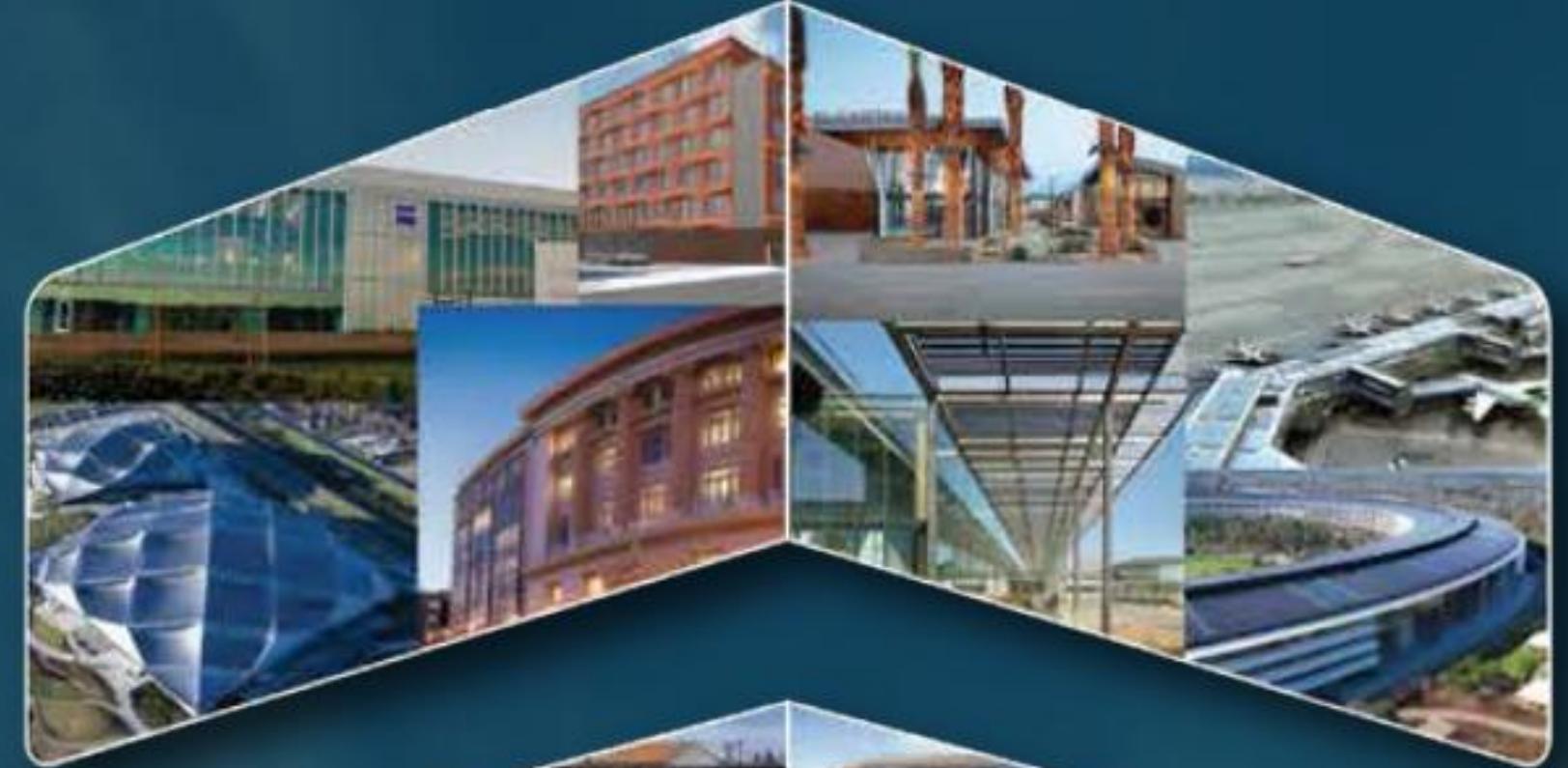




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BIM PORTFOLIO

Kuppa Pramod Kumar





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ABOUT ME!

