part W: Fire installation	2011 Ed 3
21	SANS 10400-XA	The application of the NBR Part X: Environmental sustainability Part XA: Energy usage in buildings	2011 Ed 1
22	SANS 10400-XB	The application of the NBR Part X: Environmental sustainability Part XB: Water Usage in buildings	FUTURE



# THE REGULATIONS

1. Building Standards Act, No. 103 of 1977
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## THE FORESEEABLE FUTURE:

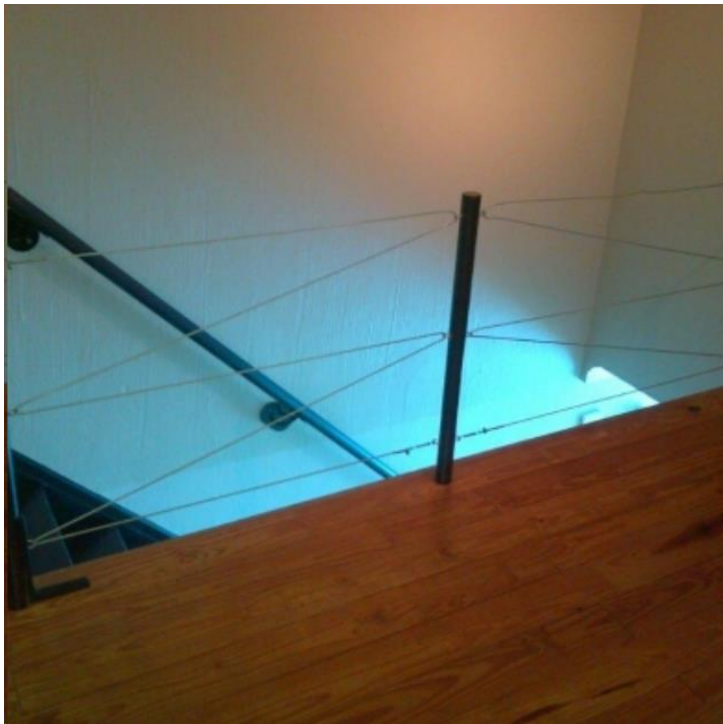
Current discussions include the introduction of WATER USAGE IN BUILDINGS (Part XB).

This would have an impact on all new buildings - We still have to see how additions and alterations are to be treated by this amendment.

# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 B and D

1. Fall protection, in particular Metal balustrades are subject to a Rational Design by a Competent Person (Structural Engineering)





# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 B and D

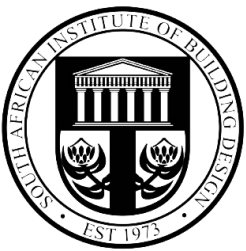
1. Fall protection, in particular Metal balustrades are subject to a Rational Design by a Competent Person (Structural Engineering)
2. Currently this is not specified correctly as most designers annotate "1000 High Balustrade to Owners Choice"



# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 B and D

1. Fall protection, in particular Metal balustrades are subject to a Rational Design by a Competent Person (Structural Engineering)
2. Currently this is not specified correctly as most designers annotate "1000 High Balustrade to Owners Choice"
3. Most BCO's also overlook this Structural aspect of the Building. This health & safety is to be addressed ASAP.

