

Familiarity in Designing a Mosque: A Practice of Universal Design

UIA 2011 World Congress, Work Programme-Architecture for All

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MOSQUE

- center of religious activities, muslim places of worship and prayer; and also community's social activities. The word "mosque" comes from the Arabic *masjid*, which is related to the word for "prostration."

WHY U(M)D?

All of us are young once, most of us become old, and any of us can become disabled at anytime. And as we age, our capabilities change.

(..... Sunset Books on bathrooms: Planning & Remodeling, 2000, p. 50)



WE HAVE VARIATED AND ALSO DIFFERENT ABILITIES, THEREFORE *DIFFABLE* COMMUNITY NOT "DISSABLE"

Muslims are expected to pray five times a day, preferably in a mosque and cannot be abandoned unless very specific condition happens (as explained in Holy *Qur'an*).

UD PRINCIPLES

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible Information
5. Tolerance for Error
6. Low Physical Effort
7. Size and Space for Approach and Use

The Center for Universal Design, [NC State University](#) (1997)

Complimentary note:

'designers not only involves consideration for usability but must also incorporate other considerations such as economic, engineering, cultural, gender, and environmental concerns in their design processes'.

→ It means that UD can bring the form of the **locality** and by **its logic** and **simplicity** it can be shared universally.

THE DESIGN

1. understanding mosque's program & form
2. understanding *diffability* characteristics
3. exploration of common mosque activities culture

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Familiarity (proximity, closeness)

Kwarasan Mosque,
2008
(unbuilt Project),
Location: Klaten,
Central Java Province

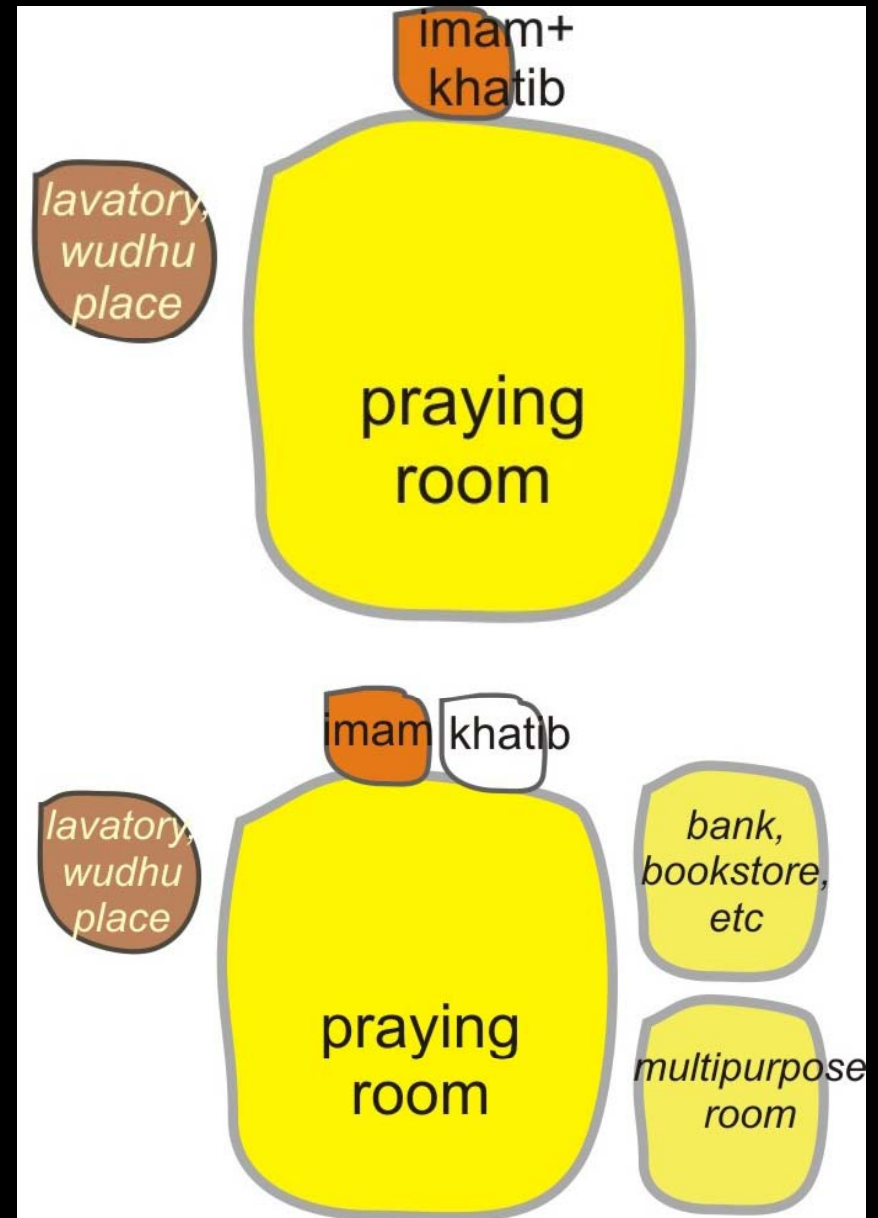
Exopansion of AlManar
Mosque , 2009
(On Going Project,
Fund raising Process),
Location: Palembang,
South Sumatera
Province