Enthusiastic and detail-oriented BIM Engineer with hands-on experience in Building Information Modeling (BIM) and a strong foundation in civil engineering. Skilled in 3D modeling, clash detection, and project coordination using tools like Revit and Navisworks. Proven ability to enhance project efficiency and accuracy through effective collaboration and technical documentation. Experience includes working on complex projects involving re-modeling, clash resolution, and creating precise shop drawings. A quick learner and dedicated team player, committed to advancing skills and delivering excellence in the BIM field.

Contact

+91 8000222151

pramod4656@gmail.com

<https://www.linkedin.com/in/kuppa-pramod-kumar-11155b22b/>

Hyderabad, India



Kuppa Pramod Kumar
BIM Engineer

Education

- **Michigan State University**
2025 | Post Graduation in BIM
- **Sreyas Institute Of Engineering & Technology**
2021 | B.Tech in Civil Engineering

Work Experience

TechnoStruct LLC

16 September 2024 - Present | BIM Intern

Capgemini

19 October 2021 - 5 September 2022 | Software Analyst

Software Proficiency



Revit



Navisworks



Construction
Cloud



Enscape



Robot Structural
Analysis



BIM TRACK



Autocad



Dynamo



ACHIEVEMENTS & CERTIFICATIONS

BIM Ready Certification – Technostruct LLC, California

- Achieved 90% in the program
- Gained expertise in Revit, Navisworks, BIM coordination, clash detection, and project execution
- Hands-on experience with real-world projects and industry workflows

Plannerly Masterclass on BIM for Project Management Technostruct LLC, California

- Utilizing ISO 19650 standards for efficient BIM management
- Implementing structured workflows to streamline project delivery

INTERN – Geological Survey of India (GSI)

- Gained foundational knowledge in geological mapping, surveying



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01 PROJECT BREIF

HUNTERS POINT SHIPYARD

BLOCK 52 &

54

BLOCK 52 A



BLOCK 54



HUNTERS POINT SHIPYARD DEVELOPMENT



AERIAL VIEW OF BLOCK 52 & 54



The Hunters Point Shipyard Blocks 52 and 54 project has received official approvals for the construction of 112 affordable housing units. Specifically, Block 52 will comprise 67 units, while Block 54 will include 45 units.

These units are designated for households earning between 30% and 50% of the Area Median Income (AMI).



