APPENDIX C

GRIHA Check List

GRIHA self-evaluation tool

Note: Applicability checks have been provided for various criterions in the table, to check for conditions on site which may make those criterion non-applicable. If in the Applicability checks, the conditions specified are false for the given project, kindly input 'no' in place of the default 'yes'.

applicable. If	f in the Applicability checks, the conditions specified are false for the given project	, kindly input	'no' in place o	f the default 'yes'.	
Criterion	Appraisal	Maximum Points	Points being attempted *	Remarks -RCC	Remarks -KNC
			*Points will be	evaluated by GRIHA con:	sultant appointed by IITH
Criterion 1	Site Selection				
	The site plan must be in conformity with the development plan/master plan/UDPFI guidelines (mandatory). This should comply with the provisions of eco-sensitive zone regulations, coastal zone regulations, heritage areas (identified in the master plan or issued separately as specific guidelines), water body zones (in such zones, no construction is permitted in the water-spread and buffer belt of 30 meter minimum around the FTL), various hazard prone area regulations, and others if the site falls under any such area (mandatory with no point allocation).	0		clients scope	clients scope
	The site should be located within ½ km radius of an existing bus stop, commuter rail, light rail or metro station and/or the proposed site must be a Brownfield site (to rehabilitate damaged sites where development is hindered by environmental contamination, thereby reducing pressure on undeveloped land)	1	0	clients scope	clients scope
		1	0		
Criterion 2	Preserve and protect landscape during construction/compensatory depository forestation.				
	Applicability Check 1 There are existing several mature trees on site that can be preserved	yes			
	Construction has been planned in a way that excavation/basement work, up to plinth level is not coinciding with rainy season and the site disruption is restricted to pre-designated areas	1		general contractors scope in- applicable in construction stage	general contractors scope in- applicable in construction stage

]	general	gonoral
	Proper staging, spill prevention plan , sedimentation and erosion control systems in place.	1	i	contractors scope in- applicable in construction	general contractors scope in- applicable in construction stage
	Trees are preserved and protected properly Note: Applicable if answer is yes in Applicability Check 1 above	1			
	Compensatory forestation is applied on site Note: Applicable if answer is yes in Applicability Check 1 above	1		masterplanners scope	masterplanners scope
		4			
Criterion 3	Soil conservation (post construction)				
	Applicability Check 2 Top soil quality meets the quality standard of top preservation criteria as per criteria 3	yes			
	Top soil is fertile and properly laid for vegetative growth Note: Applicable if answer is yes in Applicability Check 2 above	1	i	contractors scope in- applicable in construction	general contractors scope in- applicable in construction stage
	Measures taken for proper stabilization so soil Note: Applicable if answer is yes in Applicability Check 2 above	1	i	contractors scope in- applicable in construction	general contractors scope in- applicable in construction stage
		2			

Criterion 4	Design to include existing site features			
	Building and site planning to minimize the disruption of natural ecosystems and to maximize benefits from prevailing micro-climate	4	can attempt for these points as the micro climate is not disterbed	can attempt for these points as the micro climate is not disterbed
		4		
Criterion 5	Reduce hard paving on site			
	Net Paved area on site under parking, roads etc. to exceed 25% of the site area (minus the building footprint) or the net imperviousness factor of the site should not exceed the net imperviousness factors prescribed in the NBC 2005, whichever is more stringent.	1	achieved	achieved
	Total surface parking not to exceed as permitted by the local building by-laws	0		
	More than 50% of the total paved area to have pervious paving or open grid pavements or grass pavers or shading through the use of vegetated pergolas or covered with coating of SRI>0.5 OR More than 50% of the total paved area to have a combination of the above.	1	more than 50% pervious cover planned	more than 50% pervious cover planned
		2		
Criterion 6	Enhance outdoor lighting system efficiency			
	Luminous efficacy of 100% of lamps used in outdoor lighting to meet the corresponding lamp luminous efficacy as mentioned in Table 6.1, as per GRIHA	1	planned as per GRIHA guideline	planned as per GRIHA guideline
	Automatic controls to be installed for 100% of outdoor lights	0		
		1		

Criterion 7	Plan utilities efficiently and optimize on-site circulation efficiency			
	Various transportation and service corridors shall be minimized and consolidated and the pedestrian walkways to be shaded.	1	single building	single buildng
	Aggregate utility corridors shall be used	1		
	Utility corridors shall be consolidated along the previously disturbed areas or along new roads in order to minimize unnecessary cutting and trenching and ensure easy maintenance	1	masterplanners scope	masterplanners scope
		3		
Criterion 8	Provide minimum level of sanitation/safety facilities for construction workers			
	Ensure compliance with the NBC (2005) safety norms for providing the necessary safety equipment and measures for construction workers	1	general contractors scope in- applicable in construction stage	general contractors scope in- applicable in construction stage
	Provisions for drinking water, healthy and clean living conditions and sanitation facilities shall be provided for the workers	1	general contractors scope in- applicable in construction stage	general contractors scope in- applicable in construction stage
		2		
Criterion 9	Reduce air pollution during construction			
	Necessary measures to be taken on site to reduce air pollution for example providing site barricading to a height of 3 m on the site perimeter, carry out wheel washing of vehicles entering/exiting the site, sprinkle water on roads with loose dust etc.	2	general contractors scope in- applicable in construction stage	general contractors scope in- applicable in construction stage
		2		

Criterion 10	Reduce landscape water demand			
	If landscape water demand is reduced by up to 30%	1	landscape designers scope	landscape designers scope
	If landscape water demand is reduced by up to 40%	2	landscape designers scope	landscape designers scope
	If landscape water demand is reduced by up to 50%	3	landscape designers scope	landscape designers scope
		3	landscape designers scope	landscape designers scope
Criterion 11	Reduce building water use			
	Non Applicability condition: All faucets, which are installed in spaces with water head heights less than 15 feet (4.6 m), in a gravity fed systems, can be exempt for calculations in Criterion 11.			
	If building water demand is reduced by up to 25%	1	water supply.	attempted for 25% reduction. Domestic & flushing duel plumbing sys for water supply. Low flow fixtures, Low flow fixtures used
	If building water demand is reduced by up to 50%	1	not achieved	not achieved
		2		

admixtures to concrete which cause a reduction in the water required for curing etc. Criterion 13 Optimize building design to reduce conventional energy demand The WWR and/or SSR shall be limited to the prescribed levels as per Table13.1 (GRIHA Manual Introduction Volume-I) and all fenestration shall meet either the SHGC requirements of ECBC 2007OR shading requirements as suggested in 13.1.4 OR 13.1.5, as per clause 13.2.3 to 13.2.5 Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual Introduction Volume-I) If the total daylighted area>50% of the total living area and meets the prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight	Criterion 12	Efficient water use during construction			
Criterion 13 Optimize building design to reduce conventional energy demand The WWR and/or SSR shall be limited to the prescribed levels as per Table13.1 (GRIHA Manual Introduction Volume-I) and all fenestration shall meet either the SHGC requirements of ECBC 2007OR shading requirements as suggested in 13.1.4 OR 13.1.5, as per clause 13.2.3 to 13.2.5 Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual Introduction Volume-I) If the total daylighted area>50% of the total living area and meets the prescribed level of daylighted area>75% of the total living area and meets the prescribed level of daylighted Over-design of artificial lighting system shall be avoided and the lighting levels Over-design of artificial lighting system shall be avoided and the lighting levels 2 Tefer to drawing refer to drawing IITH_RCC? NIC_A INTH_RCC? NIC_A		example use waste jute bags to cover columns and beams during curing, add admixtures to concrete which cause a reduction in the water required for	1	contractors scope in- applicable in construction	contractors scope in- applicable in construction
The WWR and/or SSR shall be limited to the prescribed levels as per Table13.1 (GRIHA Manual Introduction Volume-I) and all fenestration shall meet either the SHGC requirements of ECBC 2007OR shading requirements as suggested in 13.1.4 OR 13.1.5, as per clause 13.2.3 to 13.2.5 Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual Introduction Volume-I) If the total daylighted area>50% of the total living area and meets the prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels 2 refer to drawing IITH_RCC?KNC_A 1_GRIHA_Criteria 1			1		
(GRIHA Manual Introduction Volume-I) and all fenestration shall meet either the SHGC requirements of ECBC 2007OR shading requirements as suggested in 13.1.4 OR 13.1.5, as per clause 13.2.3 to 13.2.5 Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual Introduction Volume-I) If the total daylighted area>50% of the total living area and meets the prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels 2 IITH_RCC?KNC_A 1_GRIHA N14 Majority of spaces being labs, and can be excluded, other areas can fulfill the criterion If the total daylighted area>50% of the total living area and meets the prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels Over-design of artificial lighting system shall be avoided and the lighting levels Over-design of artificial lighting system shall be avoided and the lighting levels	Criterion 13	Optimize building design to reduce conventional energy demand			
Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual Introduction Volume-I) If the total daylighted area>50% of the total living area and meets the prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels And can be excluded, other area fulfill the content of the criterion in the		(GRIHA Manual Introduction Volume-I) and all fenestration shall meet either the SHGC requirements of ECBC 2007OR shading requirements as suggested in	2	IITH_RCC?KNC_A 1_GRIHA_criteria	1_GRIHA_criteria
prescribed level of daylight If the total daylighted area>75% of the total living area and meets the prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels a lighting levels level of daylight		daylight prescribed in NBC 2005 (reference Table 13.2 GRIHA Manual	2	spaces being labs , and can be excluded, other areas can fulfill	Majority of spaces being Library / book schelves , and can be excluded, other areas can fulfill the criterion
prescribed level of daylight Over-design of artificial lighting system shall be avoided and the lighting levels designed as per designed a			1	Not achieved	Not achieved
		, -	1		
			2		designed as per NBC 2006
8			8		

Criterion 14	Optimize energy performance of building within specified comfort limits			
	All mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code 2007 of BEE shall be complied with.	6		the HVAC (distribution side
	The thermal comfort conditions and at least 10% reduction from the benchmark EPI, specified in GRIHA, shall be met.	2	designed as per)system is designed as per ECBC 2007 ,
	If the reduction in energy consumption is \geq 20% of the benchmarked figure and the thermal comfort criteria are fully met	2	however the chilled water	however the chilled water
	If the reduction in energy consumption is \geq 30% of the benchmarked figure and the thermal comfort criteria are fully met	4	equipments and efficiancy to be	generation and equipments and efficiancy to be
	If the reduction in energy consumption is \geq 40% of the benchmarked figure and the thermal comfort criteria are fully met	6		compared along with master planners for a
	If the reduction in energy consumption is \geq 50% of the benchmarked figure and the thermal comfort criteria are fully met	8	cumulative result.	cumulative result.
		16		
Criterion 15	Utilization of fly-ash or equivalent industrial/agricultural waste as recommended by BIS in building structures			
	Replace 15-25 % of OPC by weight with fly-ash or equivalent industrial/agricultural waste as recommended by BIS in structural concrete	1	can be achieved	can be achieved
	Replace more than 25% of OPC by weight with fly-ash or equivalent industrial/agricultural waste as recommended by BIS in structural concrete	1	can be achieved	can be achieved
	100% of the building blocks shall have at least 40% fly ash or equivalent industrial/agricultural waste as recommended by BIS (by volume)	2	can be achieved	can be achieved

Replace 15-25 % of OPC by weight with fly-ash or equivalent industrial/agricultural waste as recommended by BIS in masonry and plaster mortar Replace more than 25% of OPC by weight with fly-ash or equivalent industrial/agricultural waste as recommended by BIS in masonry and plaster mortar 6 Criterion 16 Reduce embodied energy of construction is reduced by adopting material efficient technologies and/or low-energy materials The embodied energy of the structural systems of the building shall be reduced by at least 2.5% for 100% of the structural system in the building. 1 The embodied energy of the structural systems of the building shall be reduced by at least 5% for 100% of the structural system in the building.	0	4-5 points could be attempted. TERI to calcuate as per after scrutinizing the BOQ	4-5 points could be attempted. TERI to calcuate as per after scrutinizing the
industrial/agricultural waste as recommended by BIS in masonry and plaster mortar 6 Criterion 16 Reduce embodied energy of construction is reduced by adopting material efficient technologies and/or low-energy materials The embodied energy of the structural systems of the building shall be reduced by at least 2.5% for 100% of the structural system in the building. 1 The embodied energy of the structural systems of the building shall be reduced 2	0	TERI to calcuate as per after scrutinizing the	be attempted. TERI to calcuate as per after
Criterion 16 Reduce embodied energy of construction is reduced by adopting material efficient technologies and/or low-energy materials The embodied energy of the structural systems of the building shall be reduced by at least 2.5% for 100% of the structural system in the building. 1 The embodied energy of the structural systems of the building shall be reduced	0	TERI to calcuate as per after scrutinizing the	be attempted. TERI to calcuate as per after
The embodied energy of the structural systems of the building shall be reduced by at least 2.5% for 100% of the structural system in the building. The embodied energy of the structural system of the building.	0	as per after scrutinizing the	as per after
by at least 2.5% for 100% of the structural system in the building. The embodied energy of the structural systems of the building shall be reduced	0	as per after scrutinizing the	as per after
· · · · · · · · · · · · · · · · · · ·		1	BOQ
		TERI to calcuate as per after scrutinizing the BOQ	TERI to calcuate as per after scrutinizing the BOQ
The embodied energy of the non-structural systems of the building shall be reduced by at least 5% for 100% of the structural system in the building block work.		TERI to calcuate as per after scrutinizing the BOQ	TERI to calcuate as per after scrutinizing the BOQ
The embodied energy of the non-structural systems of the building shall be reduced by at least 10% for 100% of the structural system in the building block work.		TERI to calcuate as per after scrutinizing the BOQ	TERI to calcuate as per after scrutinizing the BOQ
4	1	200	المحادث

Criterion 17	Use low-energy materials in Interiors			
	Minimum 70% of the total quantity of materials used for sub-assembly/internal partitions/paneling/false-ceiling/in-built furniture shall be low-energy materials	2	TERI to calculate as paer BOQ	TERI to calculate as paer BOQ
	Minimum 70% of the total quantity of materials used for flooring shall be low-energy materials	1	TERI to calculate as paer BOQ	TERI to calculate as paer BOQ
	Minimum 70% of the total quantity of materials used for door, windows and frames shall be low-energy materials	1	TERI to calculate as paer BOQ	TERI to calculate as paer BOQ
		4	refer to drawing IITH_RCC?KNC_A 1_GRIHA_criteria N17	refer to drawing IITH_RCC?KNC_A 1_GRIHA_criteria N18
Criterion 18	Renewable energy utilization			
	Non Madatory condition If more than 80% of total built-up area (FSI and non-FSI) falls under residential use, then the Appraisal 18.3.1(first appraisal clause - as mentioned below) is non-mandatory.			
	The minimum size of the renewable energy system, installed on site, should be equal to 1% of the total connected load for artificial lighting (internal and external) and space conditioning loads	2	Solar farms planned by Masterplanners for campus	Solar farms planned by Masterplanners for campus
	If the total energy generated by the renewable energy system is equivalent to 5% or more of the total annual energy consumption for artificial lighting	1	provision for solar panels on the roof	
	If the total energy generated by the renewable energy system is equivalent to 10% or more of the total annual energy consumption for artificial lighting	2		

If the total energy generated by the renewable energy system is equivalent to 20% or more of the total annual energy consumption for artificial lighting If the total energy generated by the renewable energy system is equivalent to 30% or more of the total annual energy consumption for artificial lighting If the total energy generated by the On-site or Off-site, renewable energy system is equivalent to 100% or more of the total annual energy consumption for artificial lighting Renewable energy based hot water system Applicability Check 3 The total hot water requirement is more than 500 liters per day If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above					
30% or more of the total annual energy consumption for artificial lighting If the total energy generated by the On-site or Off-site, renewable energy system is equivalent to 100% or more of the total annual energy consumption for artificial lighting 8 Criterion 19 Renewable energy based hot water system Applicability Check 3 The total hot water requirement is more than 500 liters per day If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above			3		
system is equivalent to 100% or more of the total annual energy consumption for artificial lighting 8 Criterion 19 Renewable energy based hot water system Applicability Check 3 The total hot water requirement is more than 500 liters per day NO If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above			4		
Criterion 19 Renewable energy based hot water system Applicability Check 3 The total hot water requirement is more than 500 liters per day NO If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above		system is equivalent to 100% or more of the total annual energy consumption	2		
Applicability Check 3 The total hot water requirement is more than 500 liters per day NO If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above			8		
Applicability Check 3 The total hot water requirement is more than 500 liters per day NO IITH_RCC?KNC_A 1_GRIHA_criteria N19 IITH_RCC?KNC_A 1_GRIHA_criteria N20 IITH_RCC?KNC_A 1_GRIHA_criteria	Criterion 19	Renewable energy based hot water system			
for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above 0 Note: Applicable if answer is yes in Applicability Check 3 above			NO	IITH_RCC?KNC_A 1_GRIHA_criteria	IITH_RCC?KNC_A 1_GRIHA_criteria
for hot water Note: Applicable if answer is yes in Applicability Check 3 above If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above		for hot water	0		
required for hot water Note: Applicable if answer is yes in Applicability Check 3 above		for hot water	0		
0		required for hot water	0		
			0		

Criterion 20	Waste water treatment			
	Applicability Check 4 The total waste water generation on site is more than 10kL per day.	Yes	scope of Masterplanner	scope of Masterplanner
	The treated waste water shall meet the BIS recommended disposal standards, as per table 20.3, GRIHA Note: Applicable is answer is yes to Applicability Check 4 above	2		
		2		
Criterion 21	Water recycle and reuse (including rainwater)			
	Applicability Check 5 Ground water table is low and ground water recharge is advisable as per Central Ground Water Board norms.	yes	scope of Masterplanner	scope of Masterplanner
	If the project demonstrates 25% annual water reuse Note: Applicable is answer is yes to Applicability Check 4 above	1		
	If the project demonstrates 50% annual water reuse Note: Applicable is answer is yes to Applicability Check 4 above	2		
	If the project demonstrates 75% annual water reuse Note: Applicable is answer is yes to Applicability Check 4 above	3		
	The surplus rainwater is recharged in to the ground after necessary filtration Note: Applicable if answer is yes to Applicability Check 5	2		
		5		

Criterion 22	Reduction in waste during construction				
	Hazardous and inert waste shall be segregated during construction	1		general contractors scope in- applicable in construction stage	general contractors scope in- applicable in construction stage
	The segregated waste shall be recycled and/or safely disposed				
		1			
Criterion 23	Efficient Waste segregation				
	Multi-coloured bins shall be provided to segregate waste at source	1	0	clients/masterpla nners scope	clients/masterpla nners scope
		1	0		
Criterion 24	Storage and disposal of wastes				
	Separate space shall be allocated for collection of waste before transfer for recycling	1	0	clients/masterpla nners scope	clients/masterpla nners scope
		1	0		
Criterion 25	Resource recovery from waste				
	Applicability Check 6 Organic solid waste generation on site is more than 100 kg/day	yes			
	Appropriate measures to be taken for zero-waste generation from site	2	0	could be achievable at CD	could be achievable at CD
	Note: Applicable if answer is yes to Applicability Check 6			stage	stage