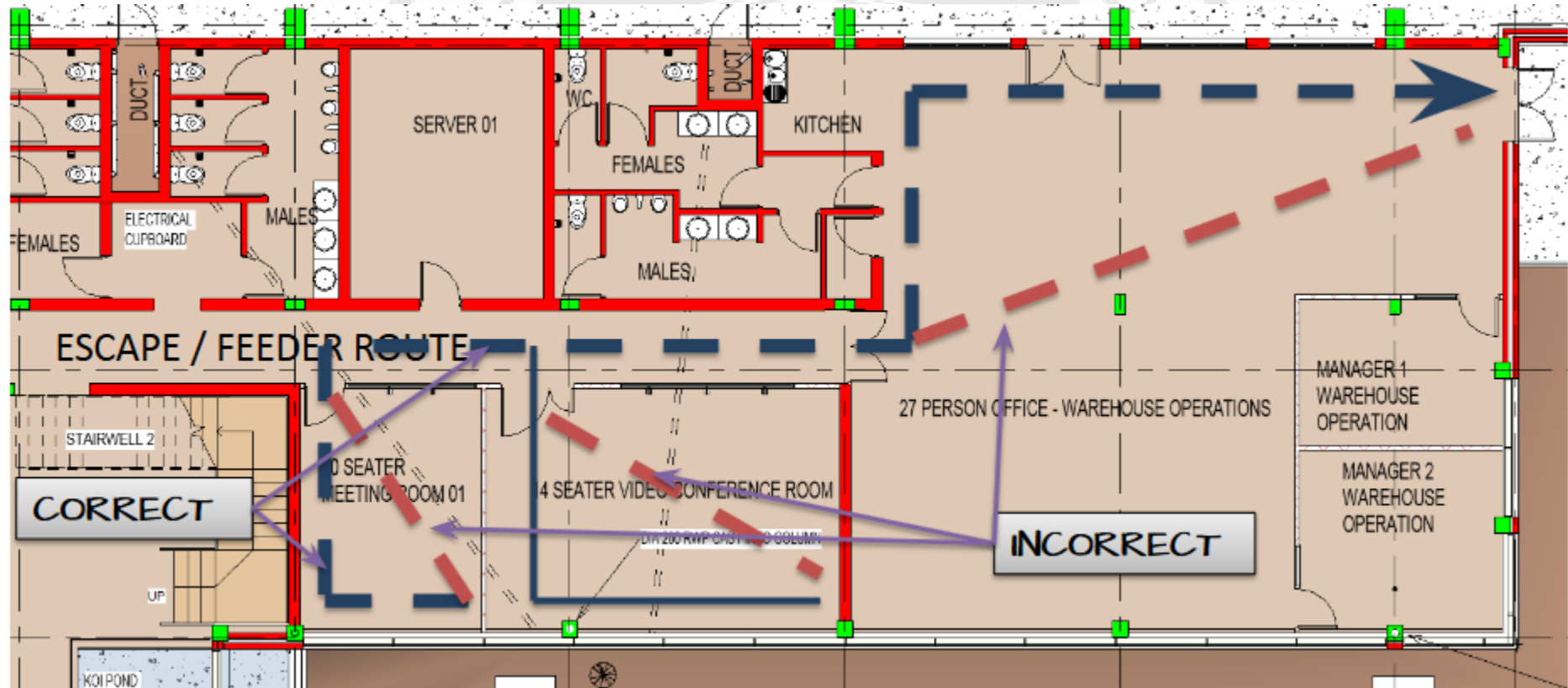




# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 T

1. Escape Travel Path is to be amended to show the correct method of Measure.



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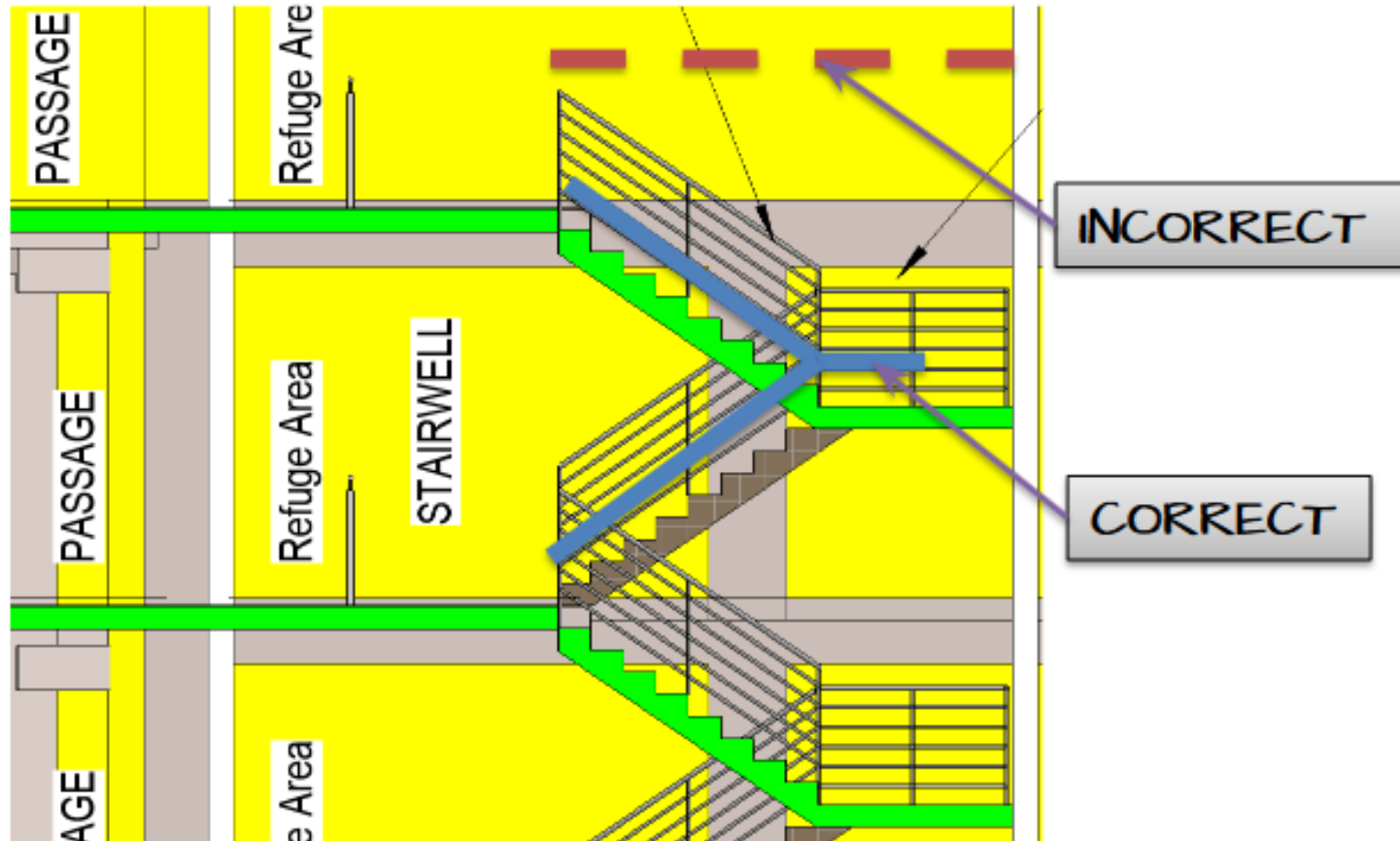
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4. Fire

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# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 T

1. Escape Travel Path is to be amended to show the correct method of Measure.
2. The reach of the Fire Hose Reel is to be amended to show the correct method of Measure.
3. Refuge Area is to be amended, assisting with design. The restriction of a Competent Person (Fire Eng.) is to be removed.
4. Fire Detection and Alarm Systems is to be amended. Most Public Buildings will be required to have some system in place.