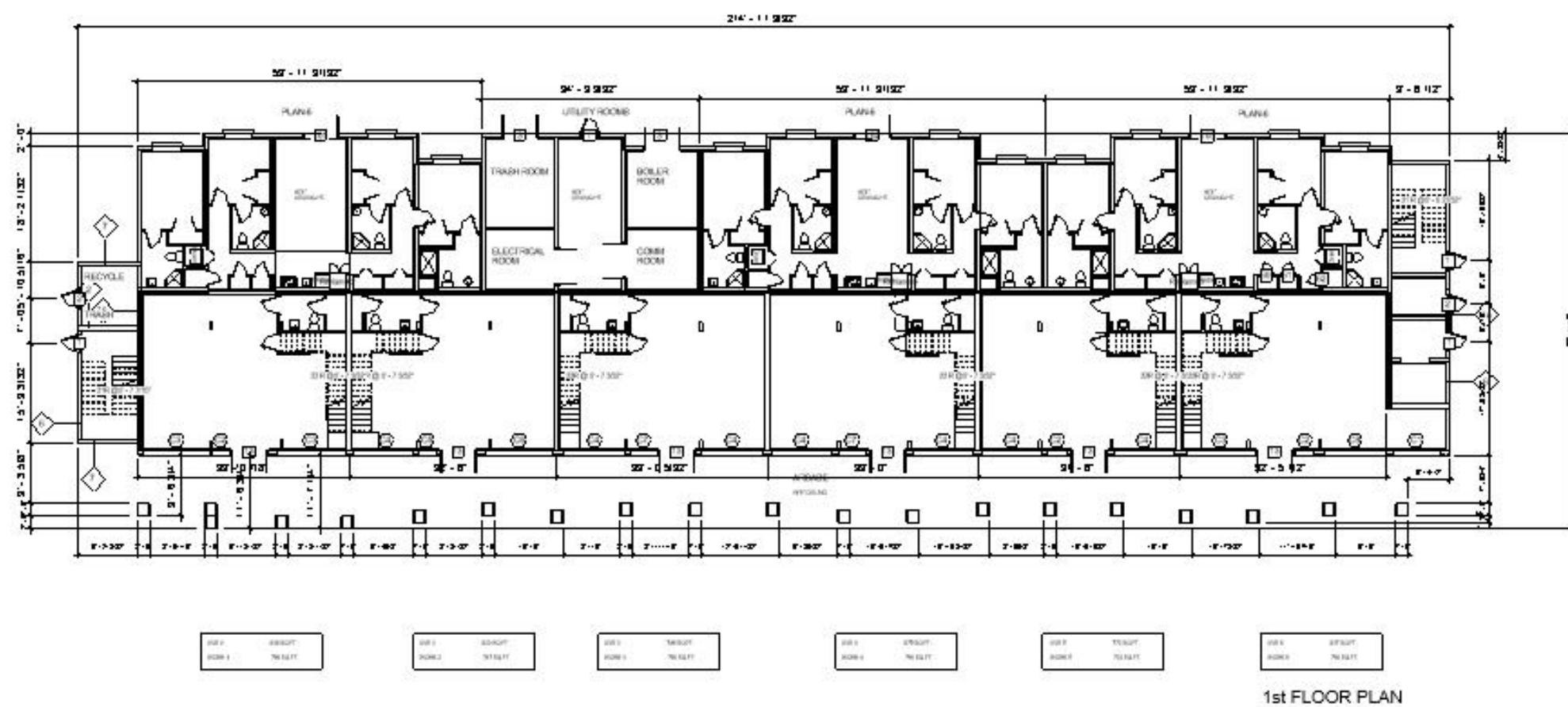
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02 ARCHITECTURE

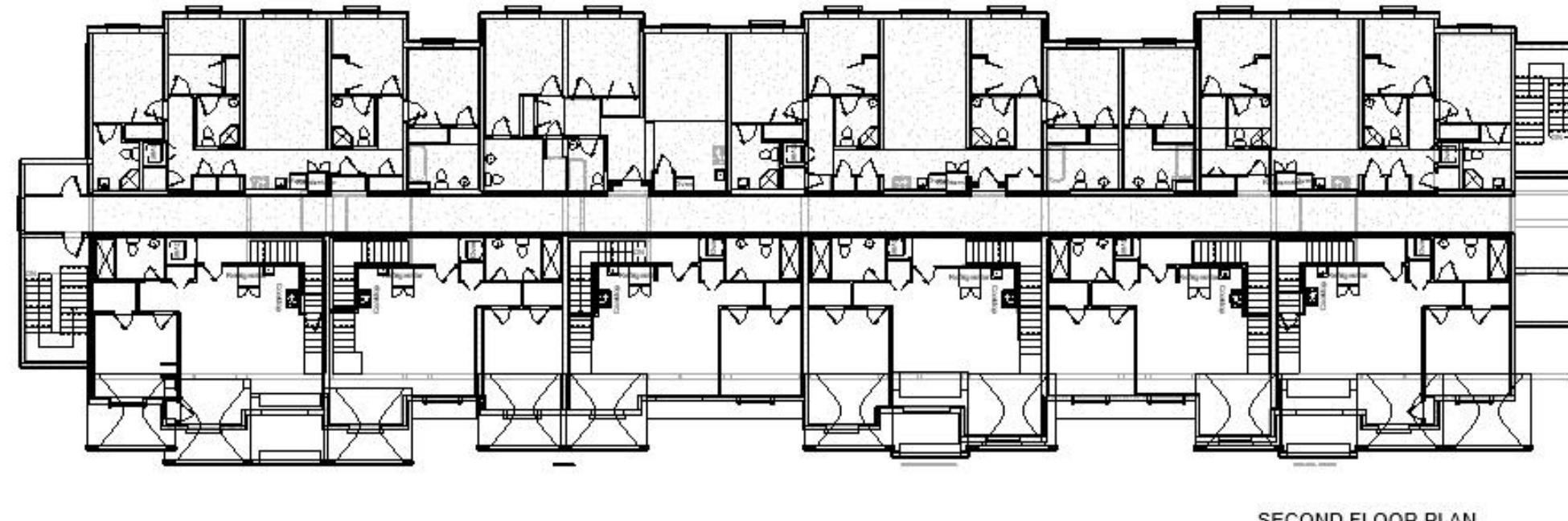
A detailed layout of rooms, hallways, and essential spaces on the first & second levels.