Design Concept



1. Understanding mosque program

- Main functions: one big prayer room, small room for *imam* (praying leader) and a place for *khatib* (preacher's podium).
- supporting functions consist of places for men and women's *wudhu* (ablution) and also lavatories.
- other functions, such as multipurpose room, bank, playgroup, book store, etc.



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1. Understanding mosque form



2. Understanding *diffabilities* characters

Thomson, etc (1984) describes five major groups that belong to disability group which need several basic design requirements, which are:

- wheelchair users
- ambulant disabled
- deaf and hard of hearing
- visually impairment
- mentally handicapped

While Harrison and Parker (in Christophersen [ed.], 2002) add others in the list of minority users of a built environment, such as:

- persons with cognitive disabilities
- persons with multiple disabilities and
- elderly

2. Understanding *diffabilities* characters

No	'Diffabilities 'groups	Handicapped by:
1	Wheelchair users (depends on a wheelchair for mobility)	<ul style="list-style-type: none"> •being at a lower level than everyone else •being wider than everyone else •being able to go only where wheels can take him
2	Ambulant disabled (able to walk but who may depend on prostheses (artificial limbs), orthoses (calipers), sticks, crutches or walking aids; and also include people who have some physical disability which affects their mobility or use of a building but do not rely on aids of any kind)	<ul style="list-style-type: none"> •have trouble reaching, bending, stooping, kneeling, and crouching •being unable to sustain physical effort—to stand for long periods or to carry heavy items even short distances, for example

2. Understanding *diffabilities* characters

No	'Diffabilities 'groups	Handicapped by:
3	Visually impairment (means vision loss that constitutes a significant limitation of visual capability resulting from disease, trauma, or a congenital or degenerative condition that cannot be corrected by conventional means, including refractive correction, medication, or surgery)	<ul style="list-style-type: none">•being difficult for people to pick out details in their environment. Things may look foggy.•being able to observe only large items, or to distinguish only shadow and light.•Glare from highly polished floors and highly reflective wall coverings may be blinding, as may bright light from direct lighting or from windows.•not being able to see adequately at low levels of lighting.

2. Understanding *diffabilities* characters

No	'Diffabilities 'groups	Handicapped by:
4	Deaf and hard of hearing (Deafness is one of the most isolating disabilities. The effects of deafness are subtle and far-reaching, the most important being the inability to communicate via the spoken word)	<ul style="list-style-type: none">•not be able to hear many sounds, particularly soft ones; and/or not be able to hear high tones, low tones, or both.•(when listening to speech) may not be able to understand certain words containing higher-pitched consonants.•have difficulty distinguishing specific sounds when background noise is present or multiple conversations are going on.•have difficulty locating the source of sounds

2. Understanding *diffabilities* characters

No	'Diffabilities 'groups	Handicapped by:
5	Elderly (People who is 50 years of age and older)	<ul style="list-style-type: none">•being unable to sustain physical effort—to stand for long periods or to carry heavy items even short distances, for example•have difficulty lifting, pushing, and pulling objects or raising or lowering themselves (say, from a sitting position to a standing position).
6	Children (a young person especially between infancy and youth)	<ul style="list-style-type: none">•being at a lower level than everyone else