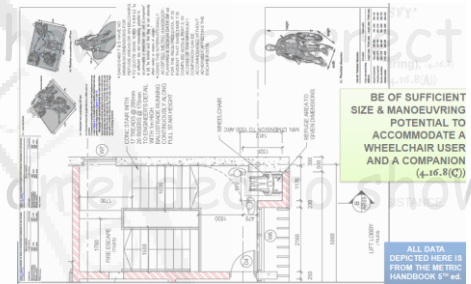
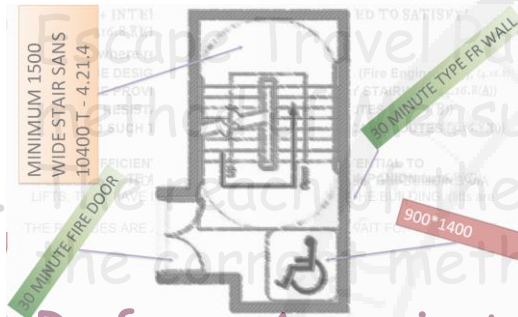
A METHOD SIMILAR TO THE  
MEASUREMENT OF ESCAPE TRAVEL  
PATHS IS TO BE USED FOR FIRE  
HOSE REELS.



# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 T

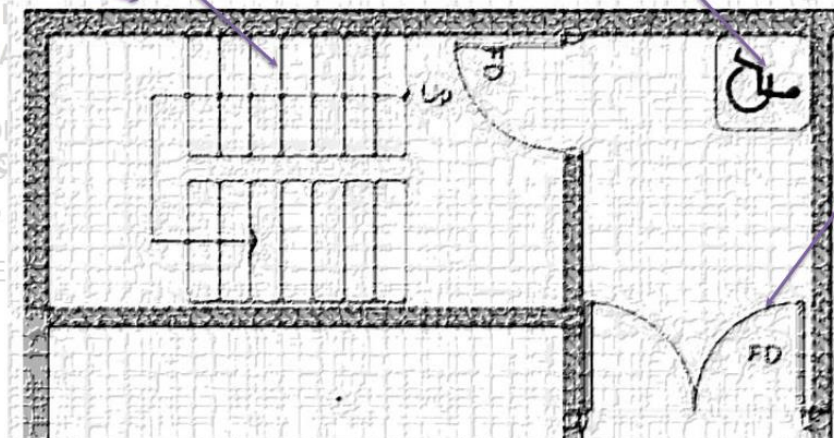
1. Escape Route with is to be amended to show the correct measure.
2. Fire Hose Reel is to be amended to show the correct method of Measure.
3. Refuge Area is to be amended, assisting with design. The restriction of a Competent Person (Fire Eng.) is to be removed.
4. Fire Detection and Public Buildings will place.



MINIMUM 1500 WIDE STAIR SANS 10400 T - 4.21.4

900\*1400

30 MINUTE TYPE FR WALL



30 MINUTE FIRE DOOR

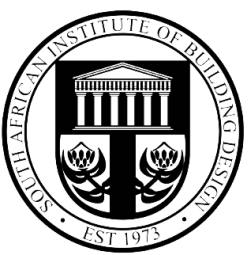
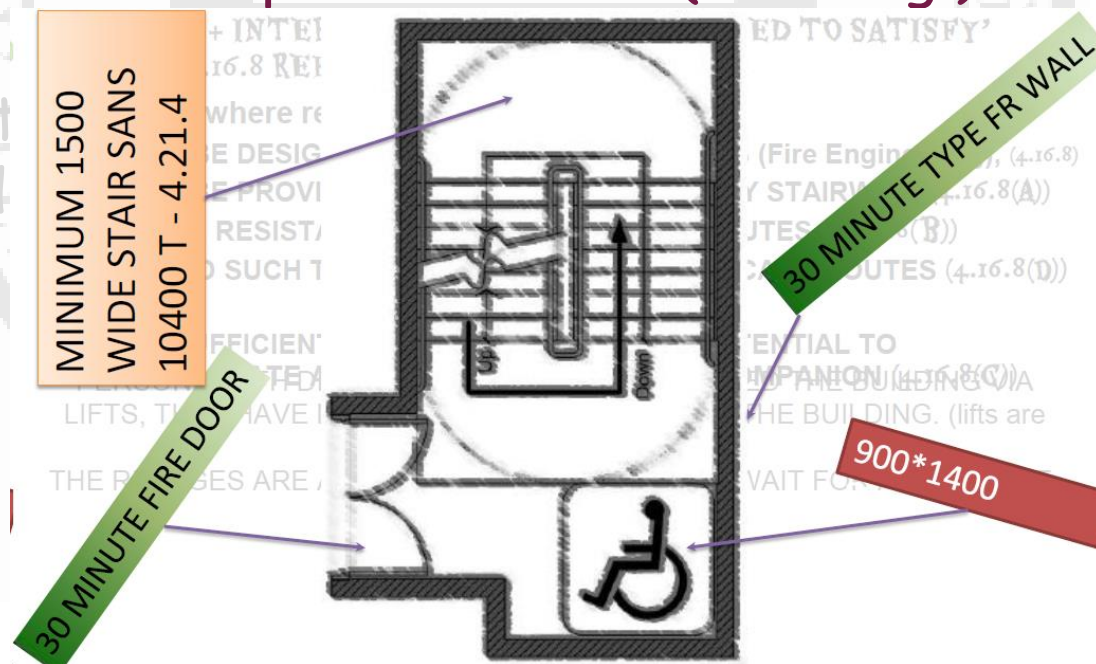
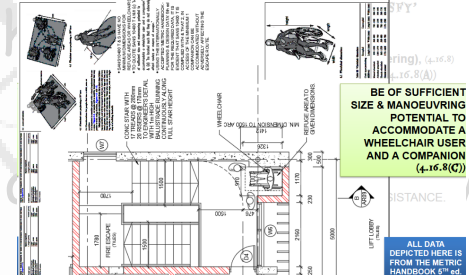
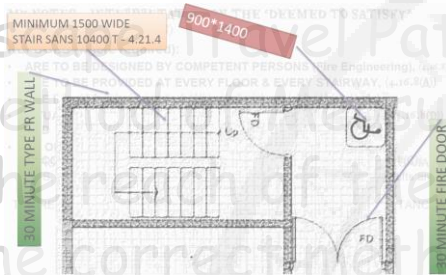