Includes entrances, staircases, and possible utility areas

1ST FLOOR PLAN



2ND FLOOR PLAN





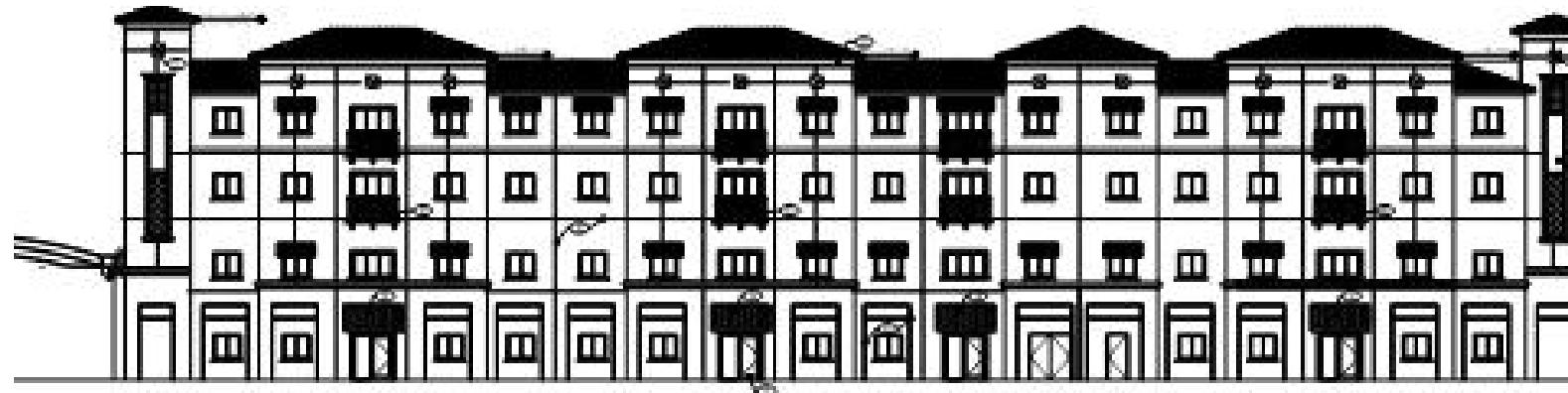
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SECTIONAL VIEW

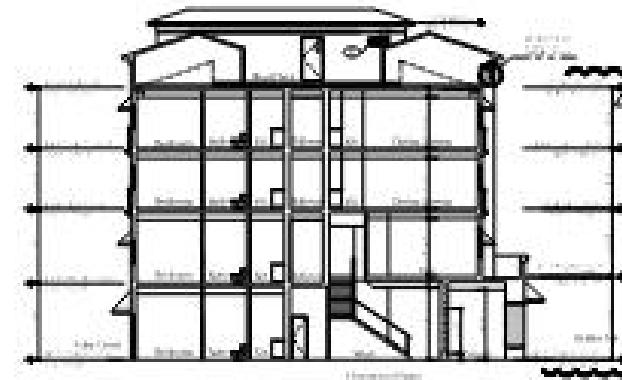
Represents detailed architectural sectional views of a building design, providing insight into the internal structure and spatial layout