Accessibility need

	Group	Accessibility Needed/basic accessibel design requirements
1	Deaf and hard of hearing	<ul style="list-style-type: none"> • guidance information in entrance • signage (<i>sholat</i>/praying, <i>khotbah</i>/speech, <i>azan</i>/praying call) in mosque's tower (with color), in <i>wudhu</i>, in bathroom • implementing OHP working principle as <i>khutbah</i>'s display • emergency bell in bathroom • clear and consistent and full signposting, labelling and display of information
2	Blind person	<ul style="list-style-type: none"> • tactile map in entrance • guiding block for reaching steps or ramp • handrail • Braille plat in handrail
3	Elder person	<ul style="list-style-type: none"> • access bath room • access <i>wudhu</i> room complemented with bench • railing

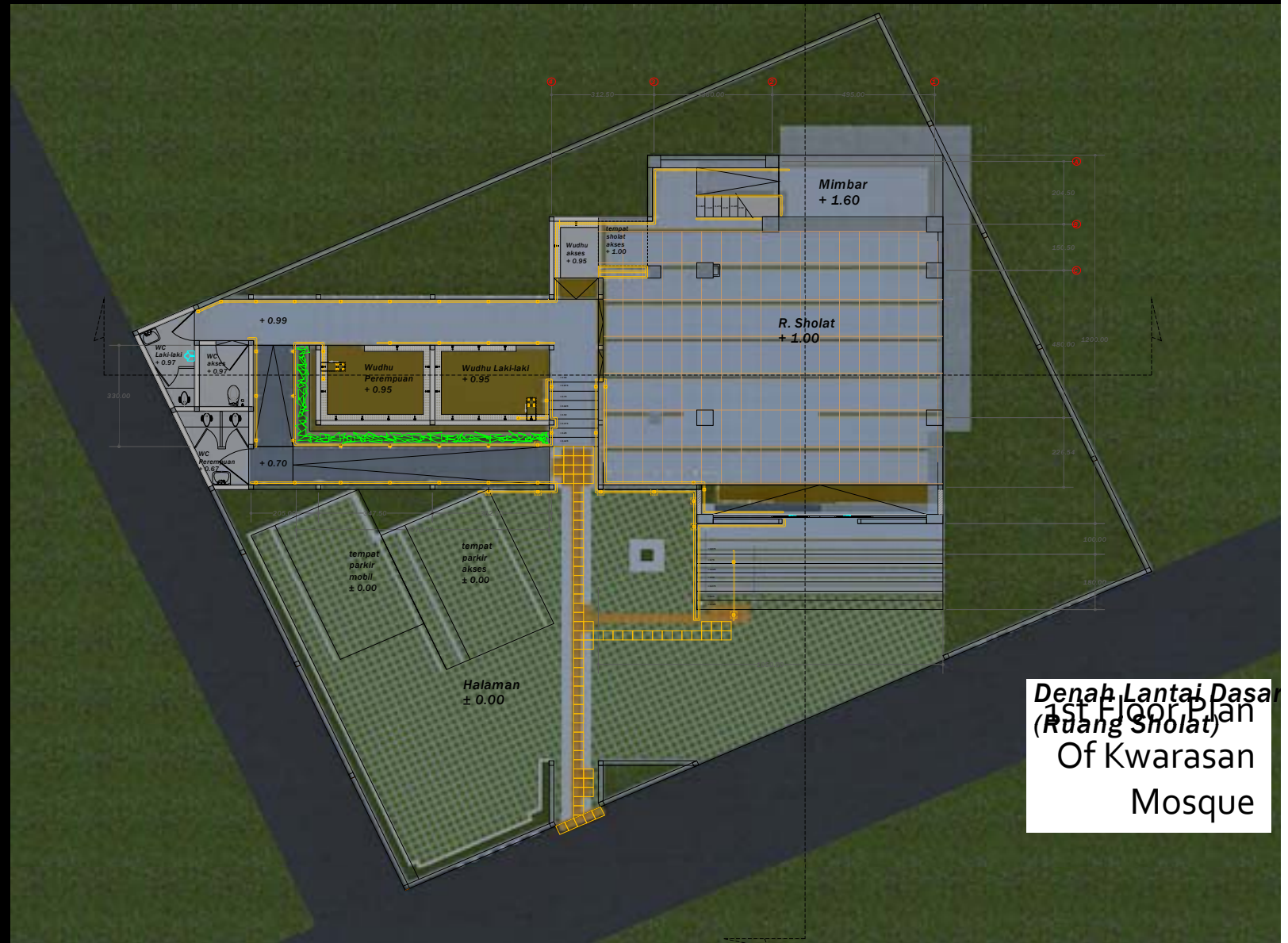
Accessibility need

	Group	Accessibility Needed/basic accessibel design requirements