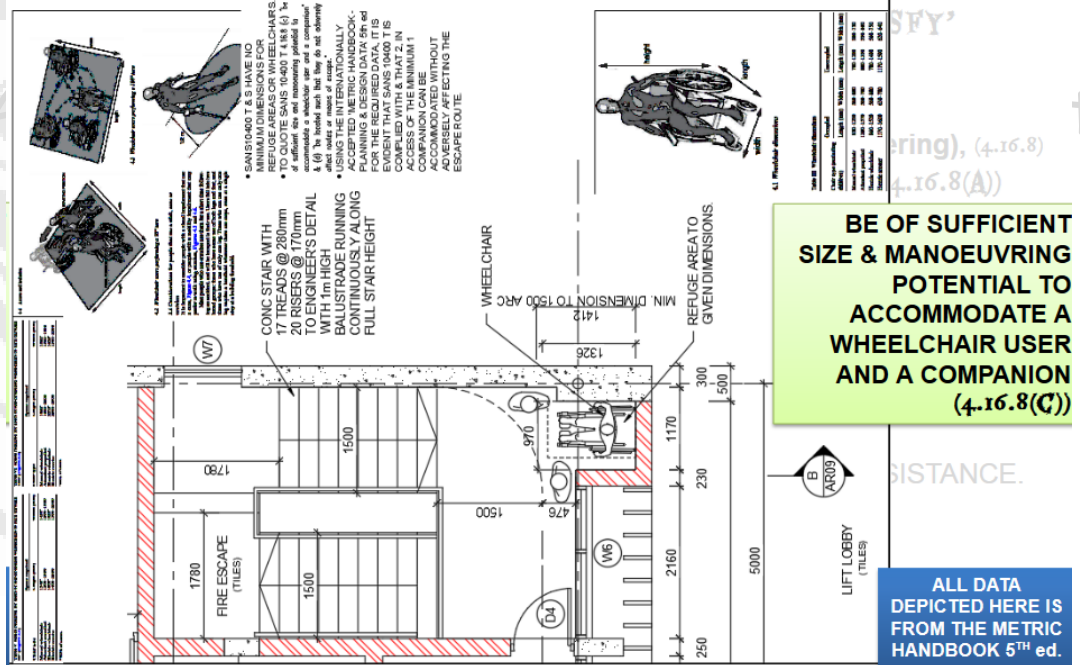


# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 T

1. Escape Route is to be amended to show the correct method of Measure.
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4. Fire Detect Public Build place.





# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 T

- THIS WOULD HAVE A DESIGN & COST IMPLICATION ON NEW BUILDINGS.**
1. Escape Travel Path is to be amended to show the correct method of Measurement.
  2. The reach of the Fire Hose Reel is to be amended to show the correct method of Measurement.
  3. Refuge Area is to be amended to show the correct design. The restriction of a Competent Person (Fire Eng.) is to be removed.
  4. Fire Detection and Alarm Systems is to be amended. Most Public Buildings would be required to have some system in place.



# THE "DEEMED TO SATISFY" SANS 10400

THE FUTURE OF SANS 10400 XA

SANS 10400 XA AMENDMENT WOULD  
BE A COMPLETE REWRITE.

A FEW OF THE MAJOR CHANGES ARE  
COVERED IN THE FOLLOWING SLIDES.

WE WILL INFORM YOU OF THE  
DOCUMENT WHEN IT IS READY FOR  
PUBLIC COMMENT.

WE WOULD ALSO HOST WORKSHOPS  
WITH REGARDS TO THESE CHANGES  
AS SOON AS POSSIBLE.