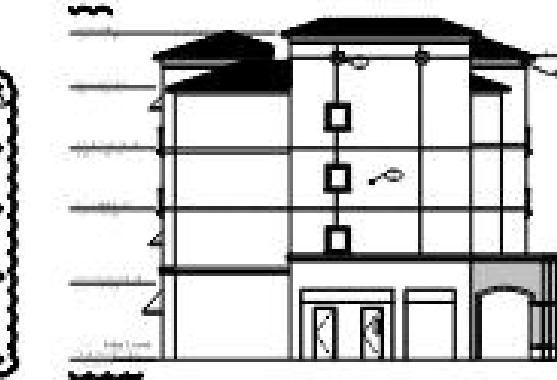
BUILDING A NORTH ELEVATION



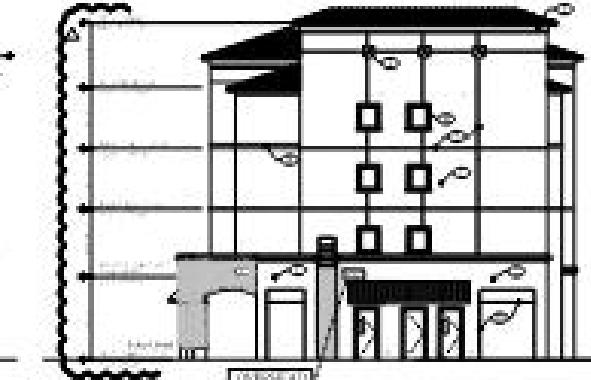
BUILDING A SOUTH ELEVATION



BUILDING A SECTION 1

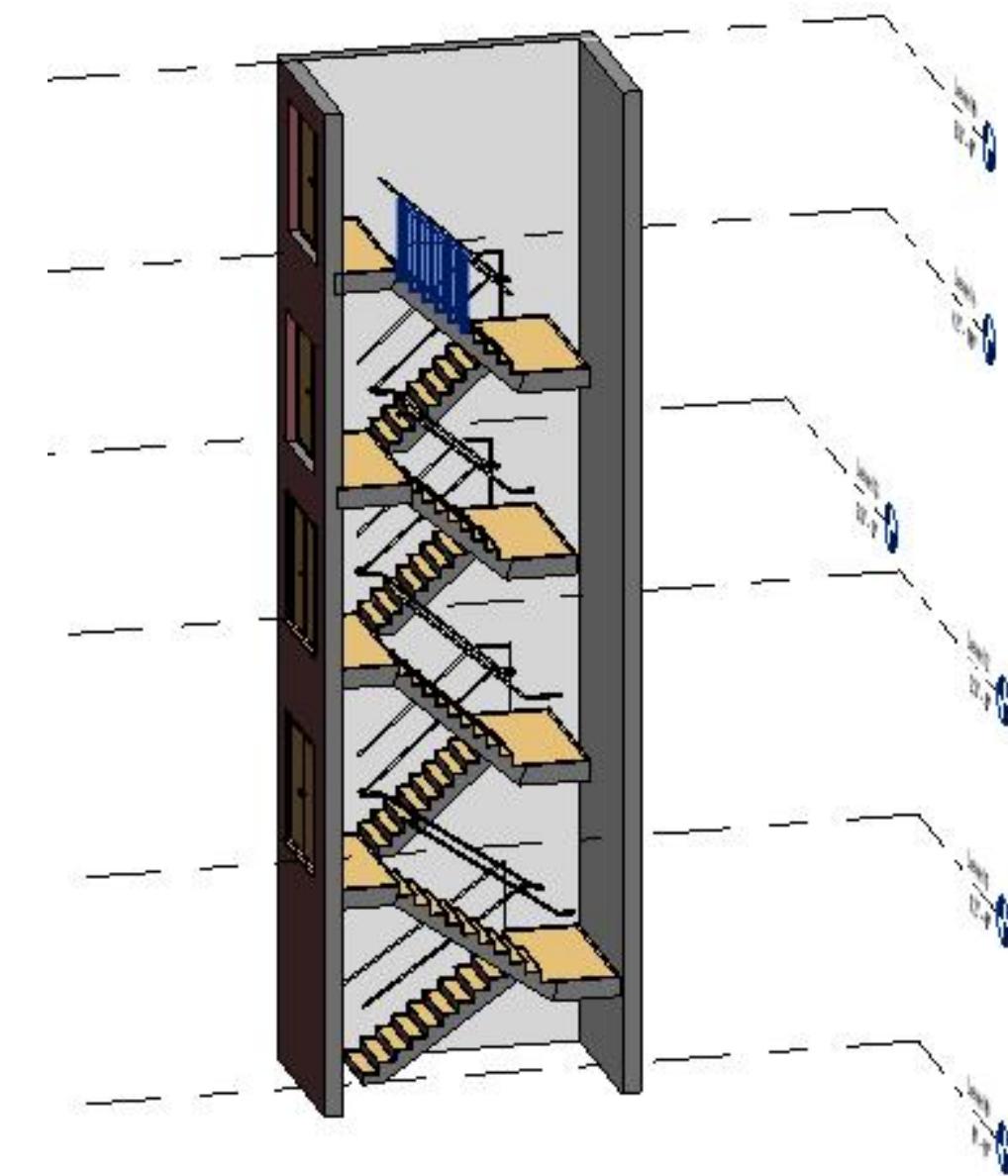
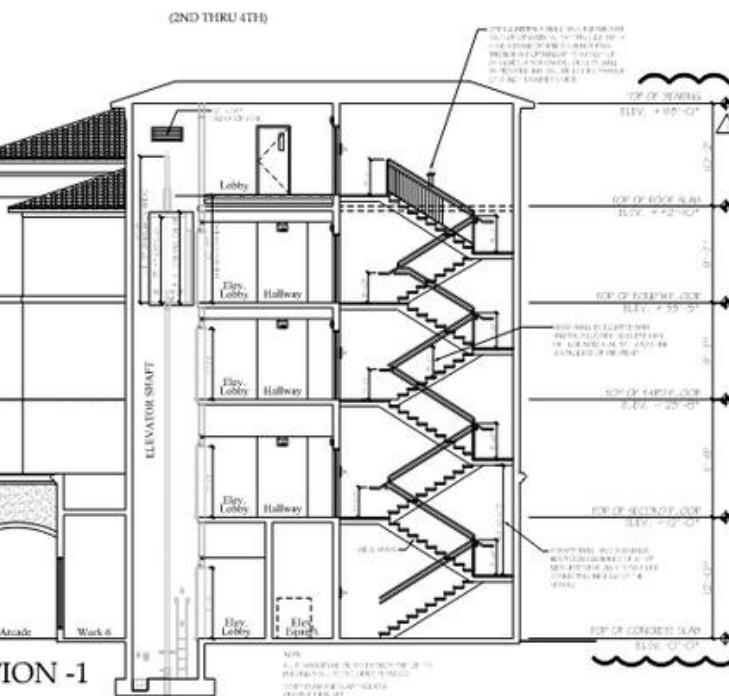


BUILDING A EAST ELEVATION



BUILDING A WEST ELEVATION

SECTIONAL & 3D VIEW OF STAIR CASE





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DOORS AND WINDOWS SCHEDULE

A detailed chart listing specifications for doors and windows, including dimensions, materials, and types.