4	Ambulant disabled	<ul style="list-style-type: none"> • access bath room • access <i>wudhu</i> room • accessible parking place • accessible praying room • handrail • space requirements in circulation areas and door widths • alternative provision will be necessary, such as steps as well as ramps and narrower wc cubicles
5	Children	<ul style="list-style-type: none"> • access bathroom • access <i>wudhu</i> room complemented with lower water fixtures
6	Wheelchair users	<ul style="list-style-type: none"> • all kinds of fittings, controls and equipment need to be places within a narrow range of reach • the minimum width and space requirements • changes in level must be negotiated by means of ramps or lift • floor surfaces should be smooth and hard

Plan

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Denah Lantai Dasar
1st Floor Plan
(Ruang Sholat)
Of Kwarasan
Mosque

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1. parking



2. entrance



3. ramp



4. main room

Form

Onion dome
Minaret



45 ° square door shape

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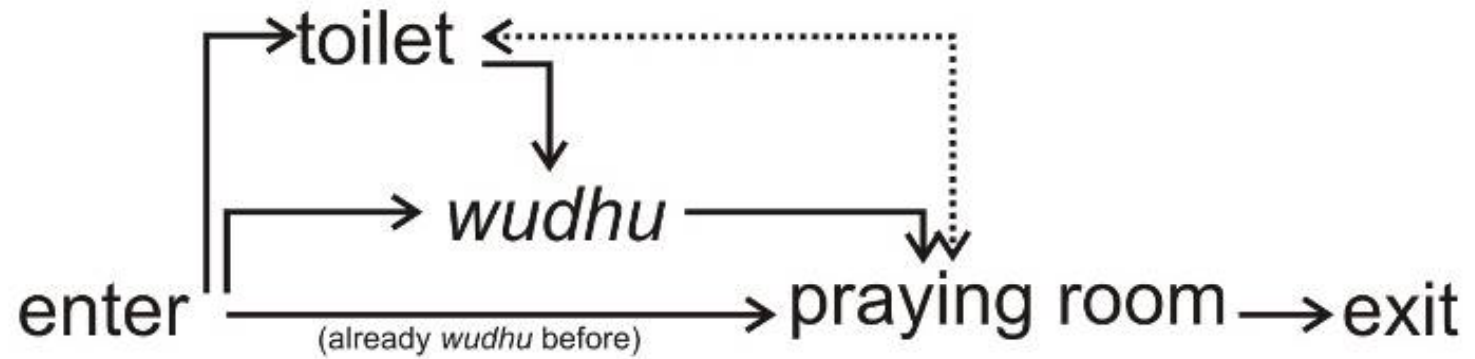
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Islamic Calligraphy
New Minaret
Existing Minaret