Criterion 26	Use of low-VOC paints/adhesives/sealants				
	100% of all paints used in building interior shall be low/zero-VOC, as per Table 26.1, GRIHA Manual	1	0	could be achievable at CD stage	could be achievable at CD stage
	100% of all adhesives and sealants used shall be low/zero-VOC, as per Table 26.1, GRIHA	1	0		
	100% of all composite wood products shall not use urea-formaldehyde	1	0		
		3	0		
Criterion 27	Minimize ozone depleting substances				
	All insulation to be used in the building shall be CFC and HCFC free All HVAC and refrigeration equipment shall be CFC free The fire-suppression systems and fire extinguishers shall be halon free	1	0	achieved	achieved
	and me suppression of stems and me stems guitarion as a nation mes	1	0		
Criterion 28	Ensure water quality				
	Water used for various purposes like drinking, irrigation etc. shall conform to the BIS standards (Table 28.3, GRIHA Manual)	2	0	clients/masterpla nners scope	clients/masterpla nners scope
		2	0		
Criterion 29	Acceptable outdoor and indoor noise levels				
	The measured outdoor noise levels on site conform to the standard set by the CPCB, Table 29.1, GRIHA	1	0	report can be prepared when the buildings are ocupied	report can be prepared when the buildings are ocupied
	The measured indoor noise levels inside the building meet the noise levels recommended by NBC 2005 (Table 29.2, GRIHA Manual)	1	0	achieved	achieved
		2	0		
Criterion 30	Tobacco and smoke control				
	Smoking is prohibited on site OR Necessary provisions shall be provided in the mechanical ventilation system by the HVAC consultant	1	0	IITH is a no- smoking campus	IITH is a no- smoking campus
		1	0		

Criterion 31	Provide at least the minimum level of accessibility for persons with disabilities				
	Buildings shall be designed in compliance with the NBC code in order to be disabled friendly	1	0	provisions made refer to drawing IITH_RCC?KNC_A 1_GRIHA_criteria N31	provisions made refer to drawing IITH_RCC?KNC_A 1_GRIHA_criteria N32
		1	0		
Criterion 32	Energy audit and validation				
	A mandatory energy audit shall be conducted by a BEE certified energy auditor	0	0	report can be prepared when the buildings are ocupied	report can be prepared when the buildings are ocupied
Criterion 33	Operation and Maintenance				
	Metering and sub-metering of energy as well as water will be carried out as per GRIHA clause	1	0	report can be prepared when the buildings are ocupied	report can be prepared when the buildings are ocupied
	An O & M protocol to be specified for operation and maintenance of the various systems in the building. Additionally,	1	0		
		2	0		
		97	0		
Criterion 34	Innovation Points			None	None
	Point for innovation		0		
	Point for innovation		0		
	Point for innovation		0		
	Point for innovation		0		
Total			0		
Score Percentile		0			

APPENDIX D

IMPOSED LOAD DIAGRAM

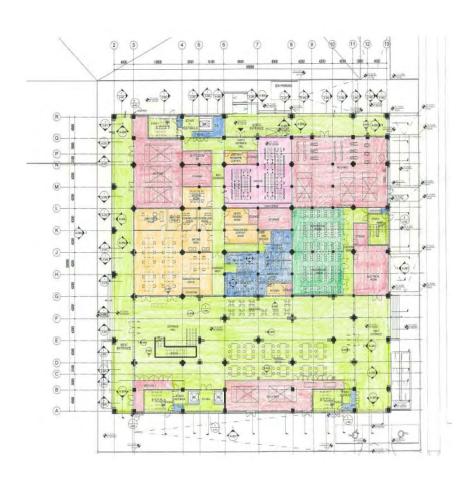
APPENDIX D: Imposed Load Diagram

a) KNC

Floor Imposed Load of Floor (N/m2)

KIND OF ROOM	IMPOSED UNIFORM LOAD (N/m²)	REMARKS
OPEN SHELF	6,000	NBC
ARCHIVE	9,600	NBC
READING ROOM	4,000	NBC (with separate storage)
GROUP STUDY ROOM	4,000	NBC
MEDIALITERACY	4,000	NBC
AUDIOVISUAL ROOM	5,000	NBC
CAFETERIA	4,000	NBC
ENTRANCE HALL	4,000	NBC
ADMINISTRATION OFFICE	4,000	NBC
CORRIDOR, STAIR	4,000	NBC
WC	2,000	NBC
KITCHEN	3,000	NBC
STORAGE	5,000	NBC
MECHANICAL ROOM	10,000	NBC
ROOF	750 1,500	NBC (inaccessible as to 0°≦Gradient≦10

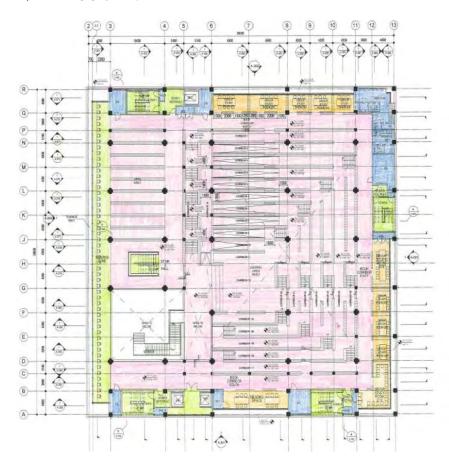
i. GROUND FLOOR LEVEL



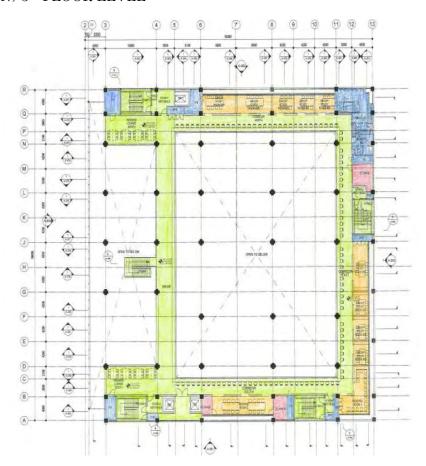
ii. 1^{ST} FLOOR LEVEL



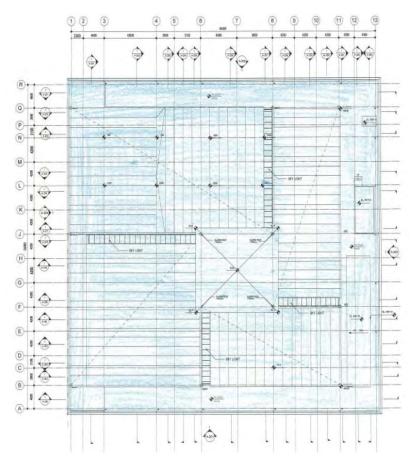
iii) 2nd FLOOR LEVEL



iv) 3rd FLOOR LEVEL



v) ROOF LEVEL

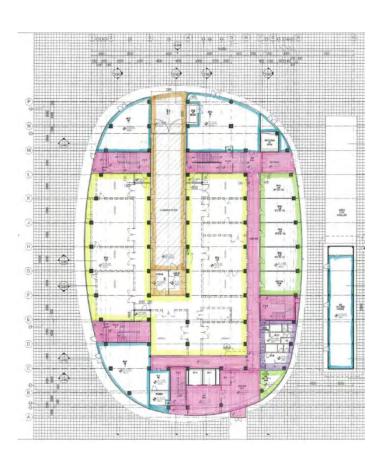


ii) RCC

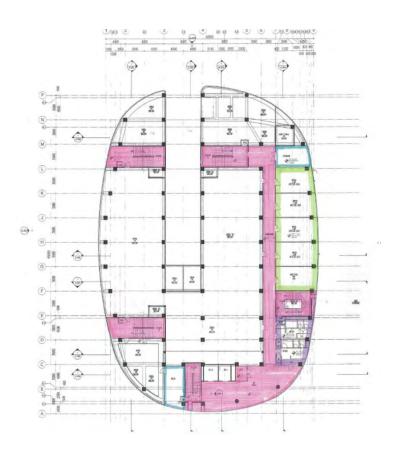
Imposed load for rooms

	Kind of room	Imposed uniform load (N/m²)	Remarks
	MEGA LAB	15,000	Shall be determined by concerning
	WET LAB	10,000	machine weight, floor finishing
	DRY LAB	7,000	such as raise floor system and future possible usage changes.
RESEARCH CENTER	SLOPE TO RECEIVING DOCK	7,500	Concerning trucks and cargo weight
COMPLEX	OFFICE, LOUNGE	4,000	NBC
	MEETING ROOM	4,000	NBC
	CORRIDOR, STAIRCASE	4,000	NBC
	BALCONY	4,000	NBC
	FIAT ROOF (accessible)	1,500	NBC (0°≦Gradient≦10°)

i) GROUND FLOOR LEVEL



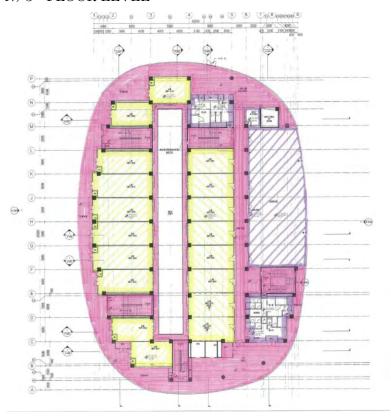
ii) 1st FLOOR LEVEL



iii) 2^{nd} FLOOR LEVEL



iv) 3rd FLOOR LEVEL



v) 4th FLOOR LEVEL



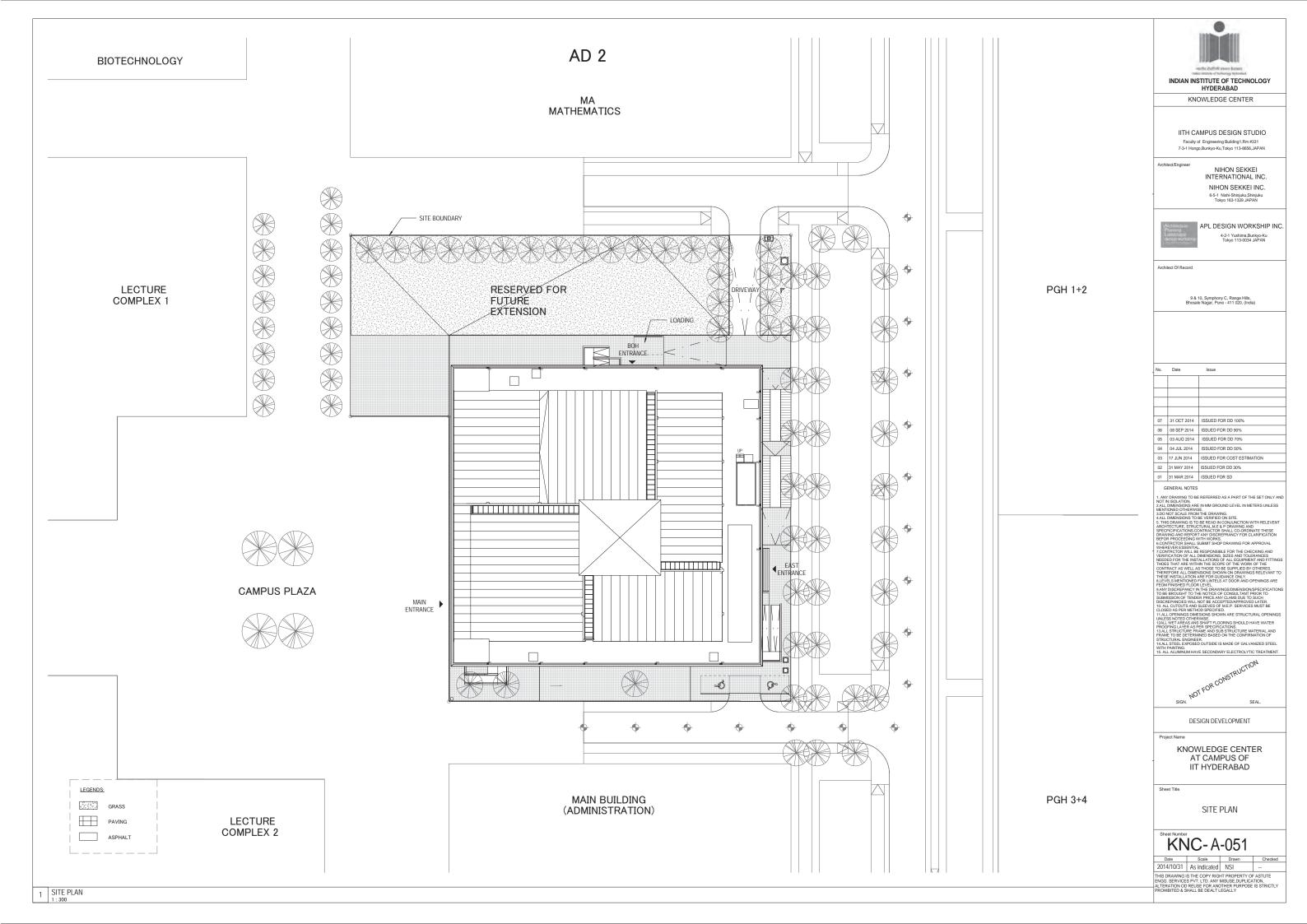
APPENDIX E

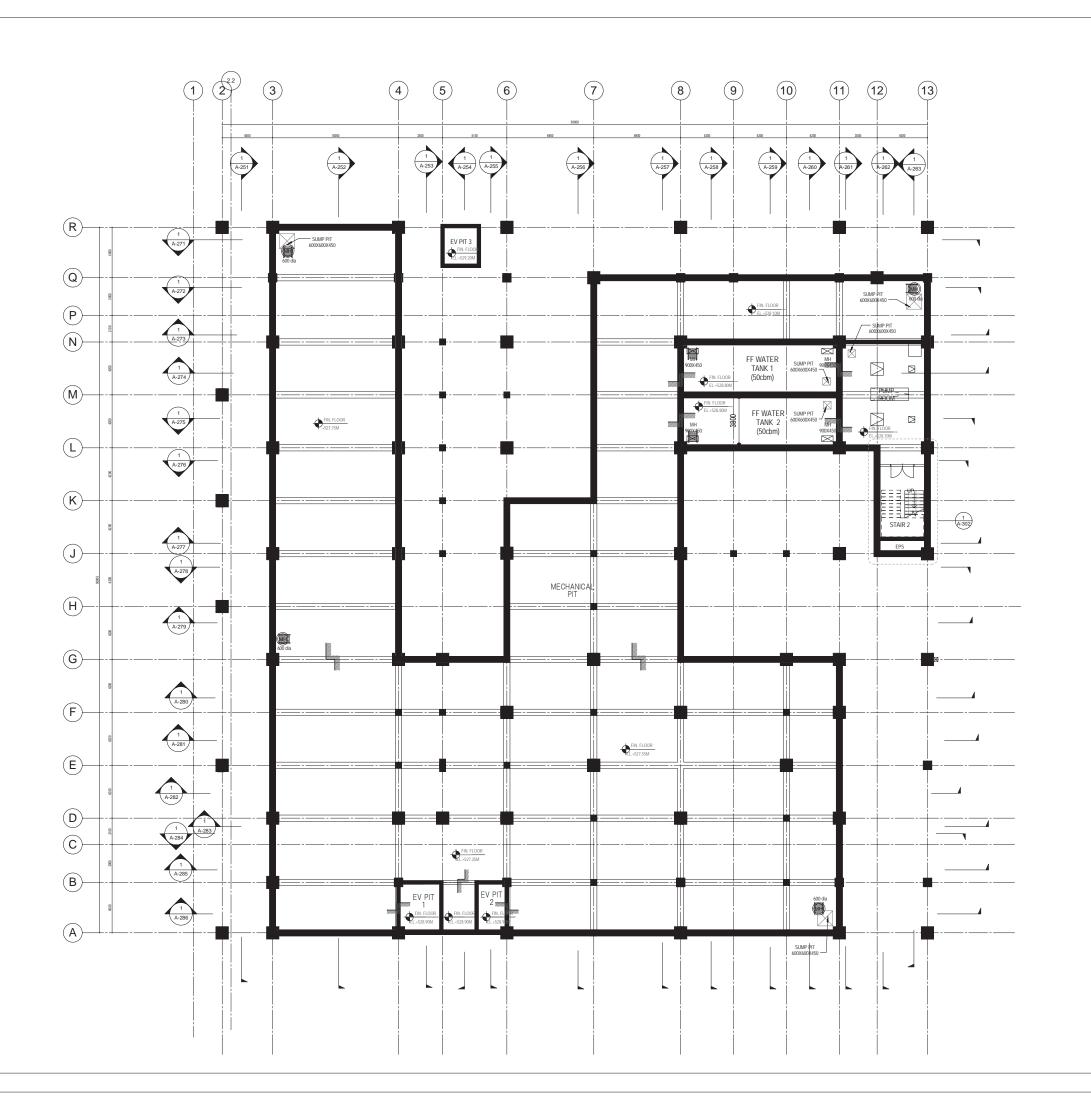
KNC & RCC Drawings



KNOWLEDGE CENTRE
AT INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD









KNOWLEDGE CENTER

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD



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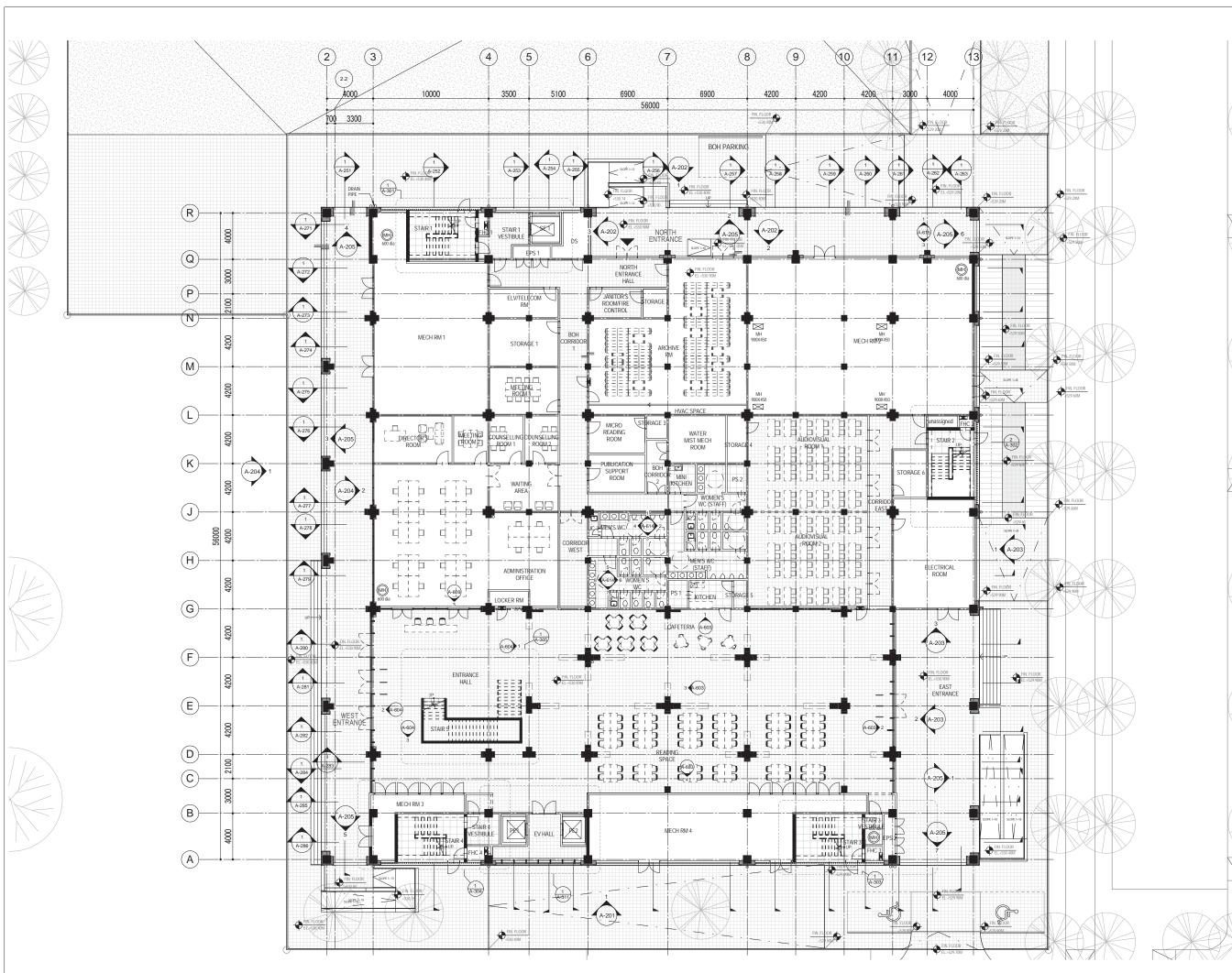
PIT LEVEL PLAN