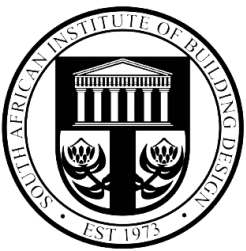
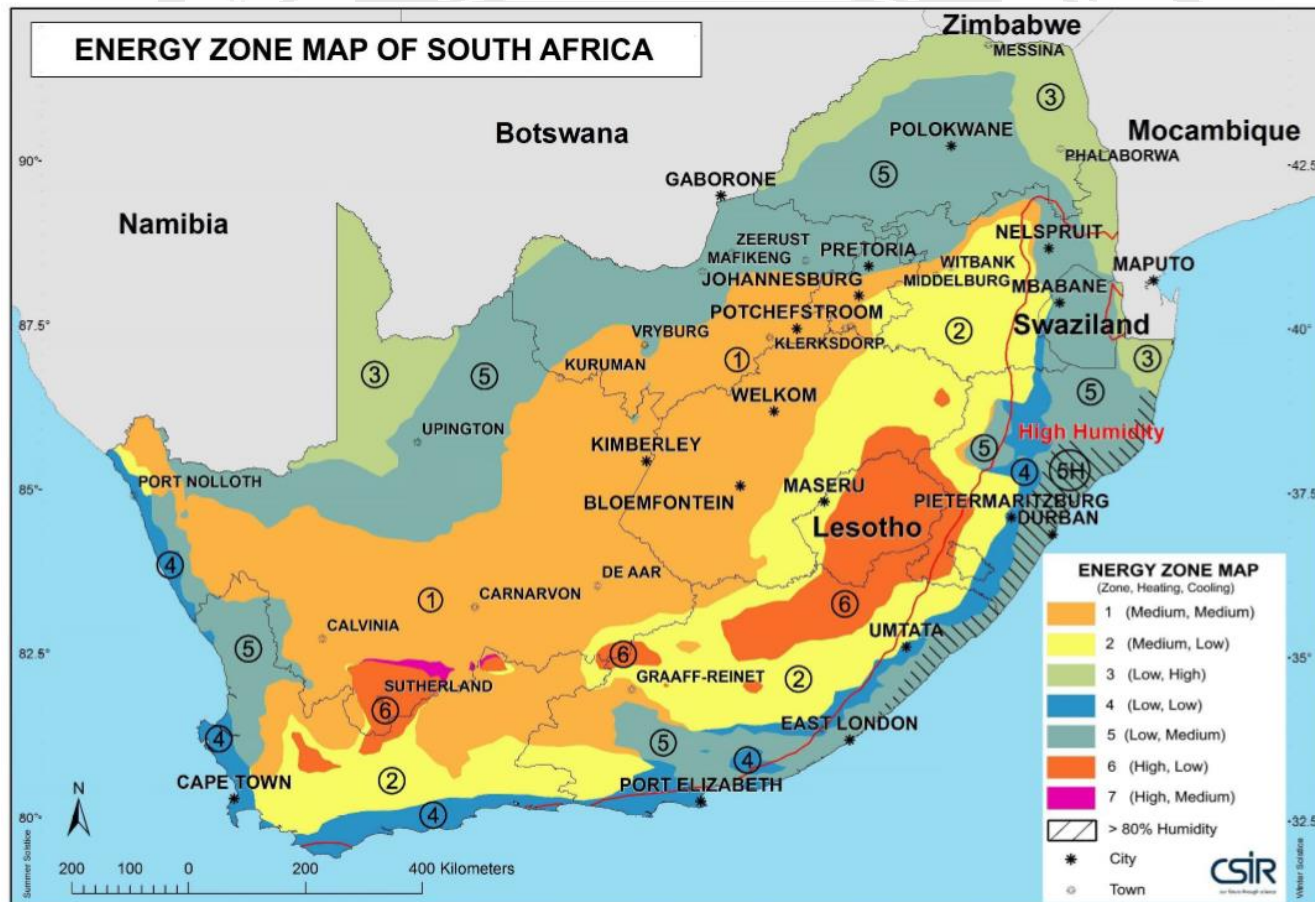




# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XA

1. SEVEN CLIMATIC ZONES + THE >80% HUMIDITY AREA WITHIN ZONE 5, IN EFFECT EIGHT CLIMATIC ZONES vs THE ORIGINAL SIX



# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XA

2. SANS 204 IS NOT REFERENCED.
3. ONLY ONE METHOD OF COMPLIANCE FOR FENESTRATION IS ALLOW FOR. THIS SEPARATES THE U-VALUE & SHGC VALUES MAKING COMPLIANCE MORE DIFFICULT and / or COSTLY.

**NOTE:** EVEN IF THE SHADING ELEMENTS TOTALLY PREVENT SUMMER SOLAR HEAT GAINS and THE U-VALUE FAILS - THE BUILDING IS NOT COMPLIANT.

**THESE TWO FACTORS SHOULD BE WEIGHED TOGETHER!**

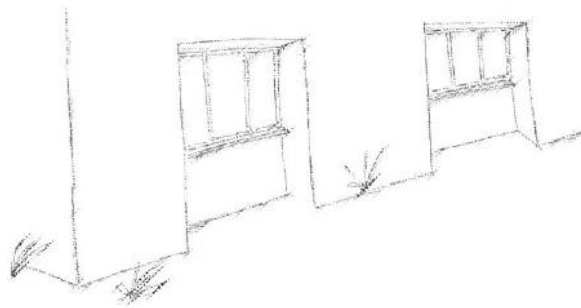


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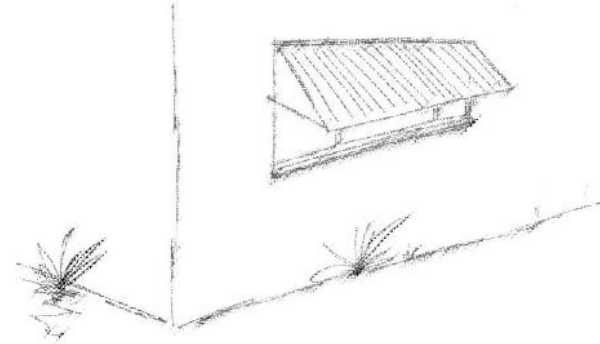
## THE FUTURE OF SANS 10400 XA

4. DIFFERENT TYPES OF SHADING IS PRESENTED IN THE INFORMATIVE ANNEXURES and THE OPPORTUNITY TO PROVIDE THE EQUIVALENT SHADING IS ALLOWED FOR.