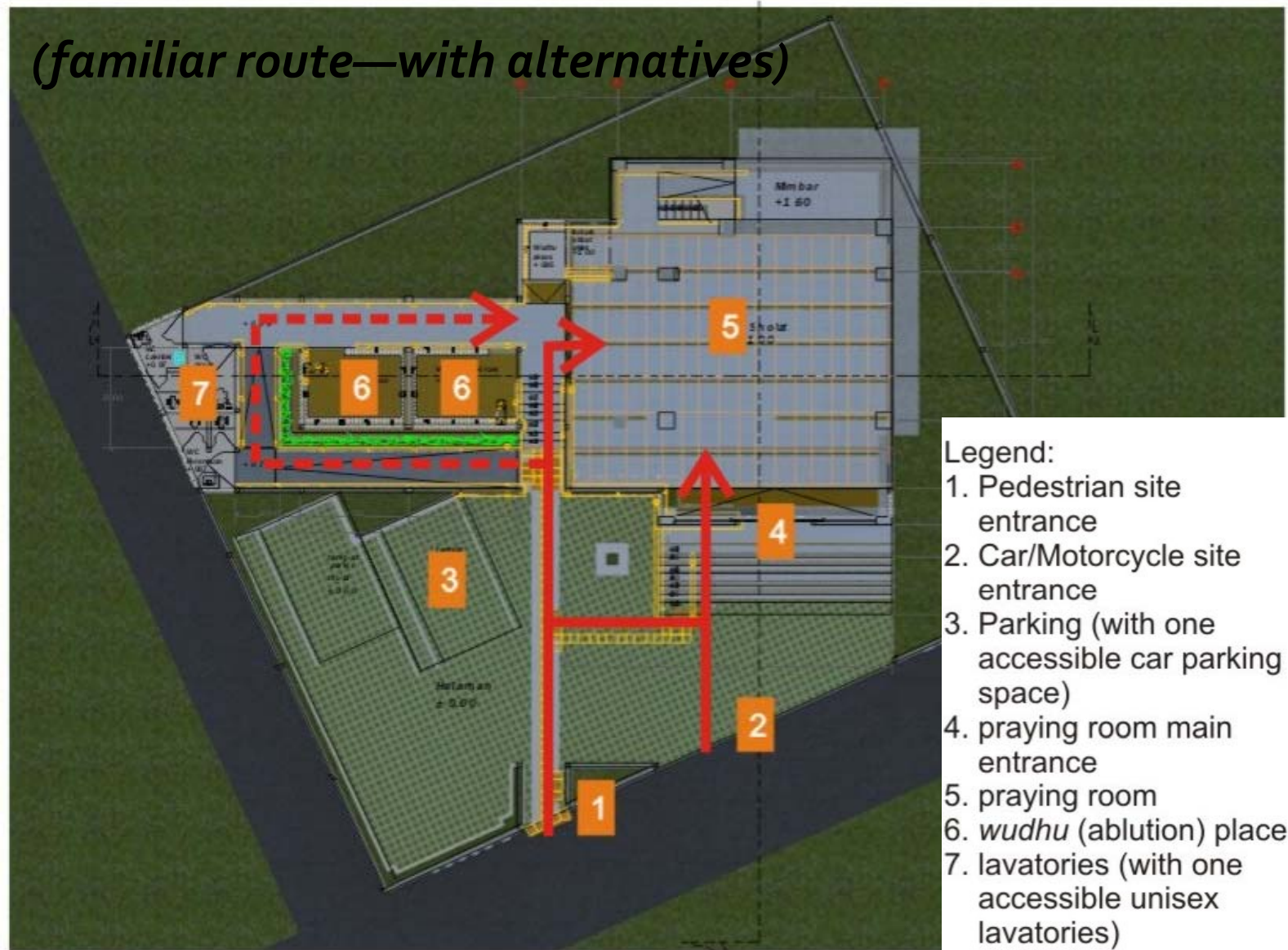
45 ° square door shape

3. Exploration of common mosque activities culture (circulation model)



Comprehensive Circulation

(familiar route—with alternatives)