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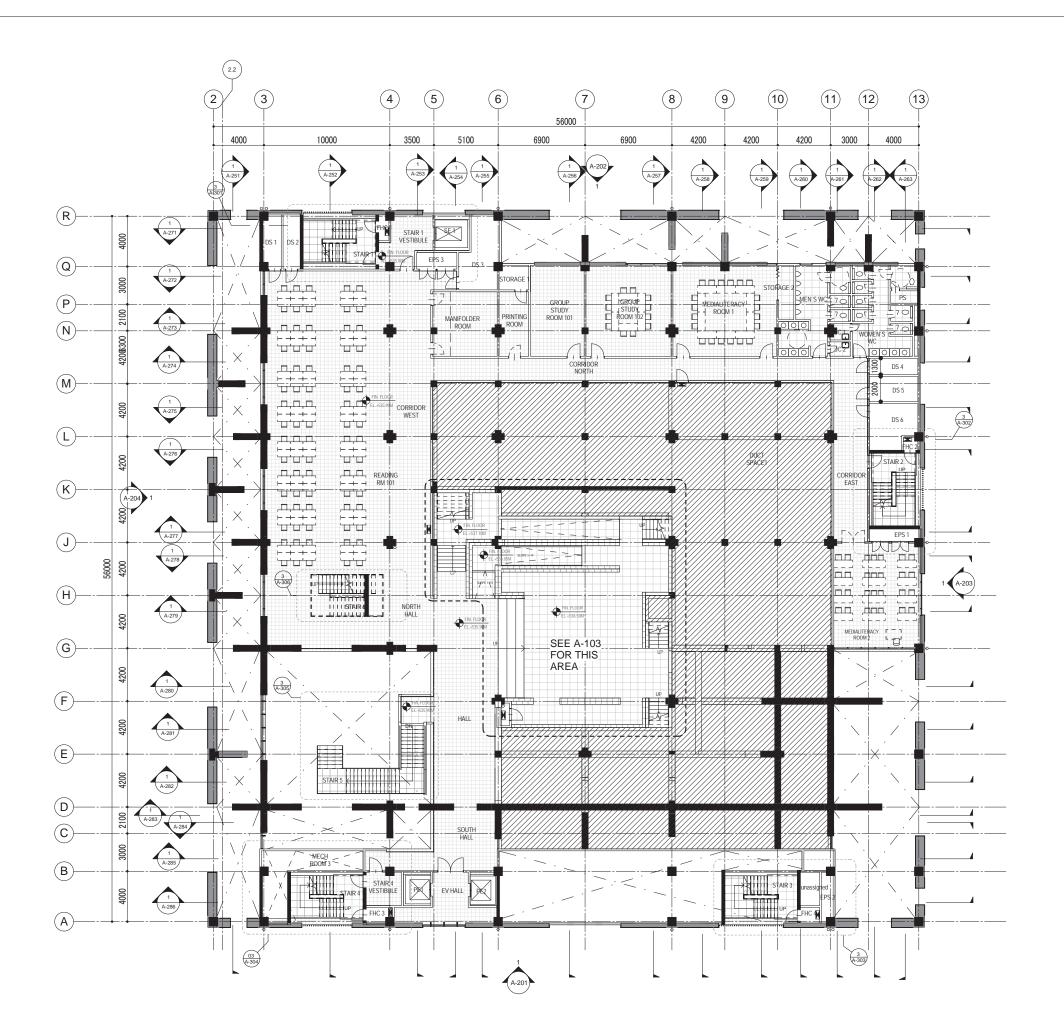
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GROUND FLOOR PLAN

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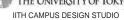
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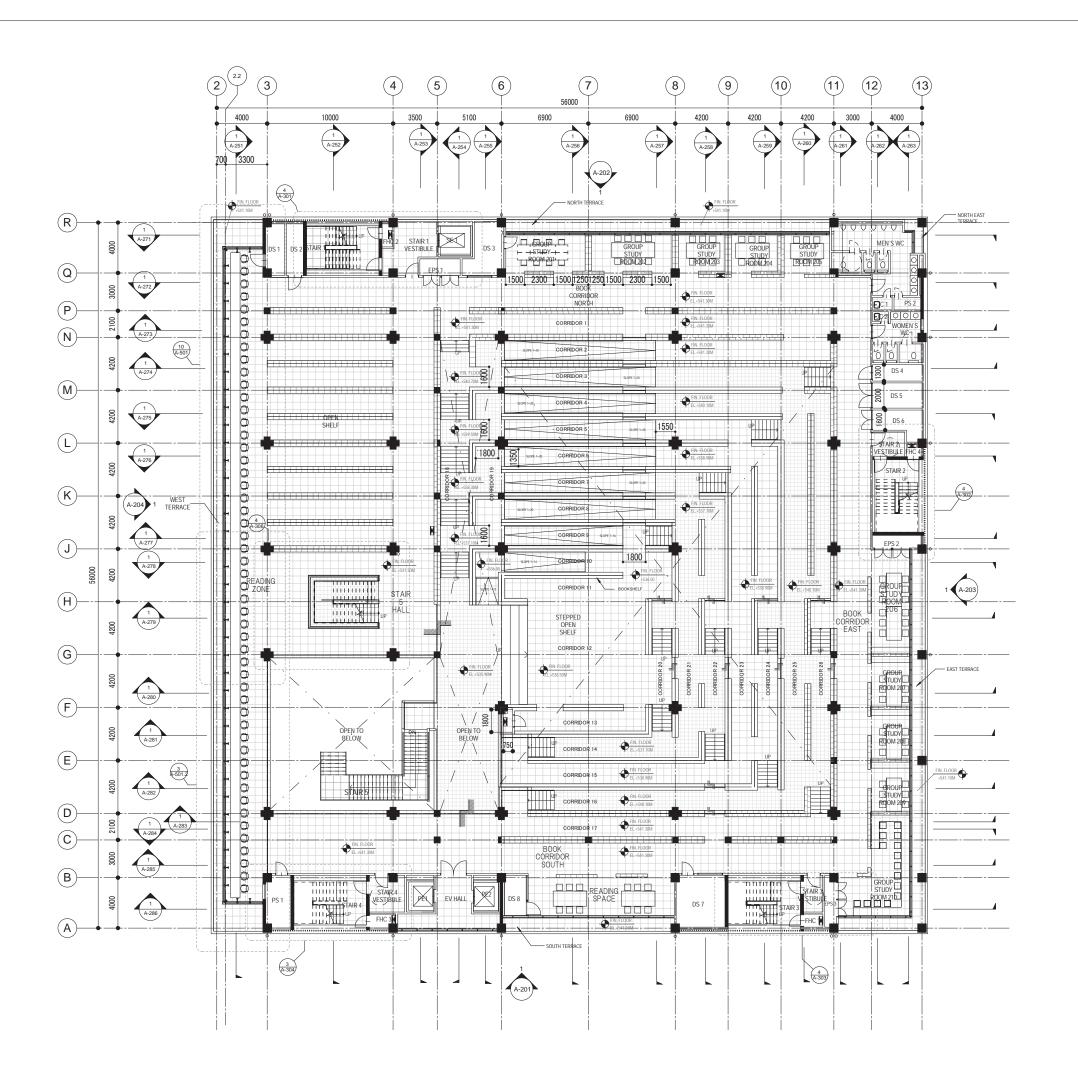
FIRST FLOOR PLAN

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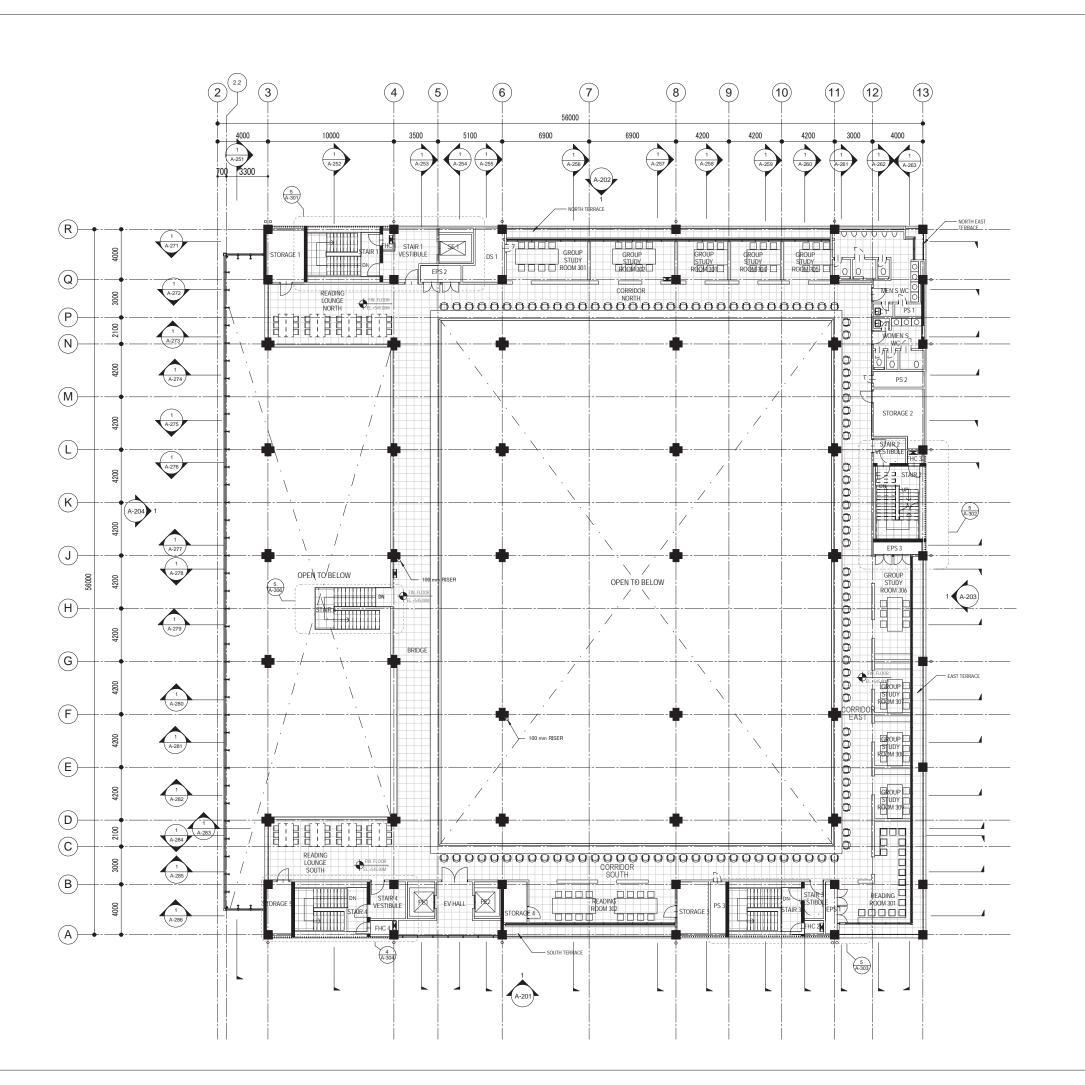
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KNOWLEDGE CENTER AT CAMPUS OF IIT HYDERABAD

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SECOND FLOOR PLAN

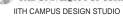
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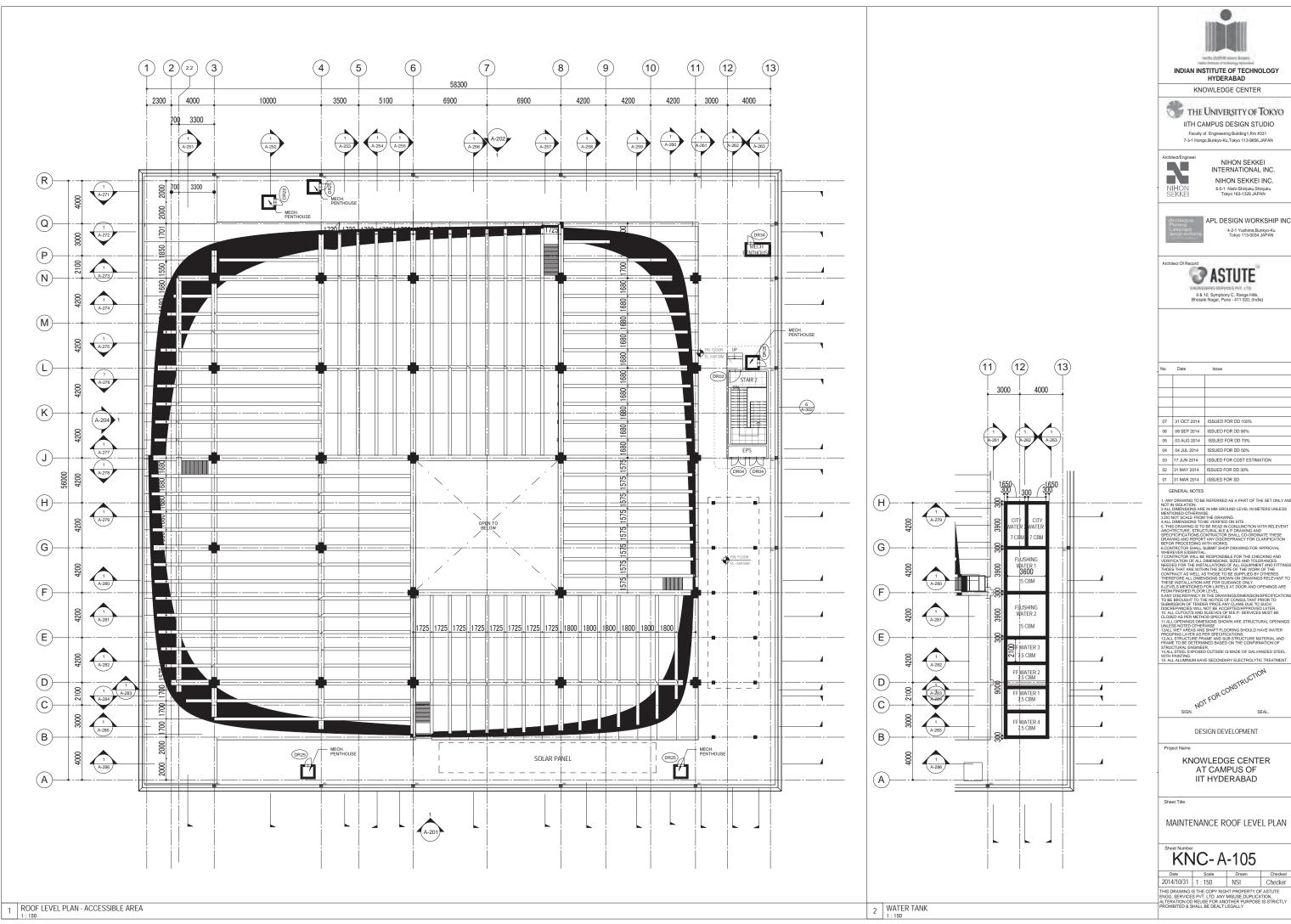
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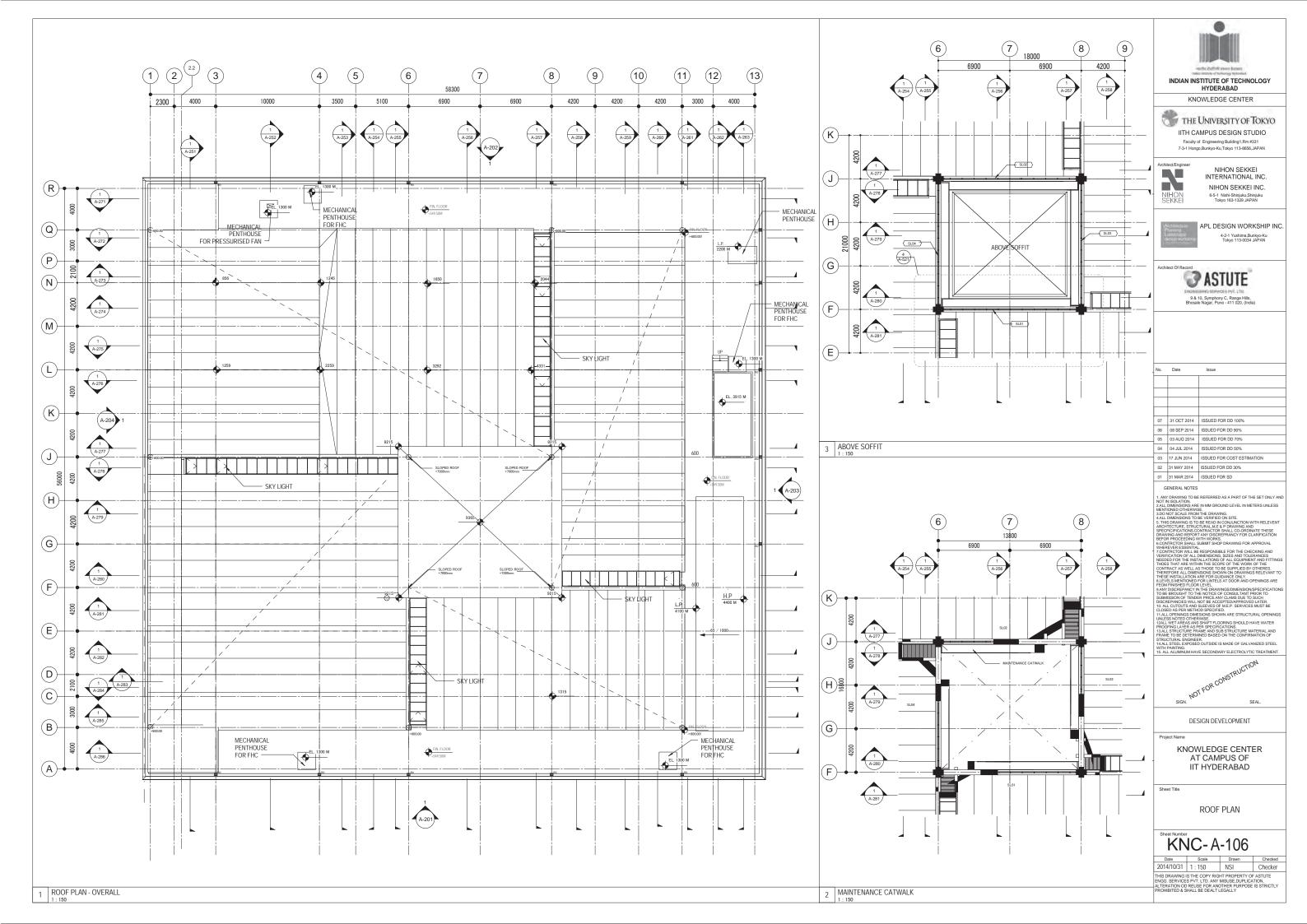
THIRD FLOOR PLAN