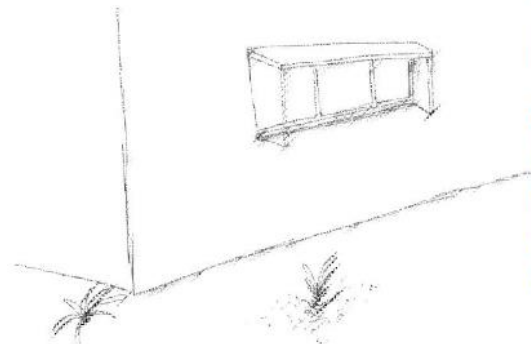
*MY EXAMPLES OF SHADING  
ELEMENTS - MANY OF WHICH DO NOT  
HAVE A DEEMED TO SATISFY RULE*



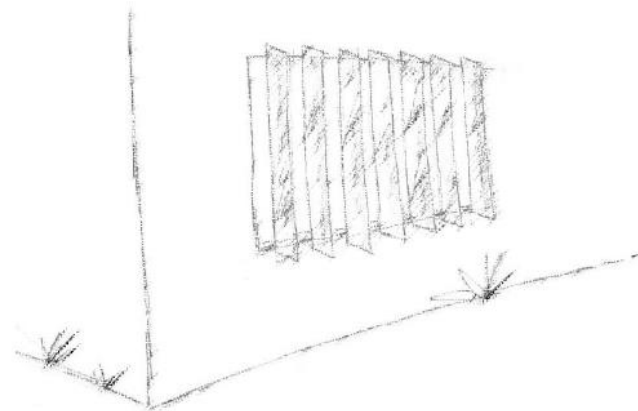
BUILDING  
GEOMETRY



AWNING BLIND, FIXED OR  
MOVABLE



PROJECTION FINS



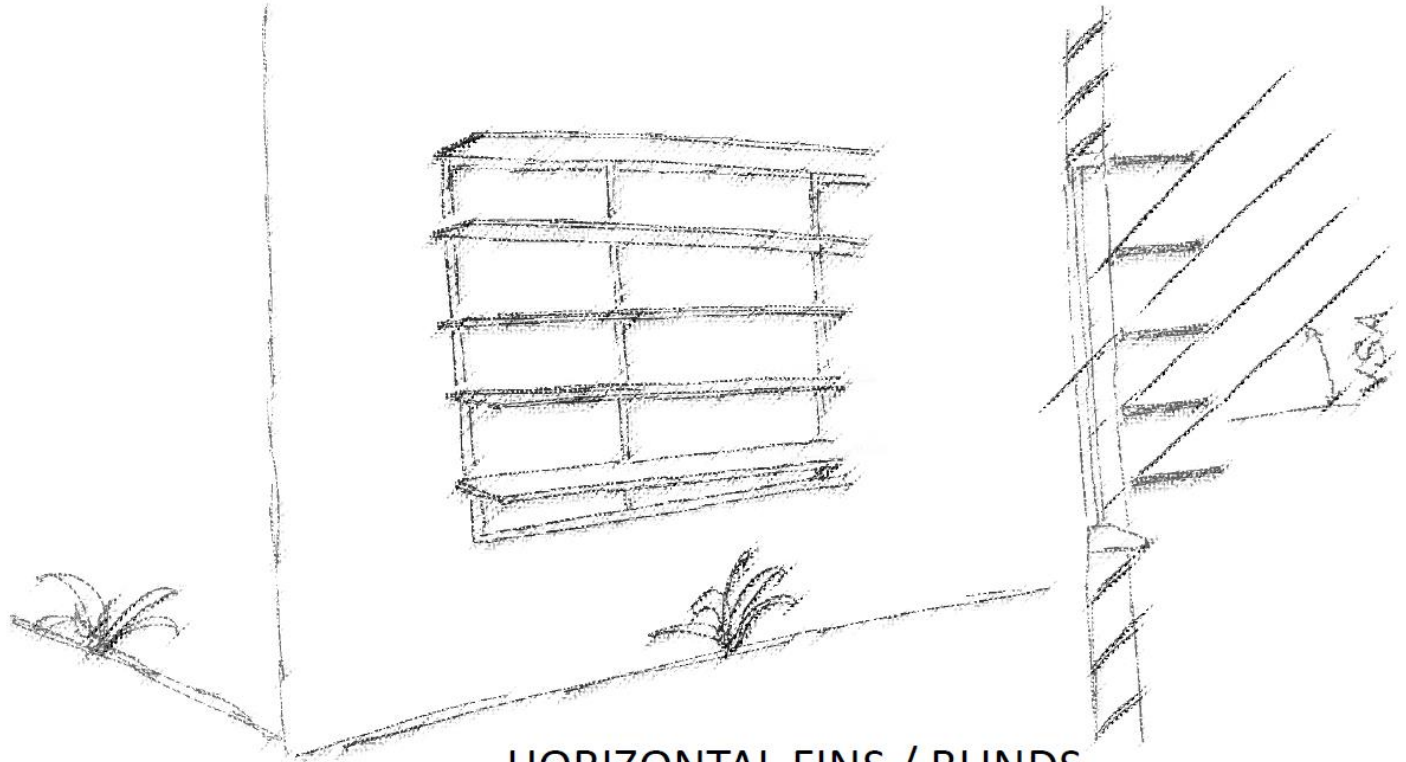
VERTICAL FINS  
(perpendicular or slanted)



# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XA

4. DIFFERENT TYPES OF SHADING IS PRESENTED IN THE INFORMATIVE ANNEXURES and THE OPPORTUNITY TO PROVIDE THE EQUIVALENT SHADING IS ALLOWED FOR.