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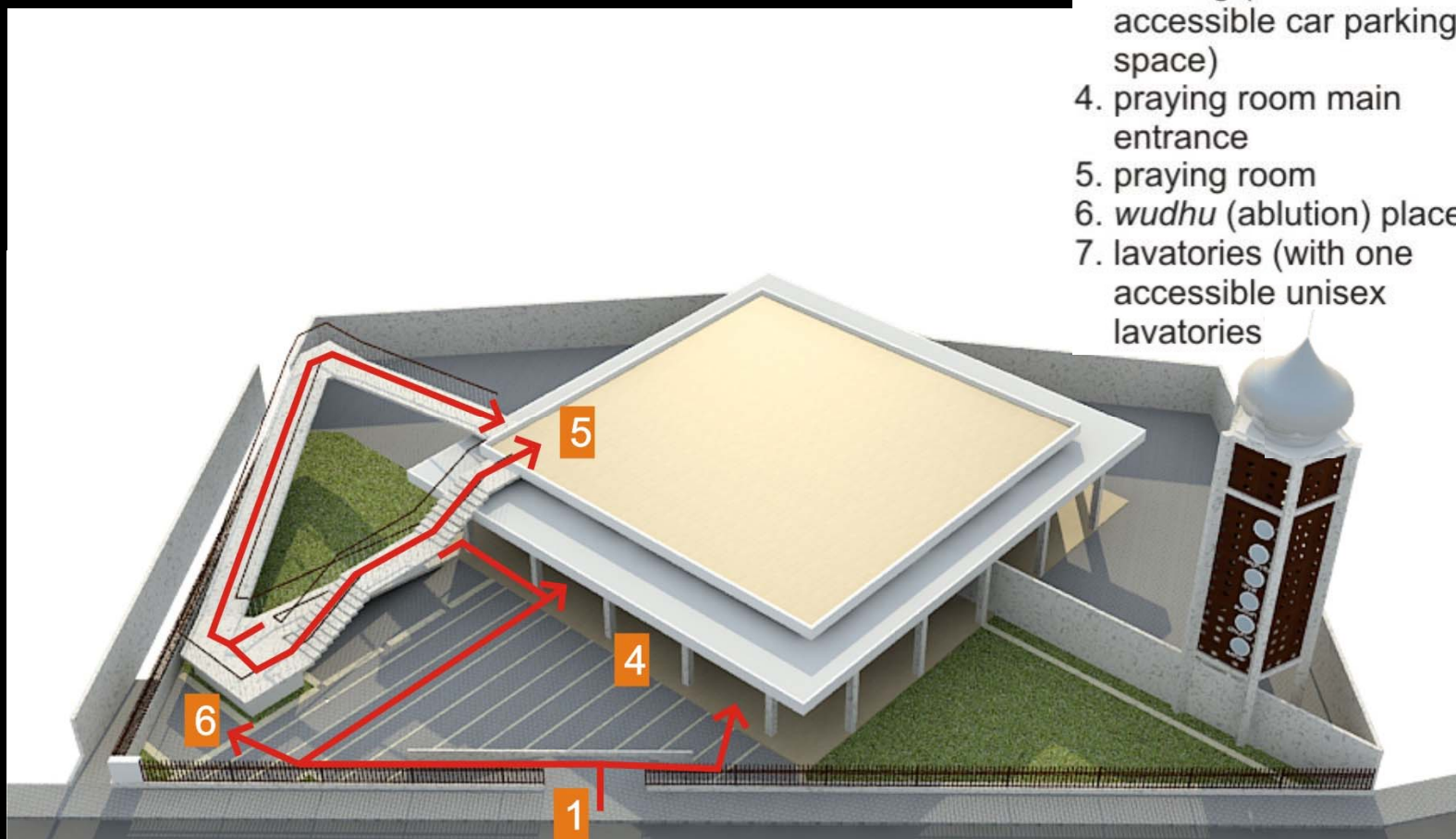
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Comprehensive Circulation

(familiar route—with alternatives)

Legend:

1. Pedestrian site entrance
2. Car/Motorcycle site entrance
3. Parking (with one accessible car parking space)
4. praying room main entrance
5. praying room
6. *wudhu* (ablution) place
7. lavatories (with one accessible unisex lavatories)



3. Exploration of common mosque activities culture

- praying schedule board



3. Exploration of common mosque activities culture

- praying time signal



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Praying time reminder



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Praying time reminder

(rescale)