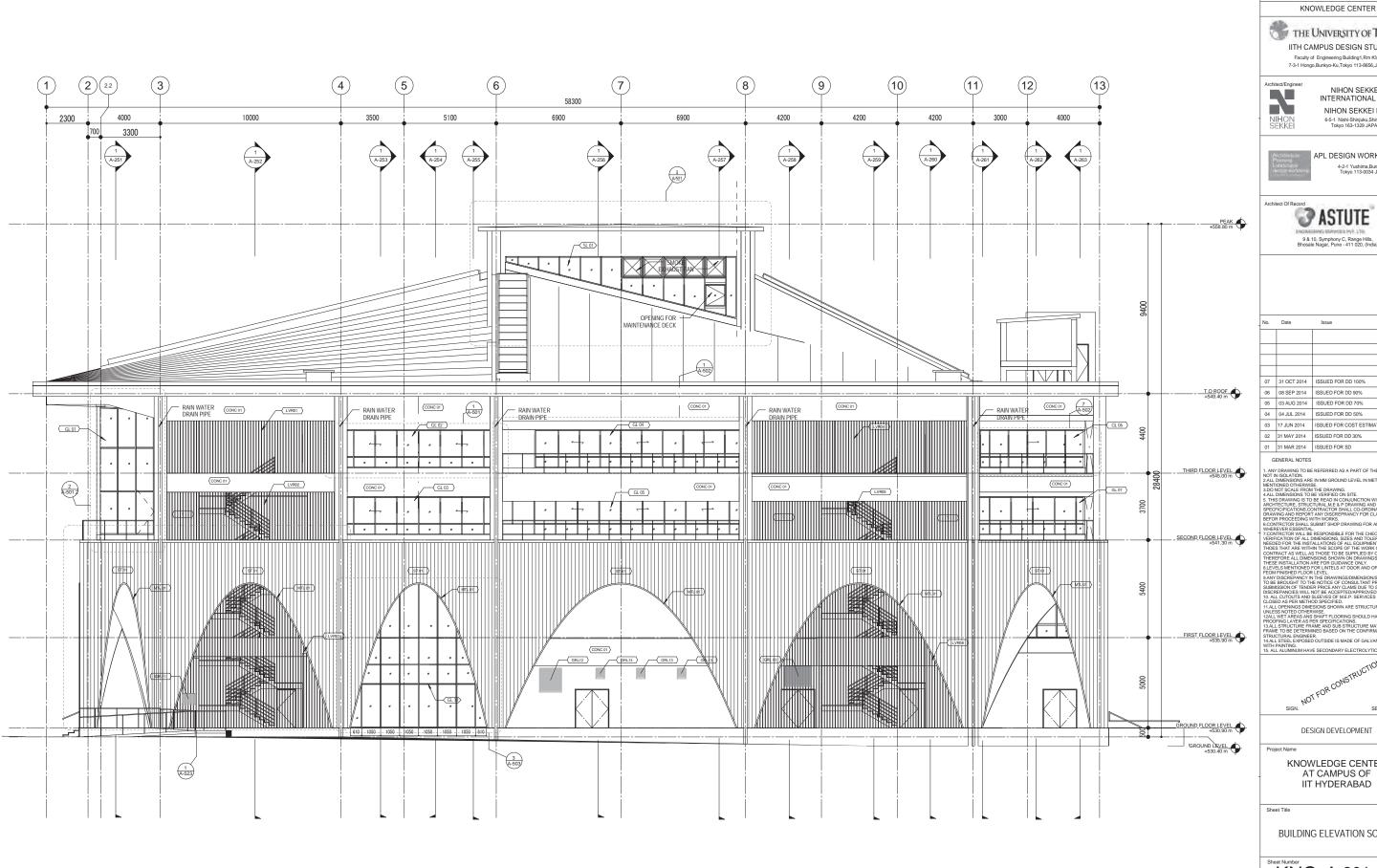
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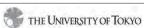








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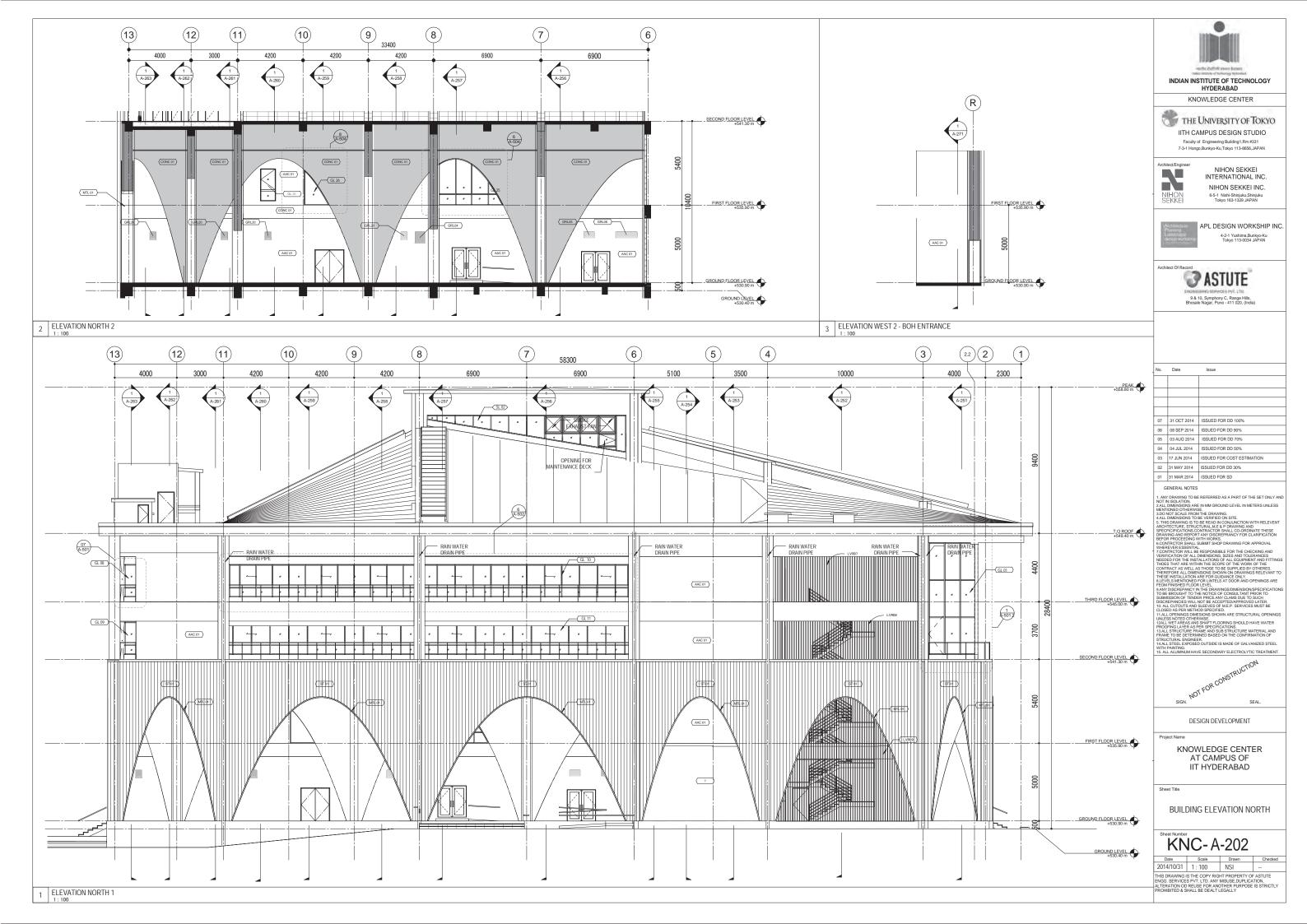
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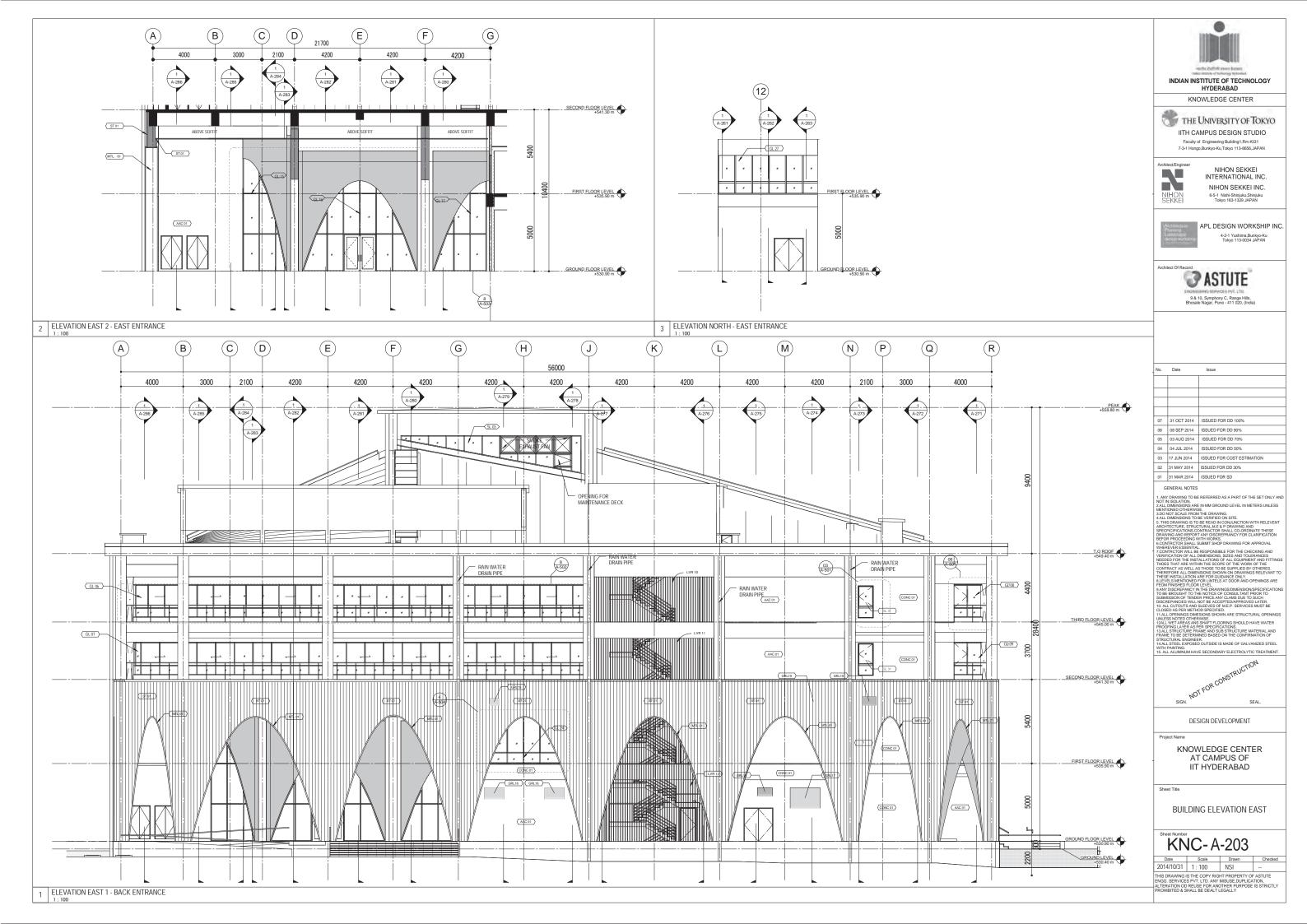
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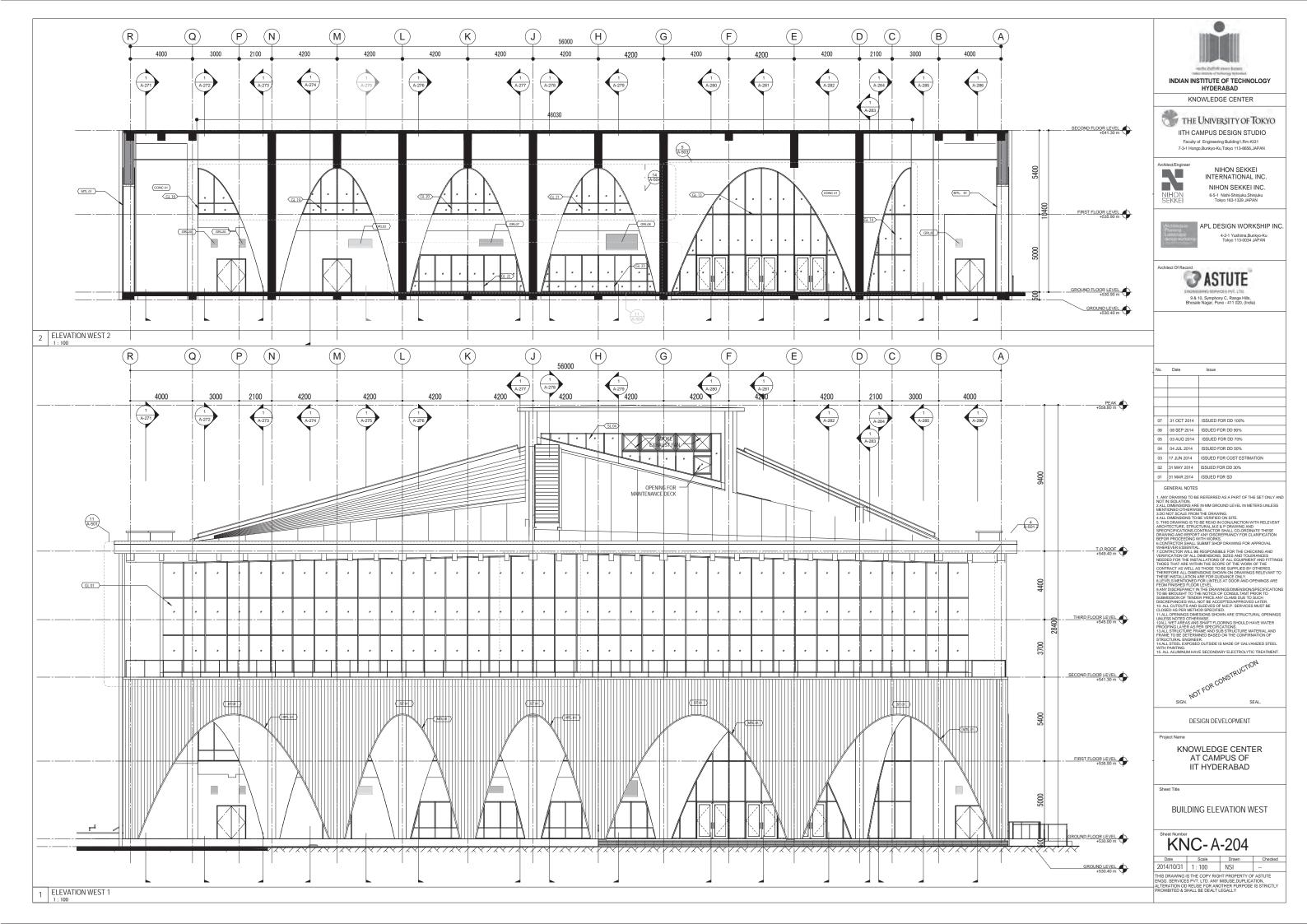
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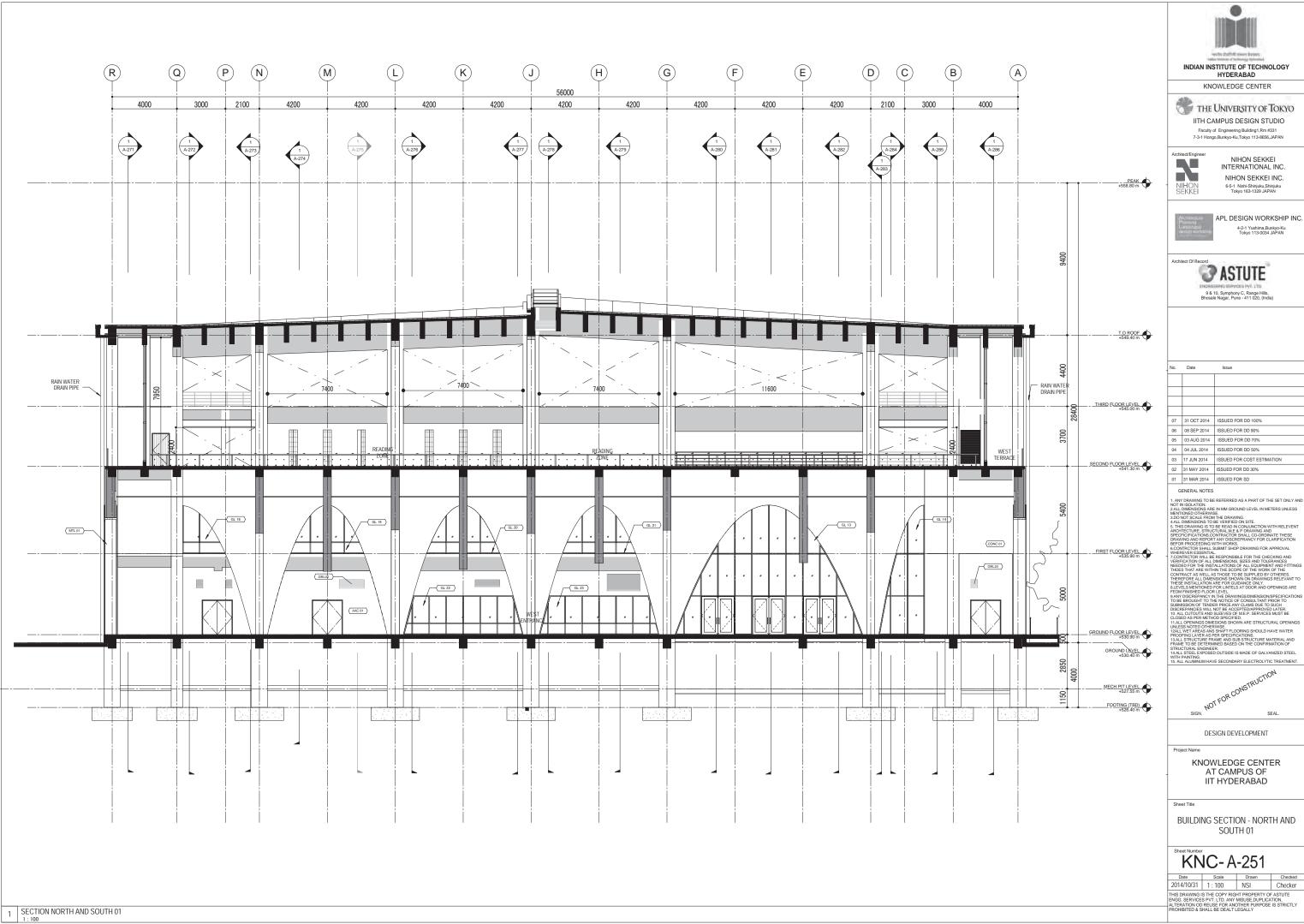
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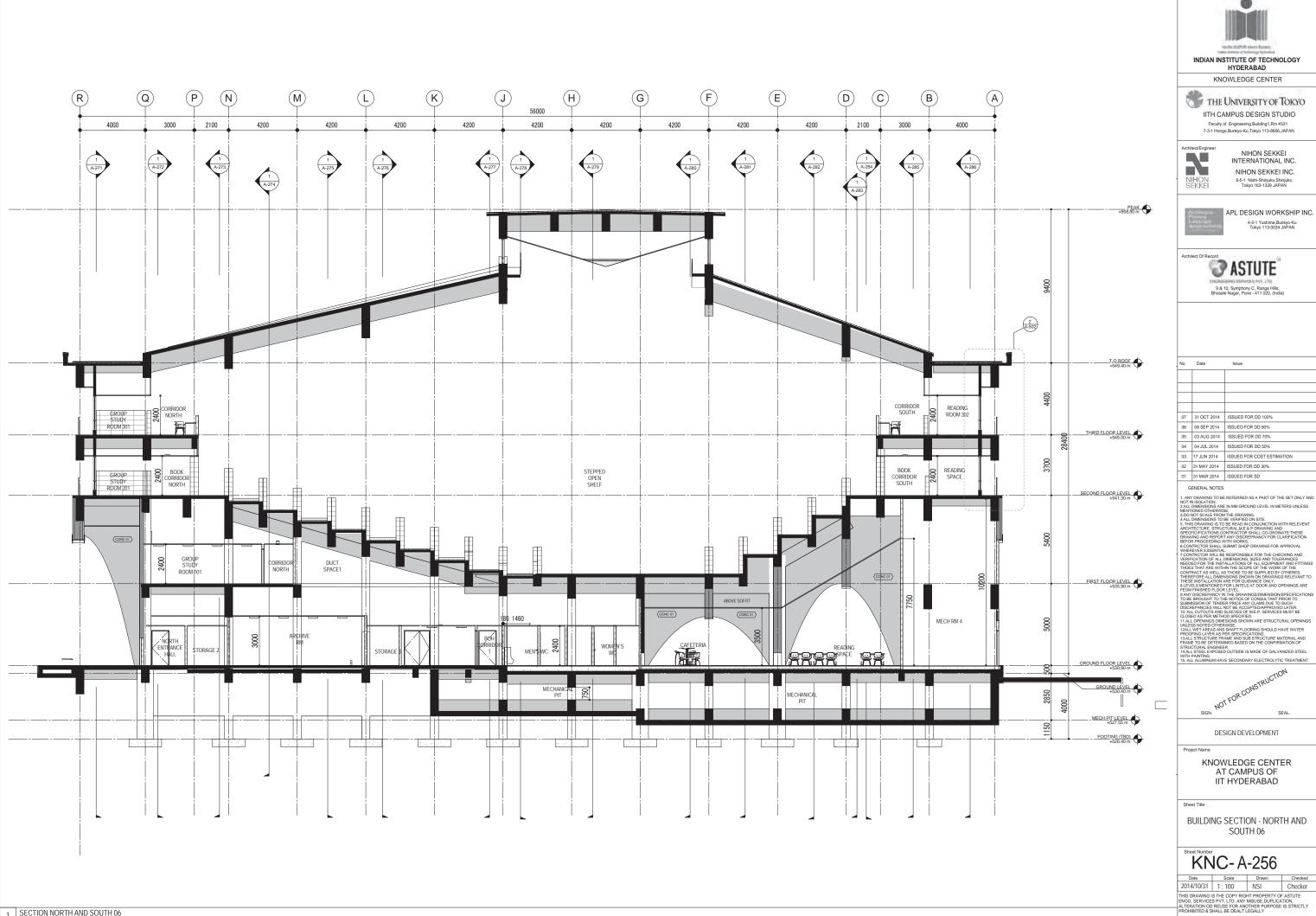
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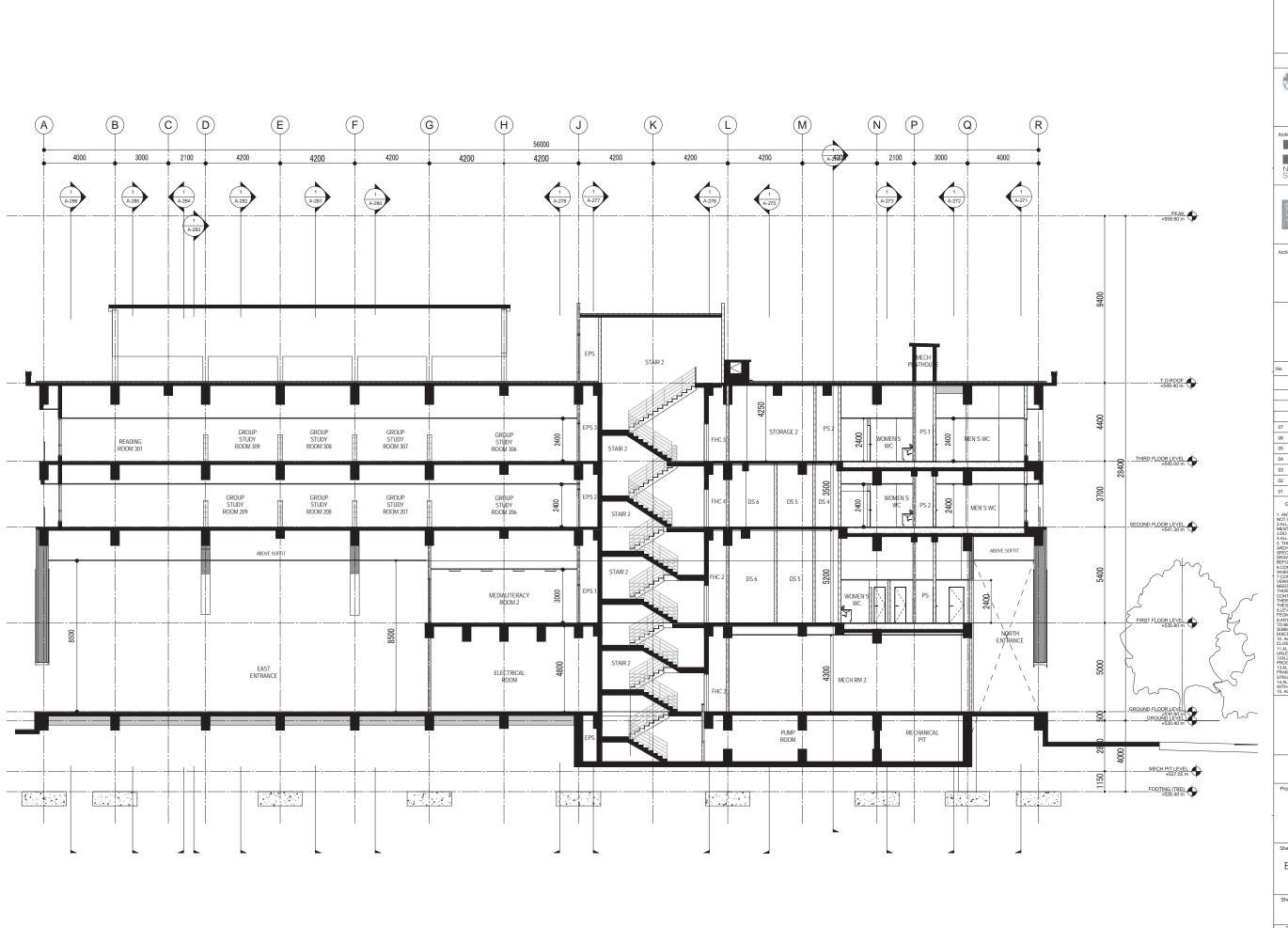