HORIZONTAL FINS / BLINDS  
(Horizontal or slanted)

MY EXAMPLES OF SHADING  
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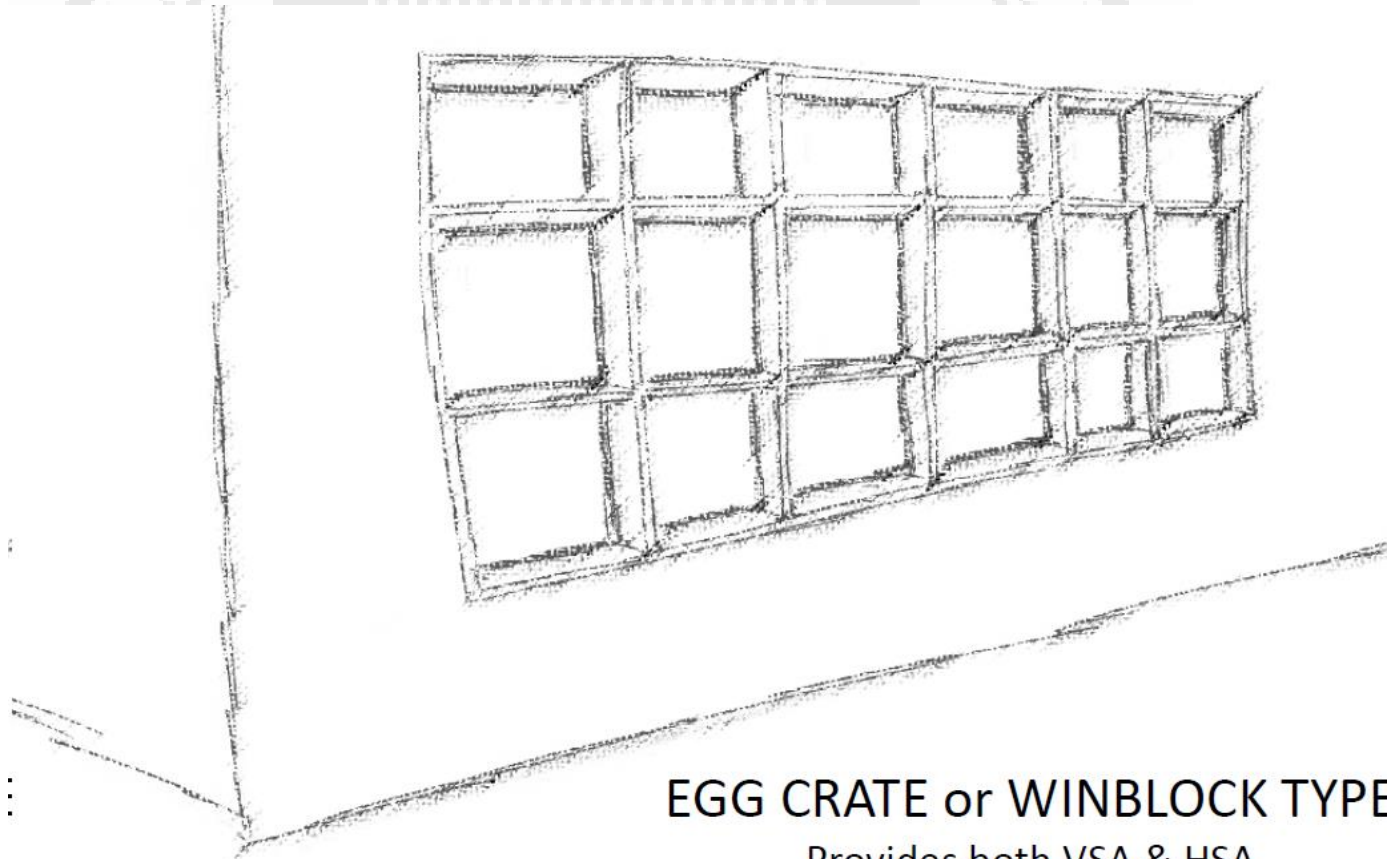