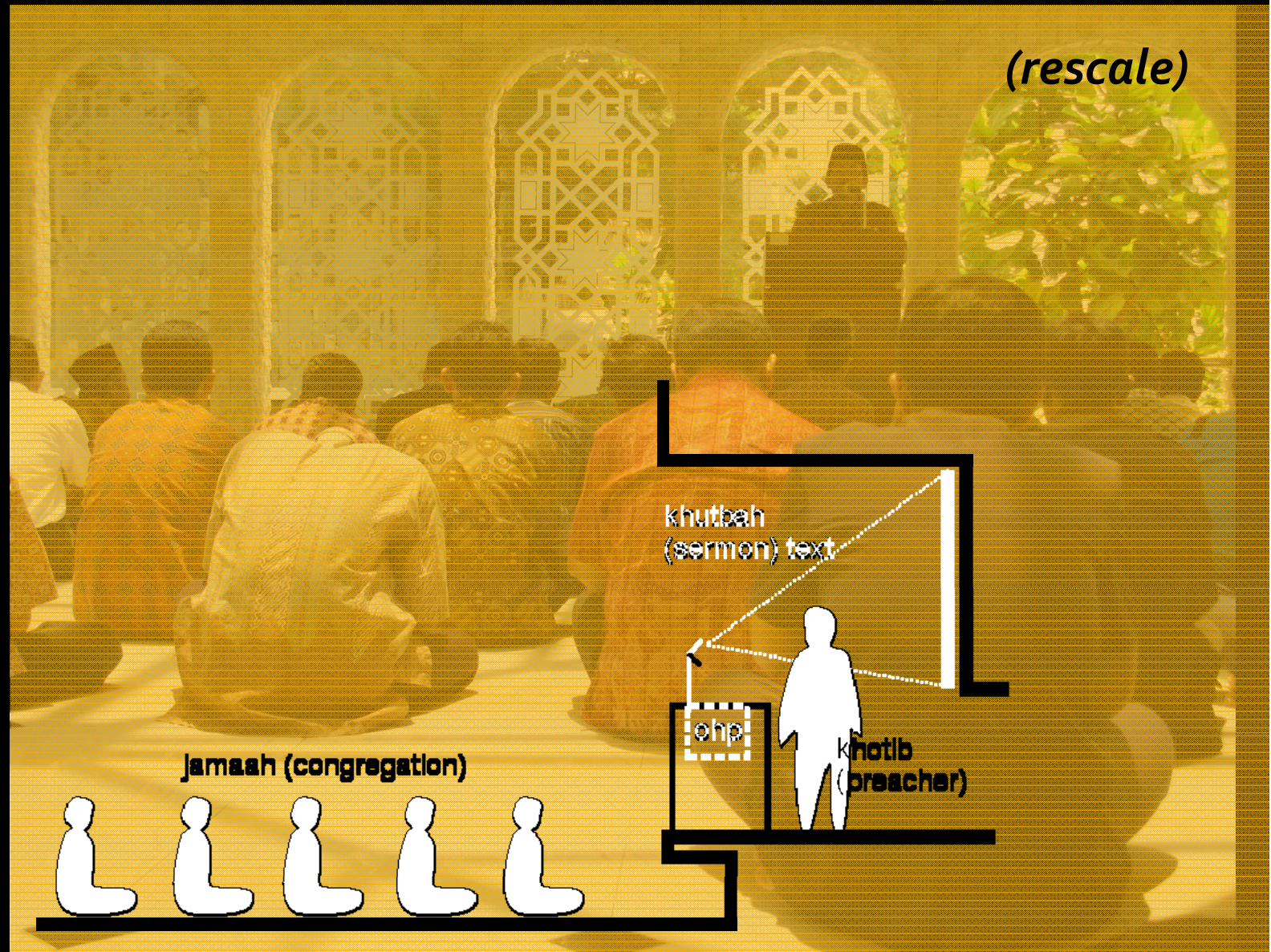


3. Exploration of common mosque activities culture

- Khotib (preacher) read his note or bring his pointer note/note during his preach



Khutbah (sermon) display



CONCLUSION

- Universal Mosque Design here comes from how accessibility standards and common language of activities in mosque make the mosque design familiar to the user and/or even universally design.
- four design components namely accessibility need, comprehensive circulation, praying time reminder, and *khutbah* (sermon) display are explaining the familiarity concept.
- Accessibility need presents basic standard for accessibility element and measurement, comprehensive circulation provides several alternatives on using the architecture program, praying time reminder gives many people an equal chance to receive information, and *khutbah* (sermon) display makes people equal in receiving the content.

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Thank you

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