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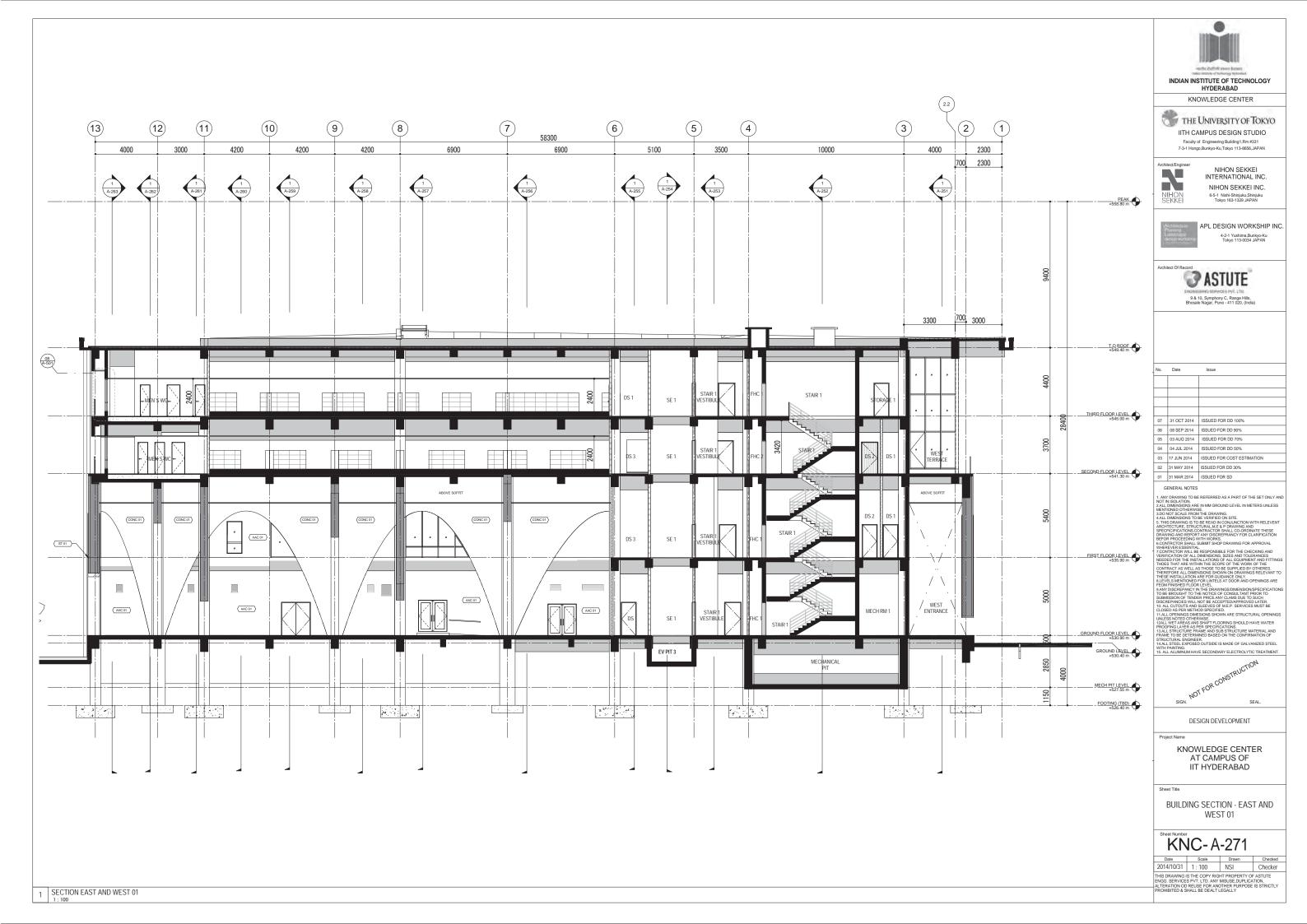
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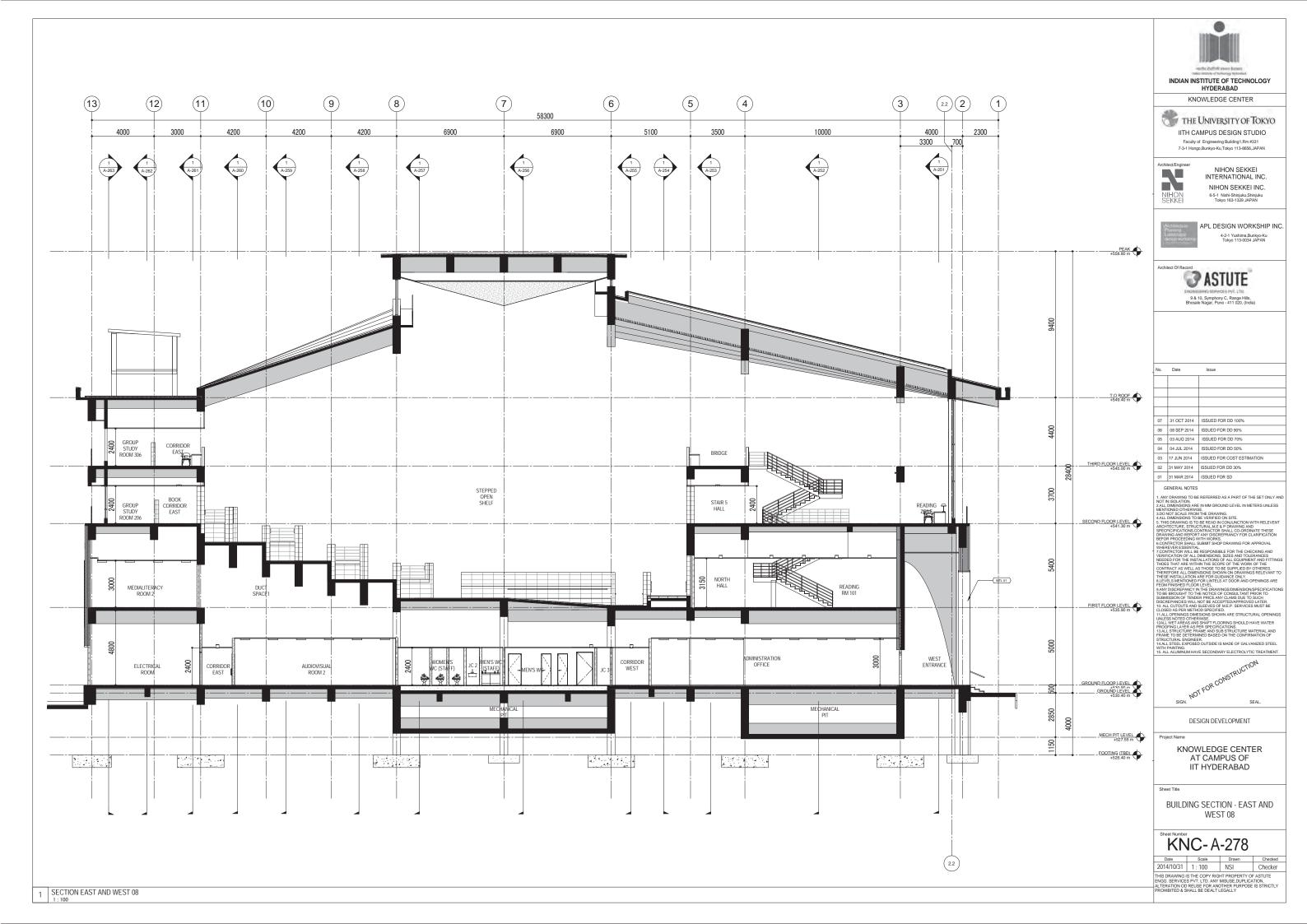
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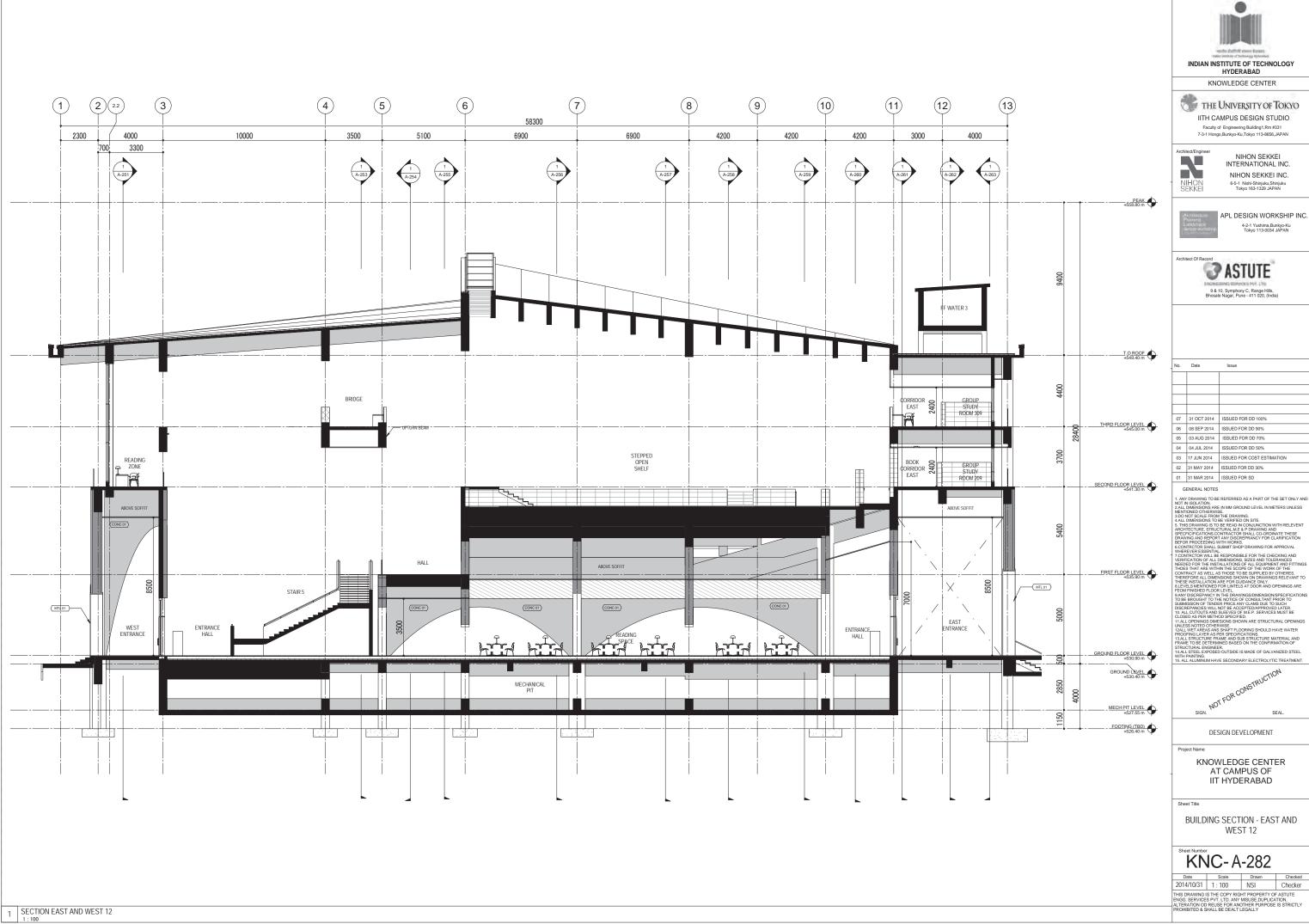
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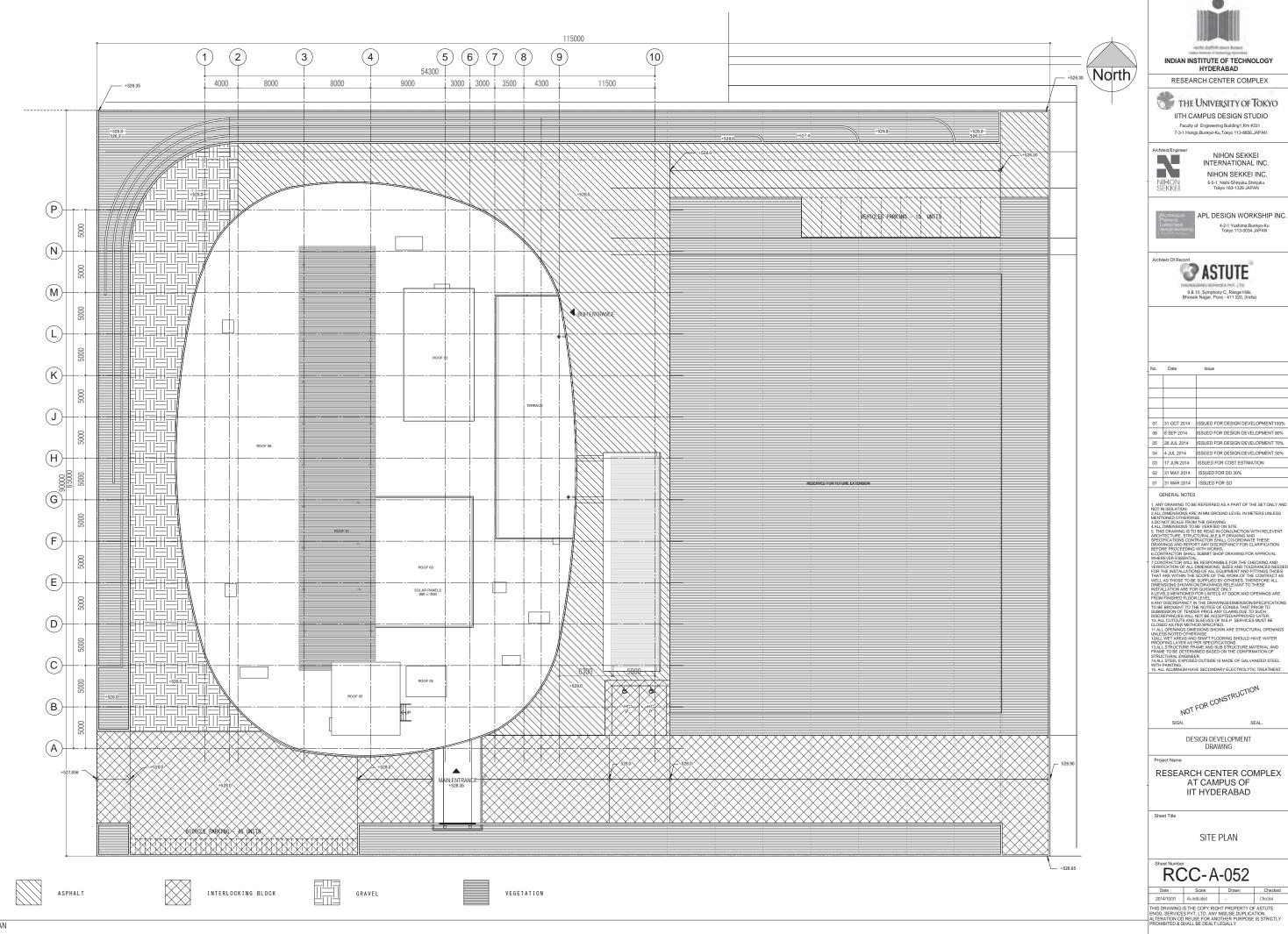