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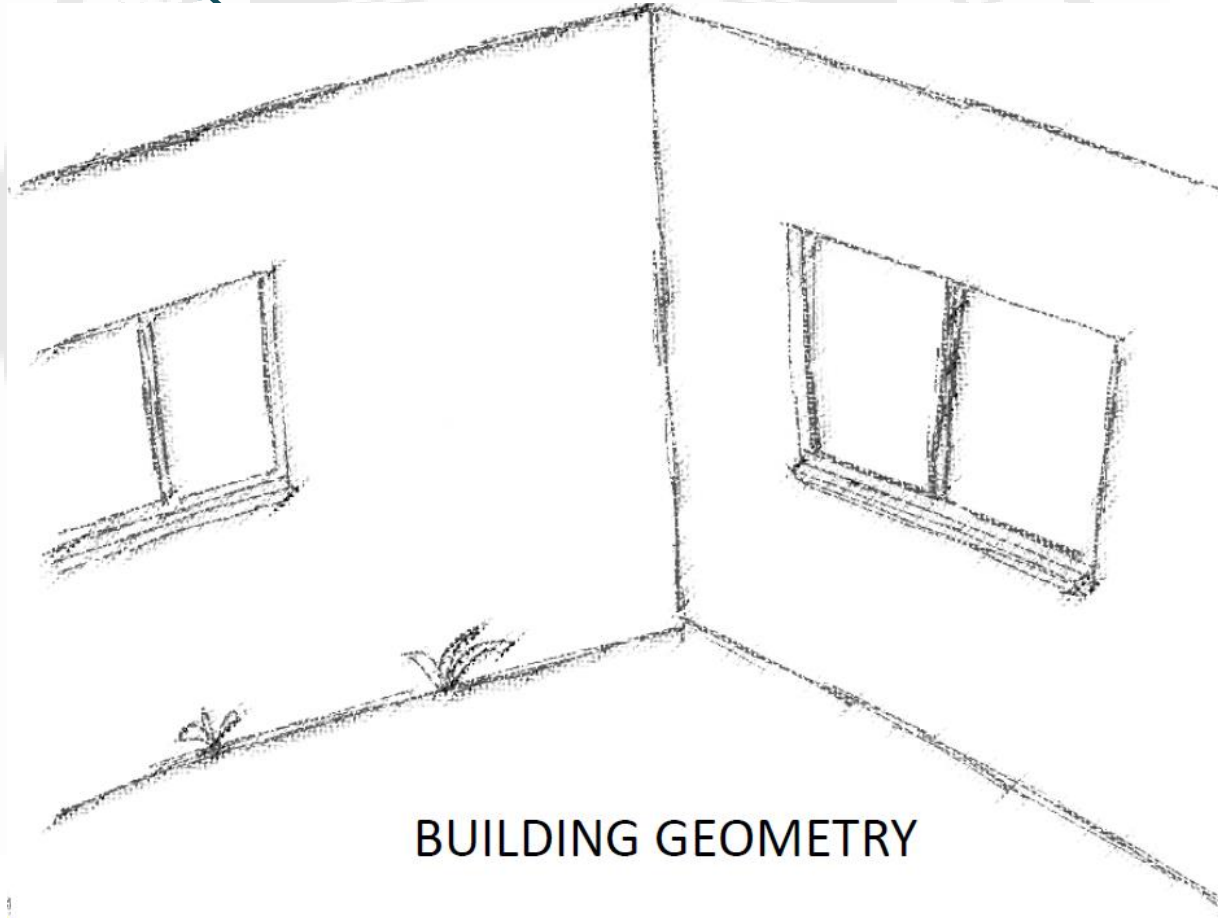
EGG CRATE or WINBLOCK TYPE

Provides both VSA & HSA

# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XA

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BUILDING GEOMETRY

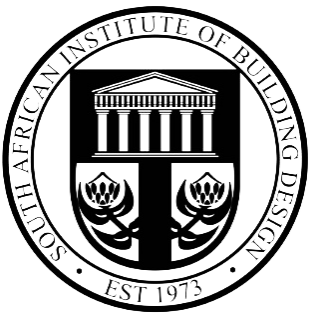
MY EXAMPLES OF SHADING  
ELEMENTS - MANY OF WHICH DO NOT  
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# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XA

5. DEEMED TO SATISFY VALUES FOR THATCH ROOFS ARE POSSIBLY PROVIDED.
6. BUILDING SEALING (air leaking) WOULD BE PROVIDED FOR.
7. HOT WATER PROVISION WOULD HAVE AN EXTENDED DEEMED TO SATISFY RULES INCLUDING HOT WATER CONSUMPTION TABLES.
8. ROOF INSULATION WOULD HAVE EXTENDED DEEMED TO SATISFY RULES.



# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XB

CURRENTLY WATER USAGE (except for fire water) IS NOT COVERED BY THE REGULATIONS or ANY 'DEEMED TO SATISFY' SANS 10400 STANDARDS.

SOME OF THE REQUIREMENTS WOULD INCLUDE THE FOLLOWING:

1. THE MAX. FLOW RATES and / or VOLUMES per TERMINAL FITTING per BUILDING TYPE.
2. IN-LINE STRAINERS WOULD BE MANDATORY.
3. DEAD LEG PIPING IS TO BE MADE SHORTER.
4. RAIN WATER HARVESTING WOULD BE MANDATORY.





# THE "DEEMED TO SATISFY" SANS 10400

## THE FUTURE OF SANS 10400 XB

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SOME OF THE REQUIREMENTS WOULD INCLUDE THE FOLLOWING:

6. GREY WATER HARVESTING WOULD BE INCLUDED.
7. CAR WASH FACILITIES IS TO RECYCLE A PERCENTAGE OF THE WATER USE.
8. WHEN DESIGNING SWIMMING POOLS, THE RAIN WATER STORAGE TANK IS TO BE INCREASED.



# DISCUSSION!

# QUESTIONS?

# THIS WORKSHOP HAS EARNED YOU 0.5 CATEGORY 1 CPD CREDIT

**Presented by:  
Videsh Boodu**



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## THE END

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### **BIBLIOGRAPHY / ACKNOWLEDGEMENTS:**

- National Building and Standards Act (103 of 1977)
- SANS 10400 suite of documents