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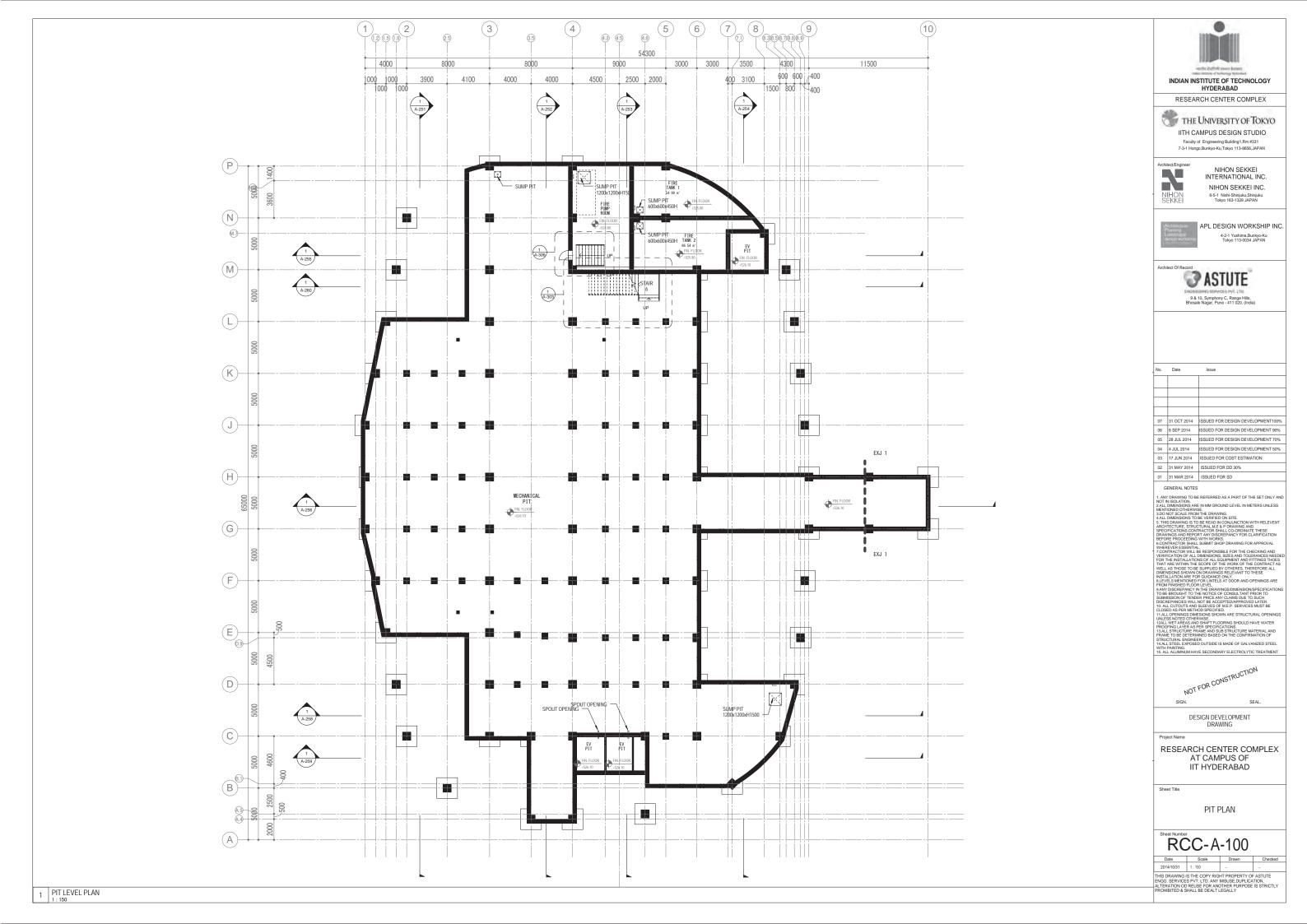


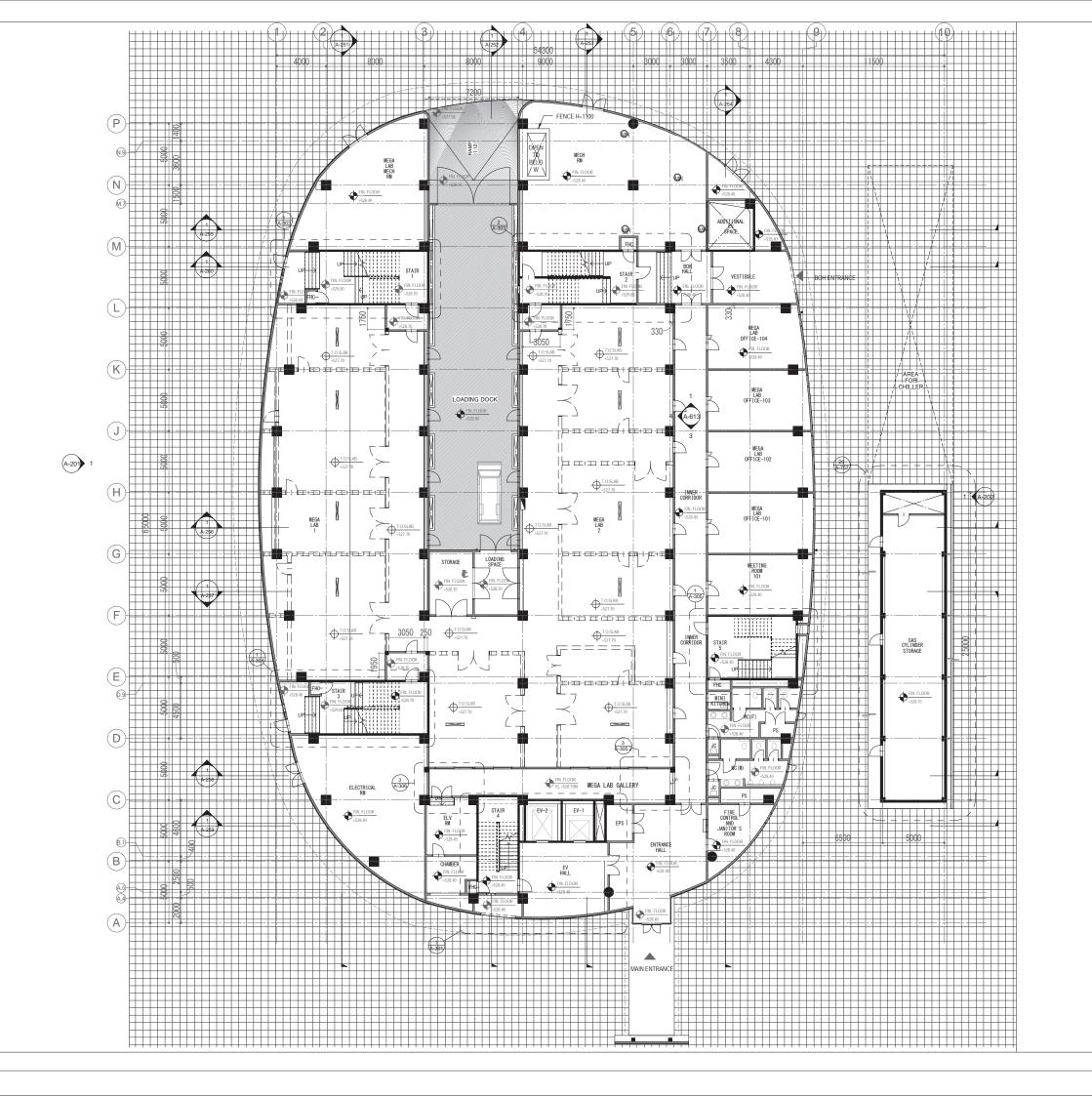
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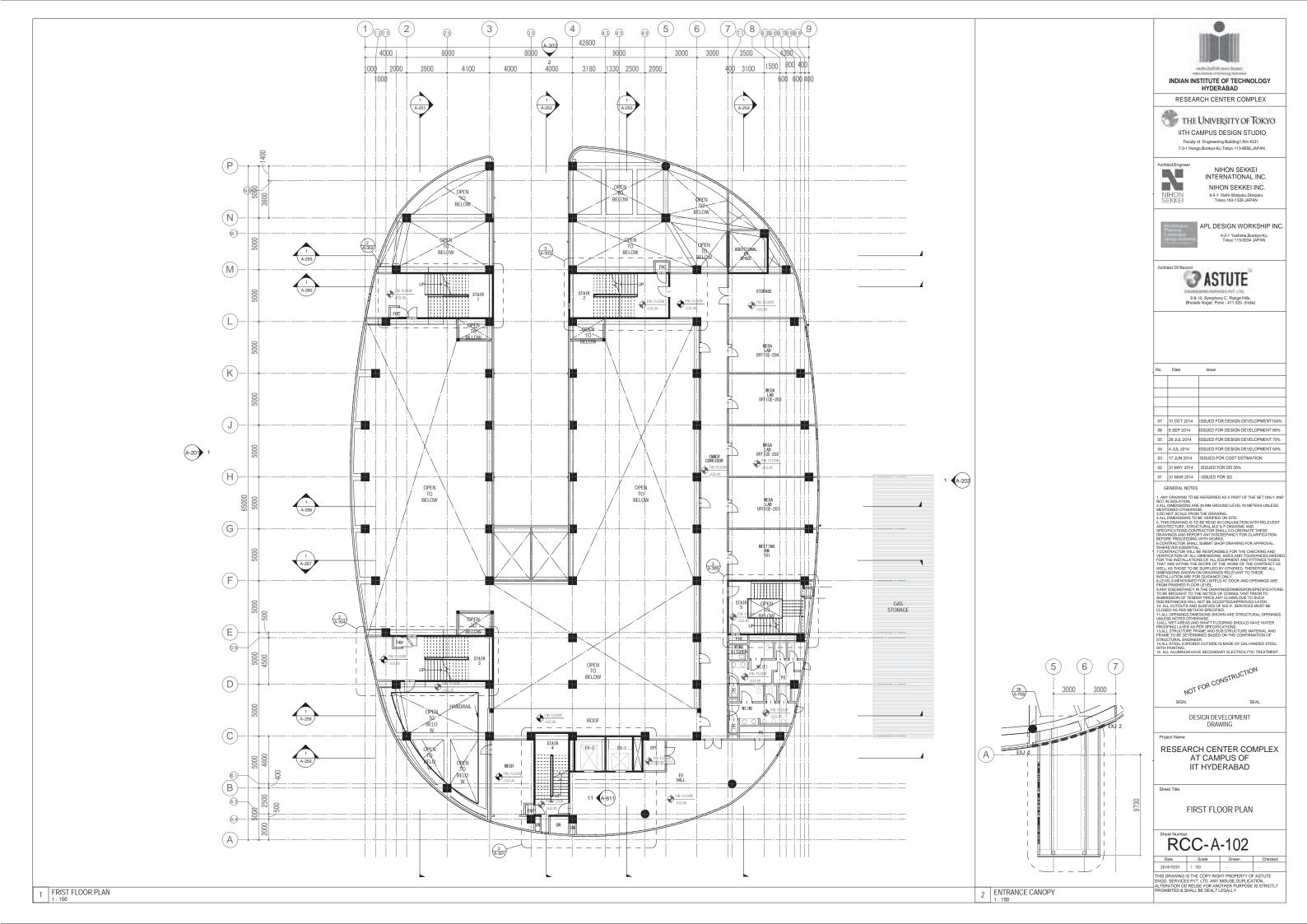
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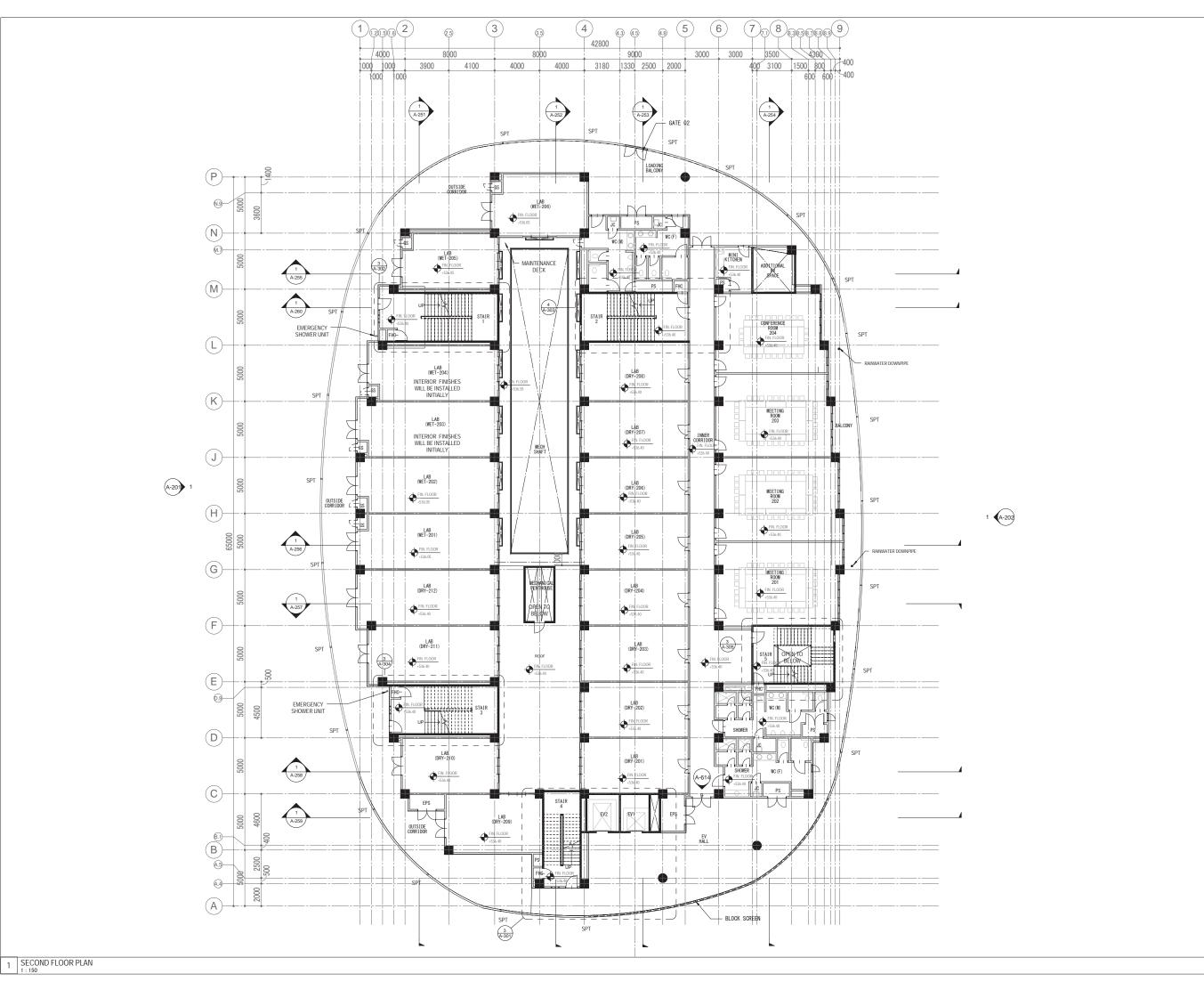
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GROUND FLOOR PLAN

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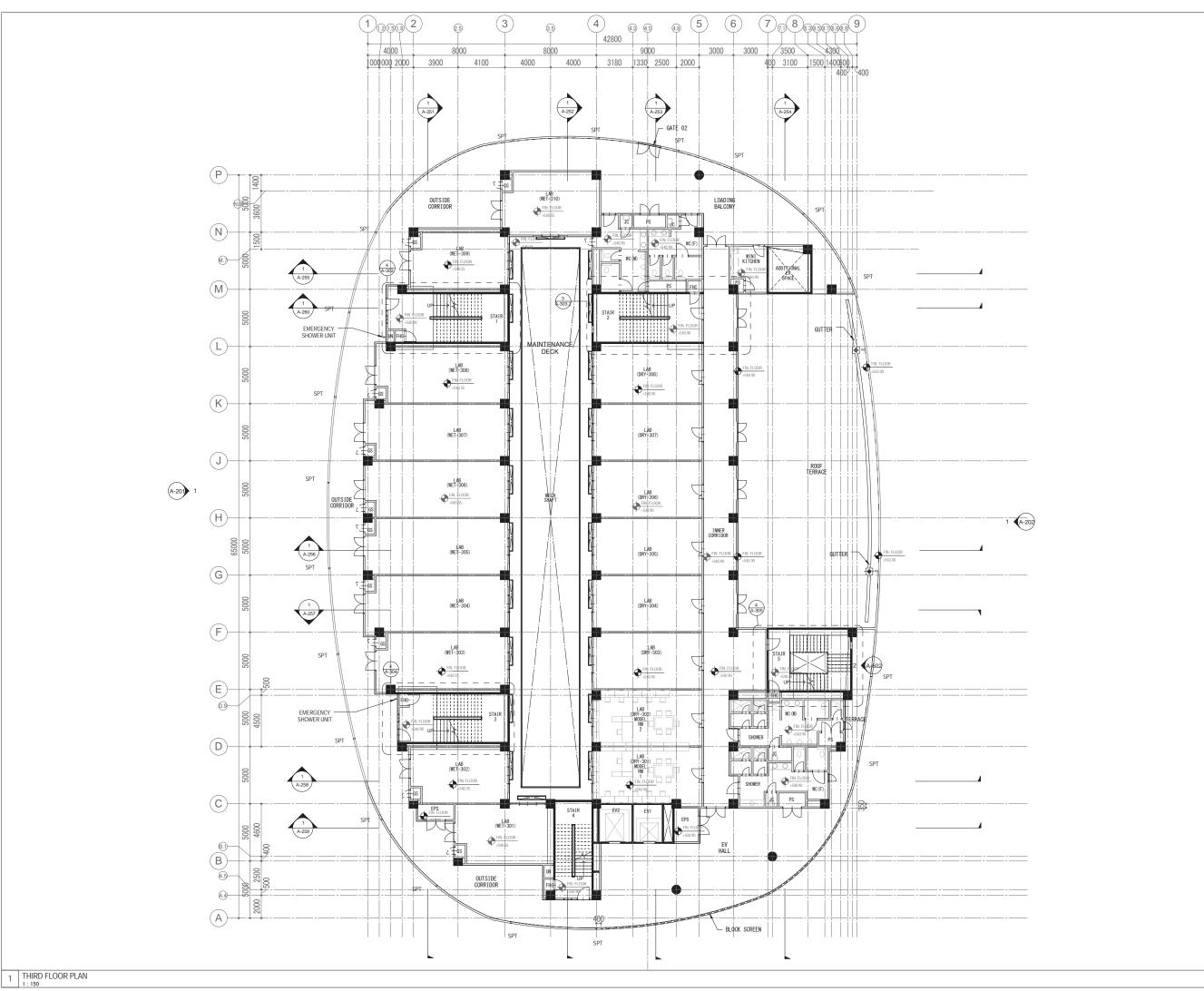
RESEARCH CENTER COMPLEX AT CAMPUS OF IIT HYDERABAD

SECOND FLOOR PLAN

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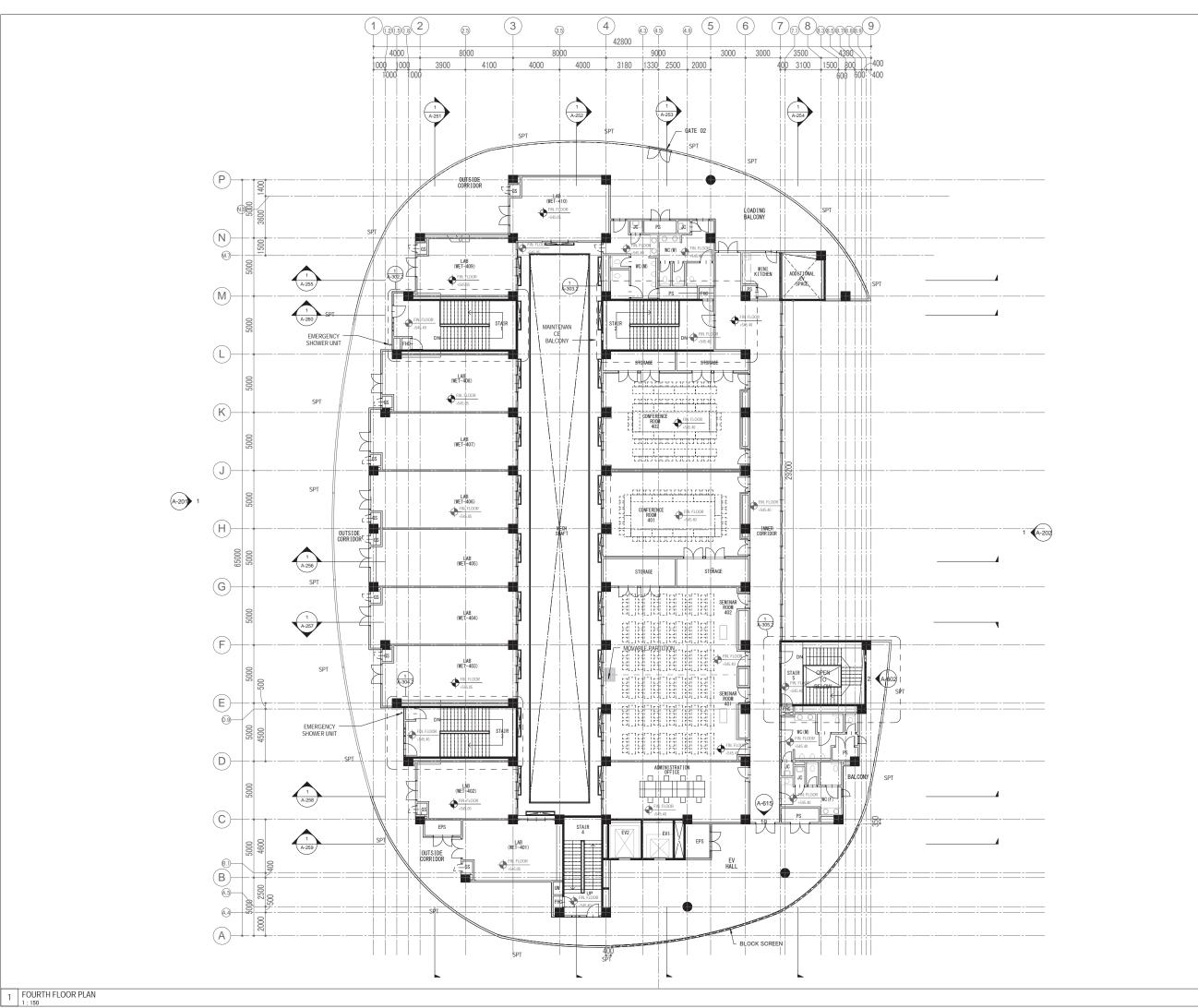
DESIGN DEVELOPMENT DRAWING

RESEARCH CENTER COMPLEX AT CAMPUS OF IIT HYDERABAD

THIRD FLOOR PLAN

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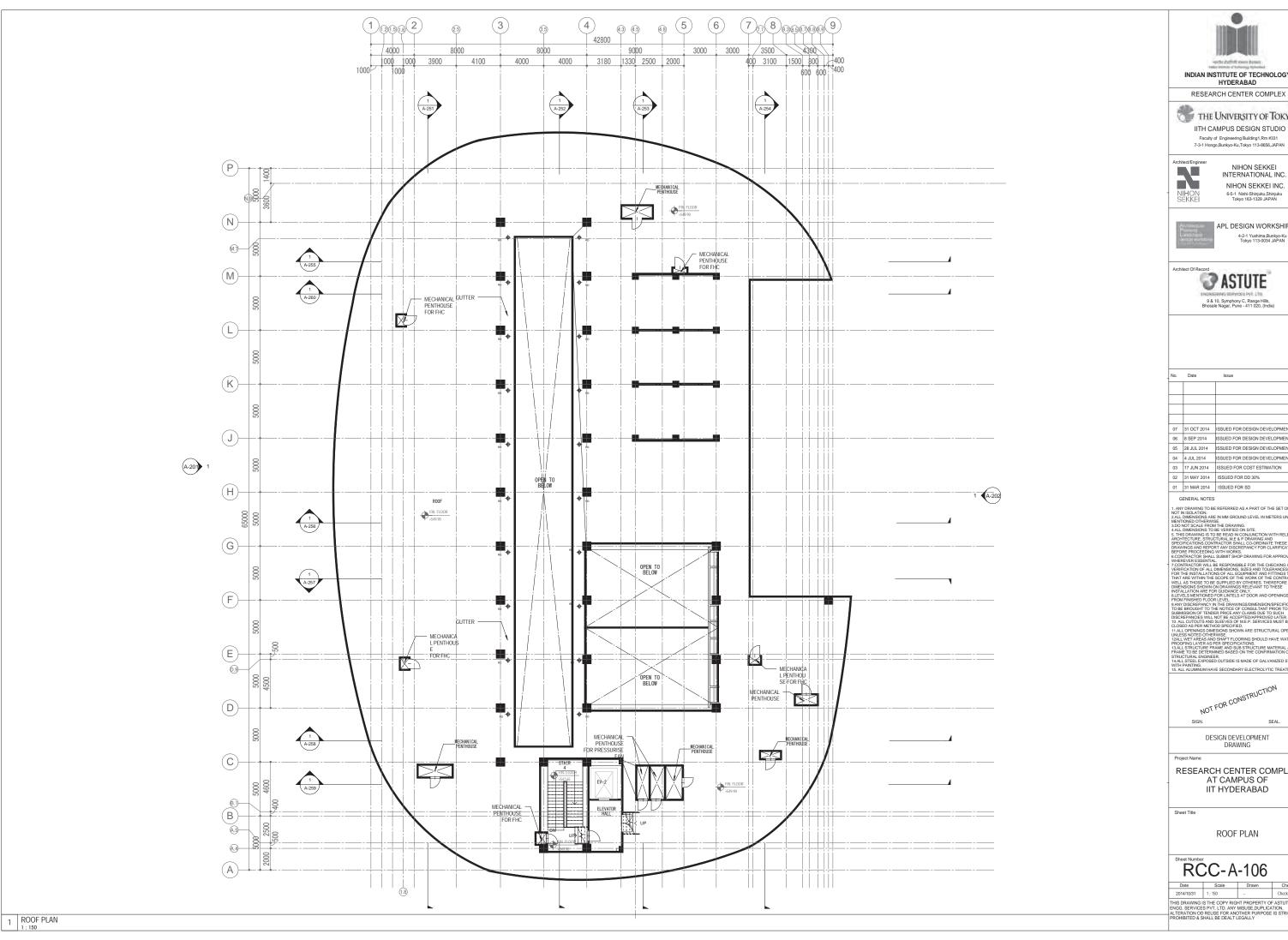
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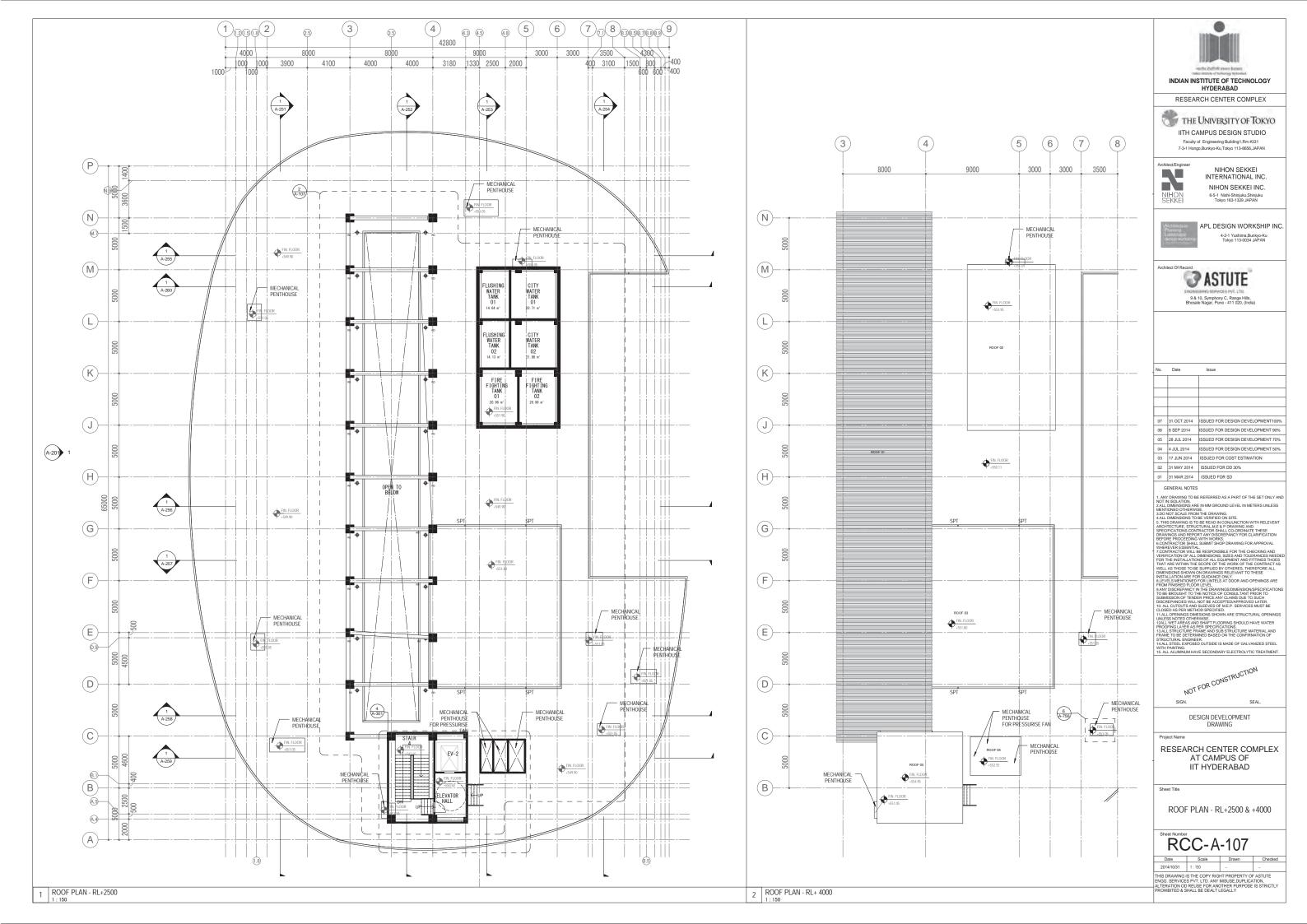
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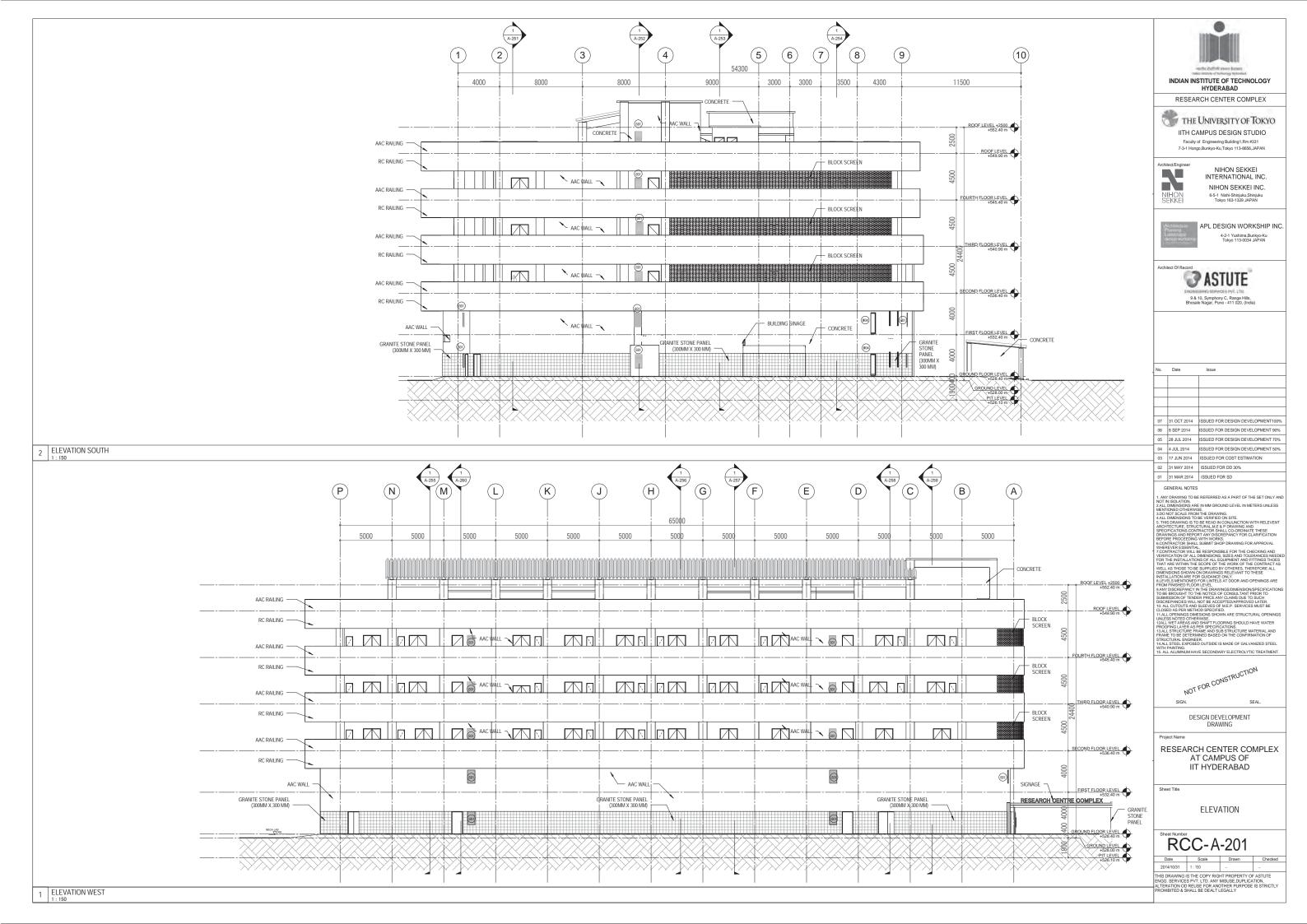
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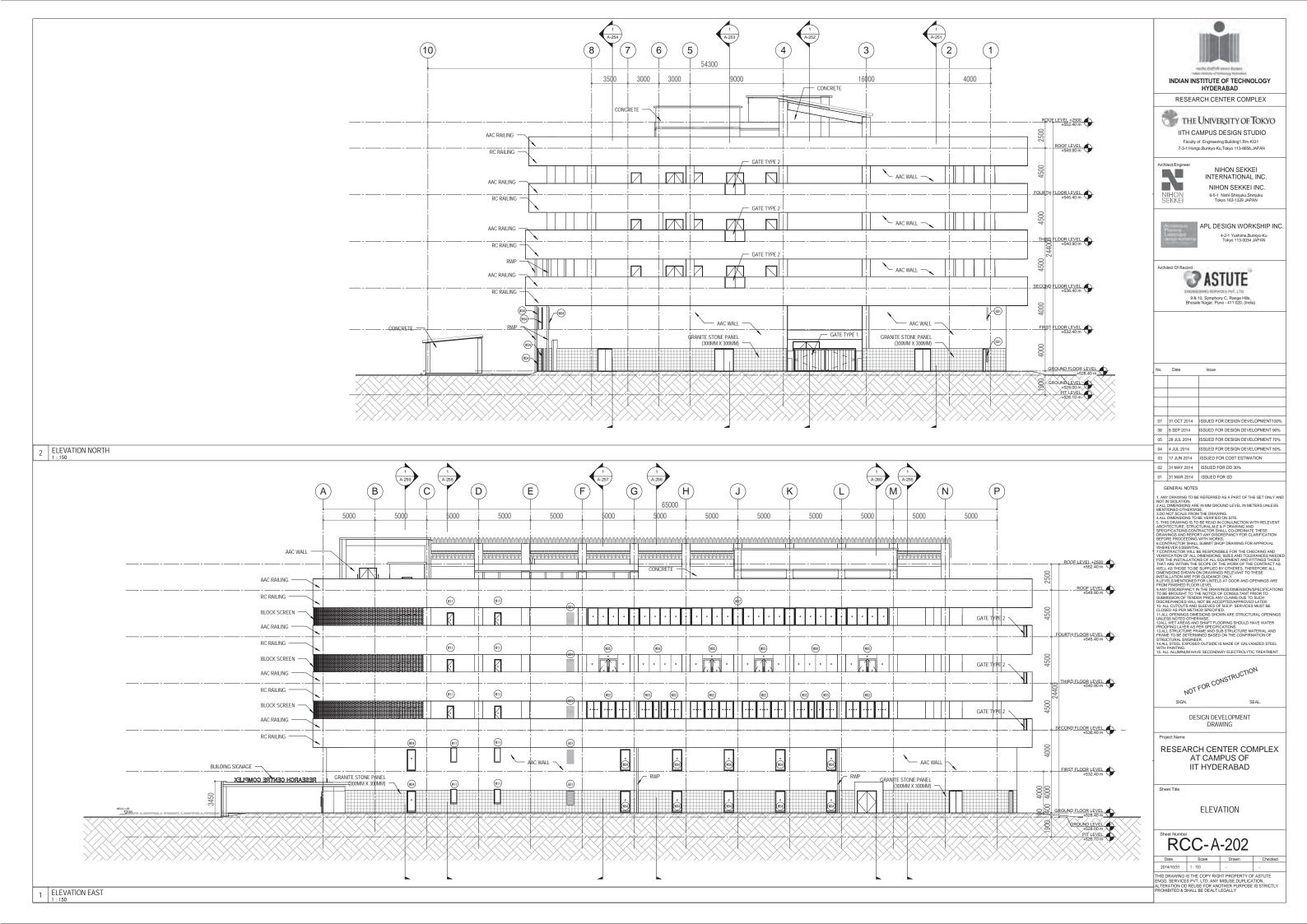
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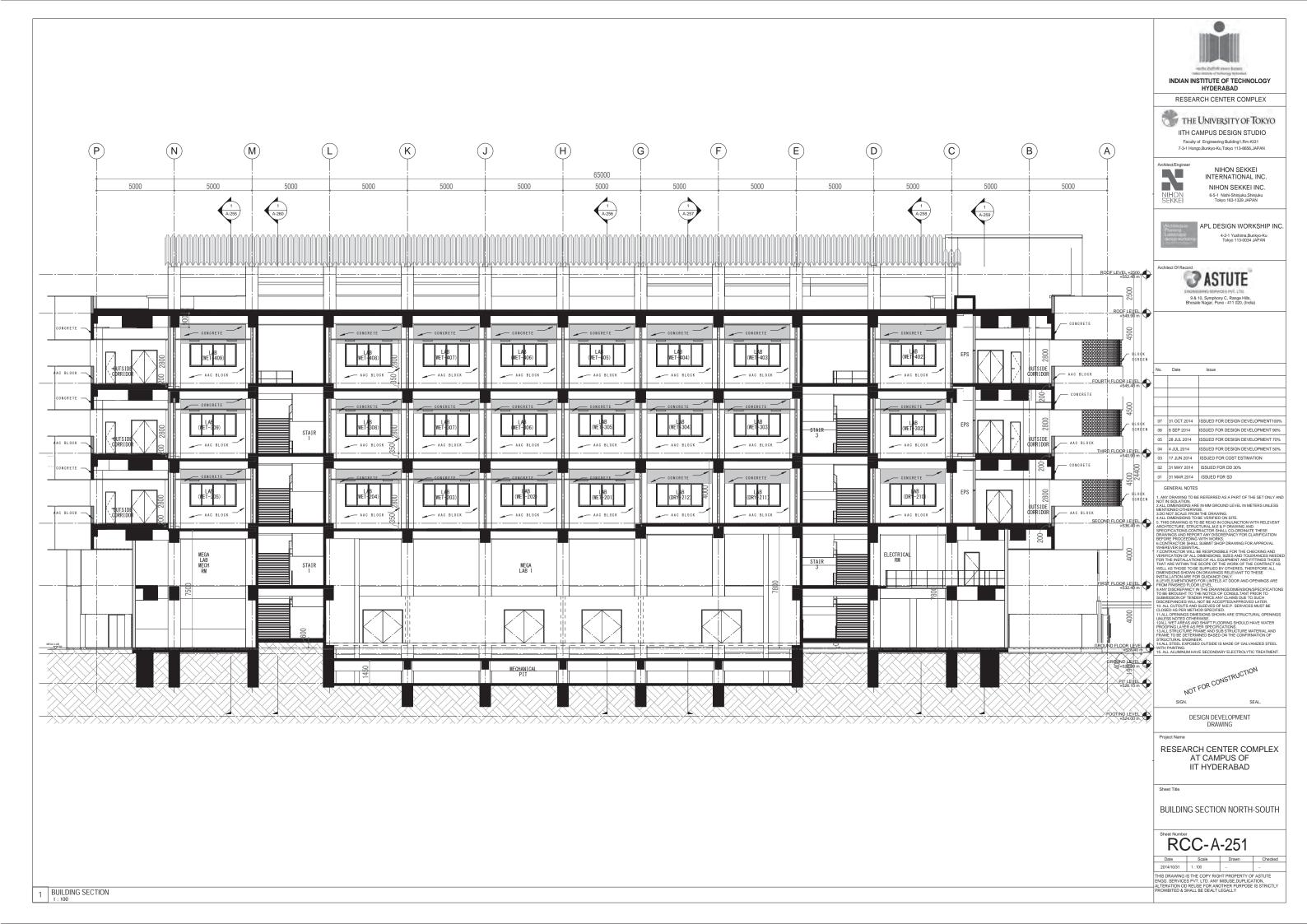
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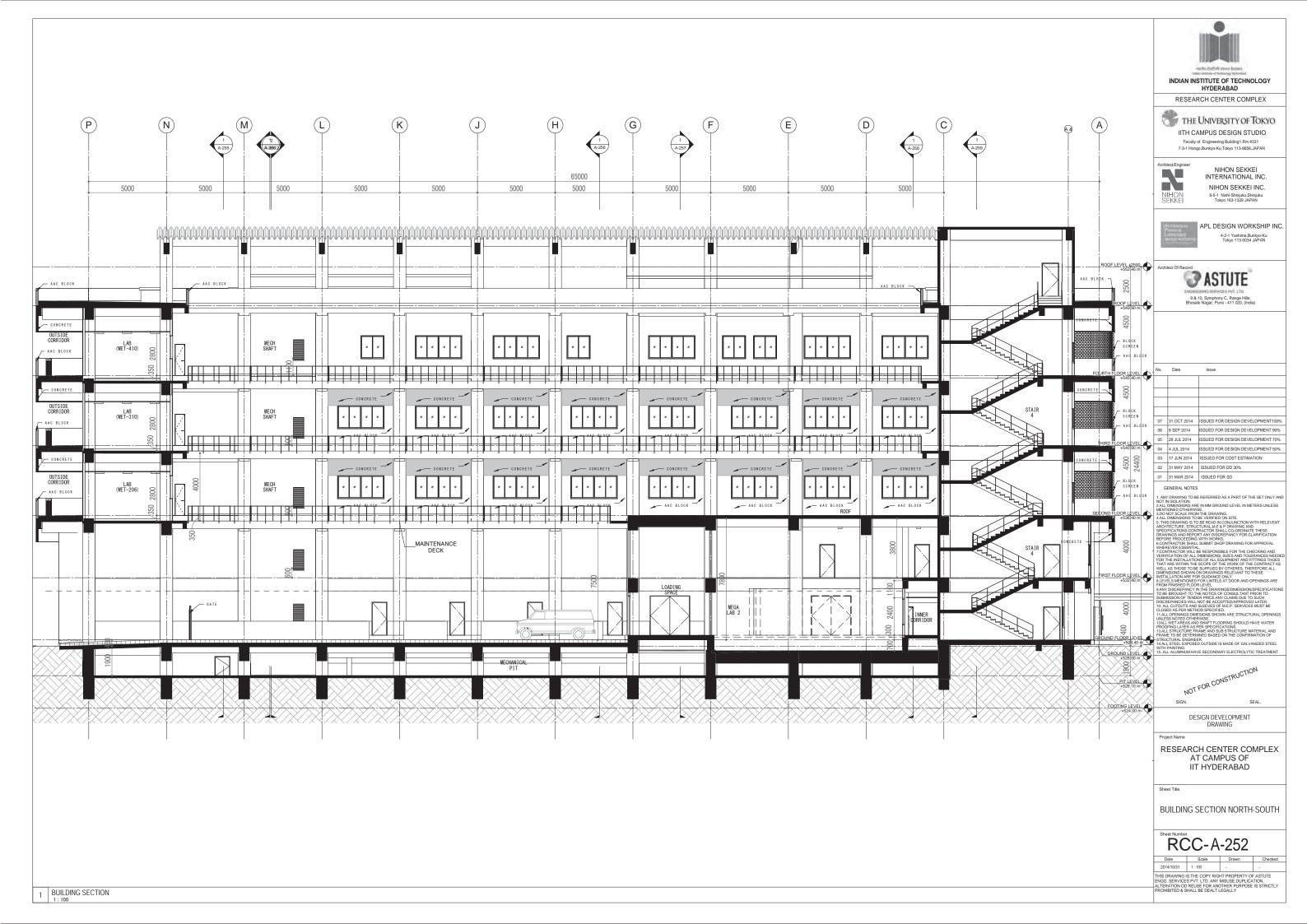
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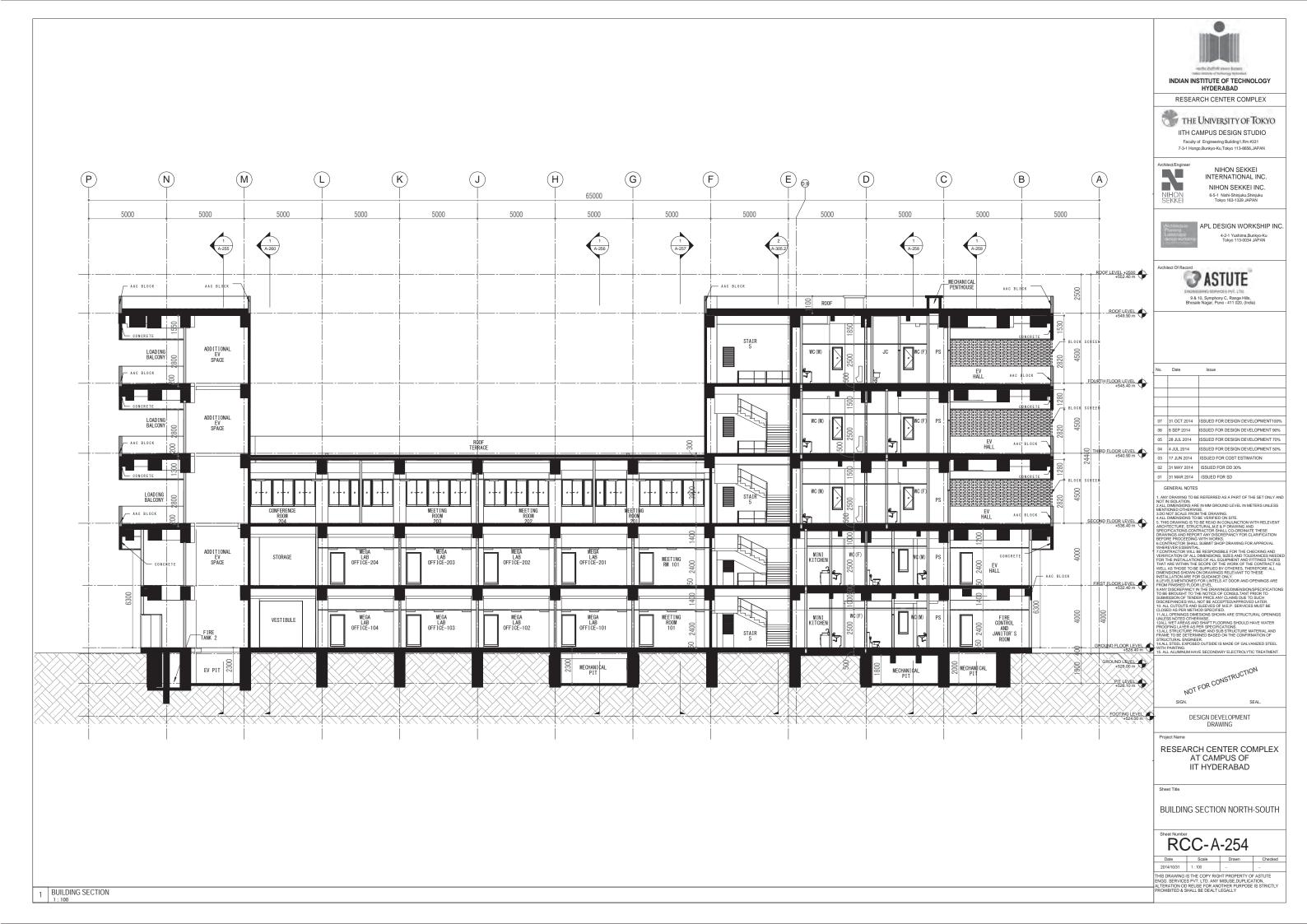


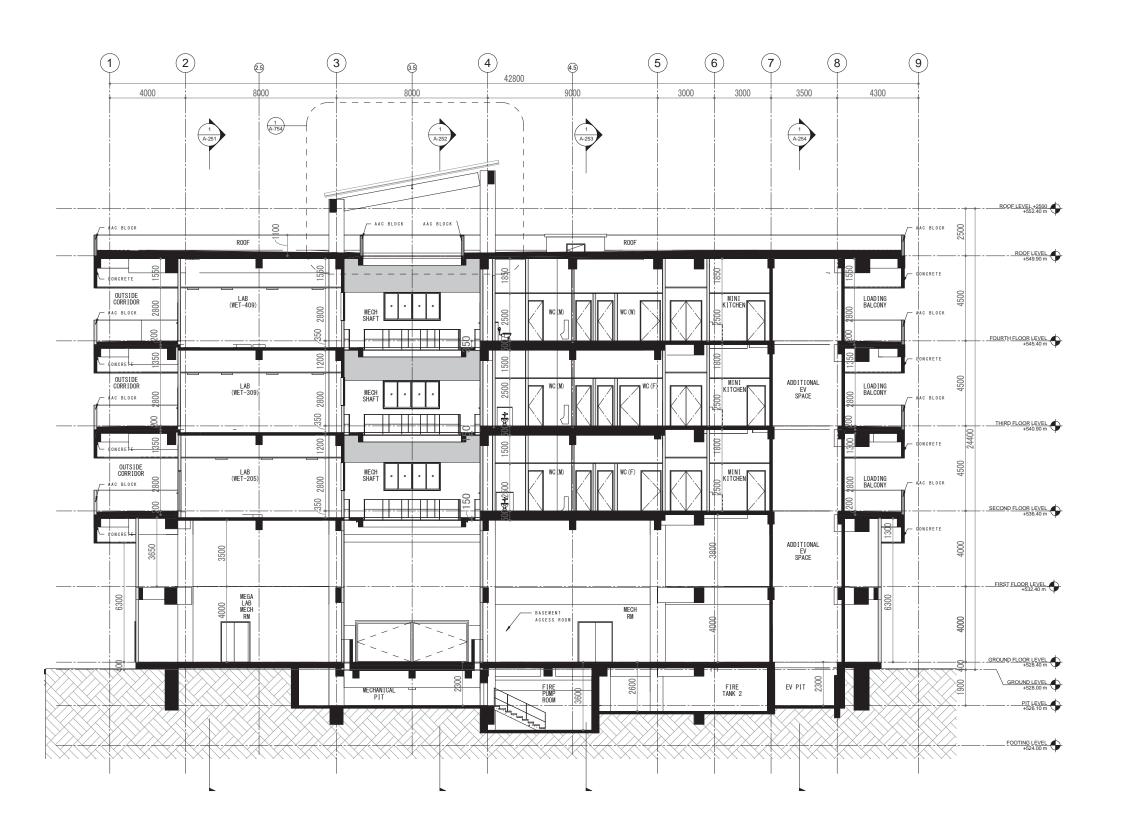
















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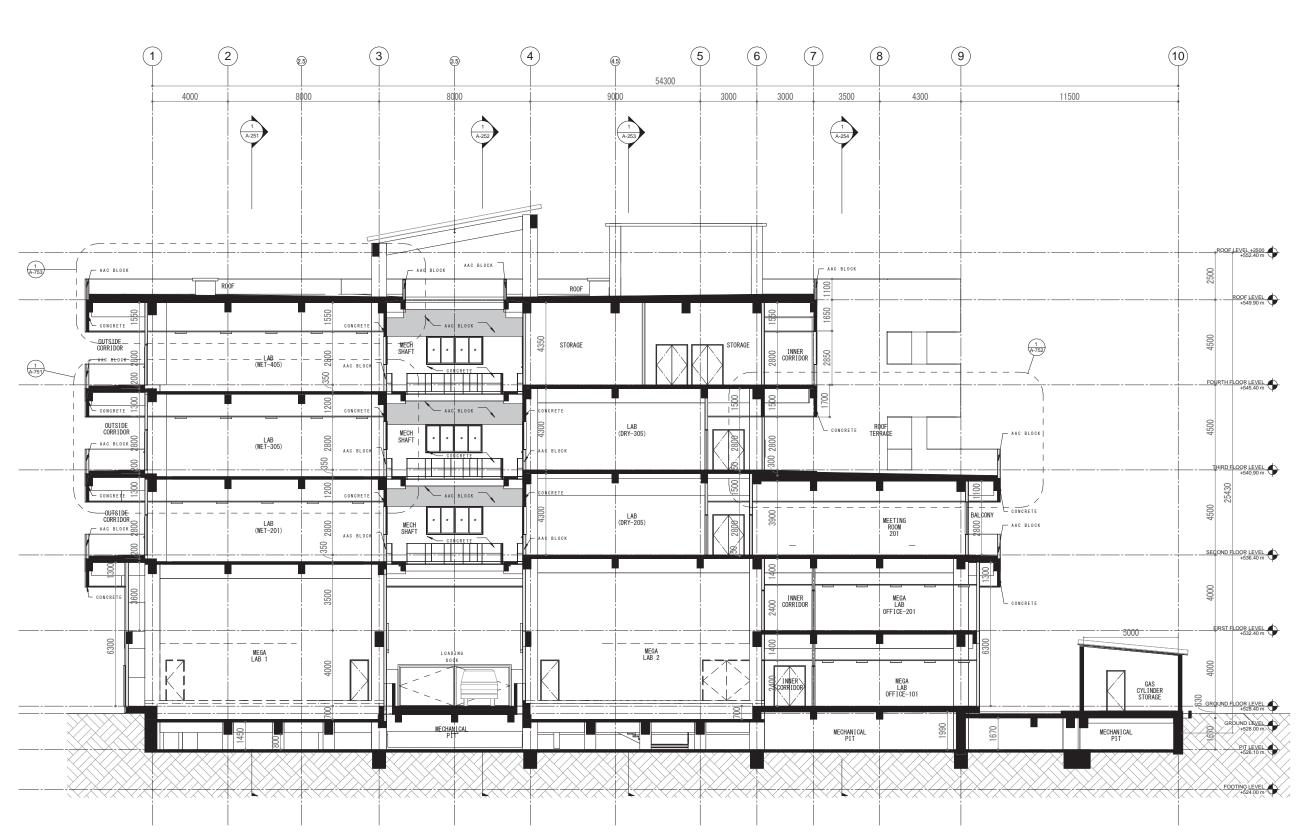
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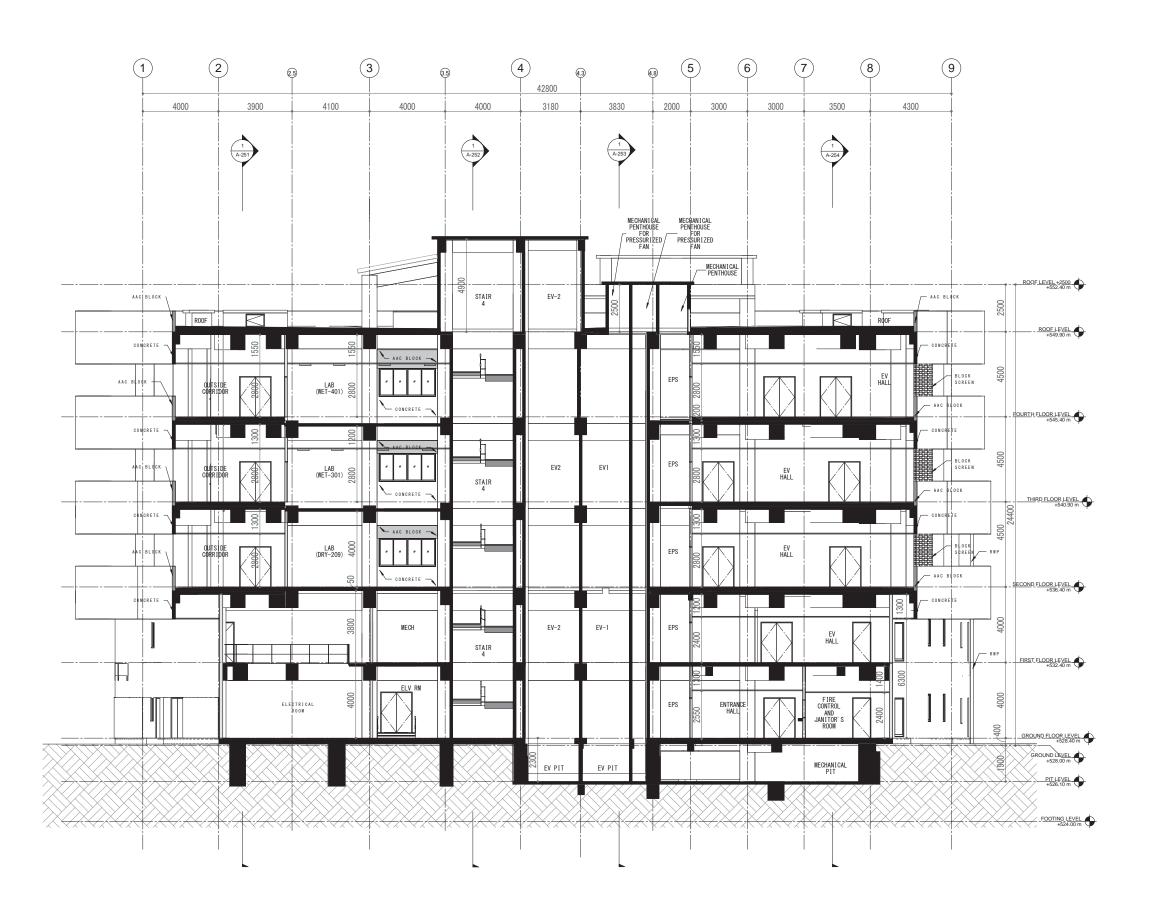
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