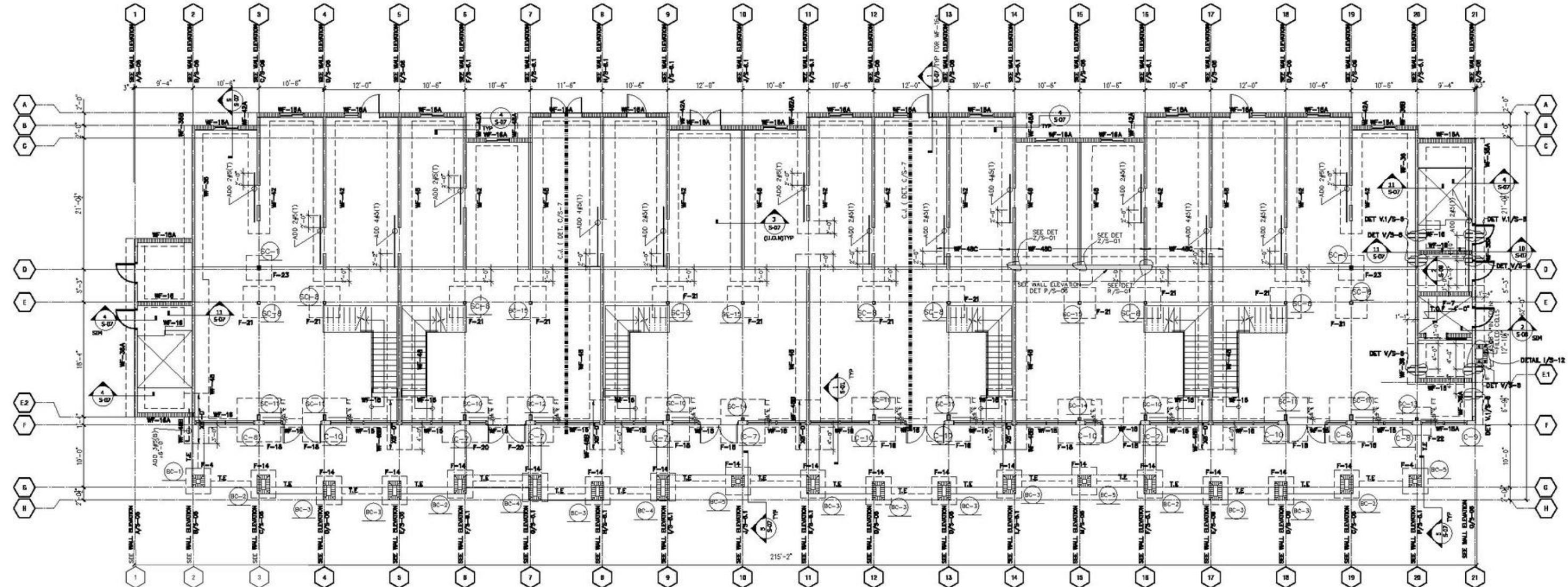


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03

STRUCTURAL



FOUNDATION & GROUND FLOOR PLAN

This structural drawing provides a detailed layout of the building's foundational and framing elements, ensuring stability.



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This document provides structural component specifications essential for construction accuracy and load-bearing efficiency.

Lists column sizes,
reinforcement details, and
positioning.

Ensures proper load
transfer from upper floors
to the foundation.

COLUMN SCHEDULE (FY=50 KSI)						
MARK	TYPE (IN)	SIZE (IN)	BASE PLATE/VERT REINF.	2ND FL. PLATE (IN)	TOP PLATE ROOF	REMARKS
SC-1	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET A/S-10	18"x18"X $\frac{3}{8}$ " DET H/S-11	18"x18"X $\frac{3}{8}$ " DET H/S-11	DET S/S-10
SC-2	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET R/S-11 DET B/S-11	16"x16"X $\frac{3}{8}$ " DET C/S-11	16"x16"X $\frac{3}{8}$ " DET H/S-11	DET S/S-11
SC-3	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET R/S-11	18"x18"X $\frac{3}{8}$ " DET C/S-11	18"x18"X $\frac{3}{8}$ " DET H/S-11	DET A/S-11
SC-4	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET R/S-11 DET B/S-11 SIM	16"x16"X $\frac{3}{8}$ " DET H/S-11	16"x16"X $\frac{3}{8}$ " DET H/S-11	DET S/S-11 DET A/S-11
SC-5	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET R/S-11 DET O/S-11	18"x18"X $\frac{3}{8}$ " DET H/S-11	18"x18"X $\frac{3}{8}$ " DET H/S-11	DET S/S-11
SC-6	STEEL	6"x6"X $\frac{1}{4}$ "	12"x12"X $\frac{3}{8}$ " DET T/S-11 DET H/S-11	16"x16"X $\frac{3}{8}$ " DET H/S-11	16"x16"X $\frac{3}{8}$ " DET H/S-11	DET S/S-11
SC-8	STEEL	6"x6"X $\frac{1}{8}$ "	12"x12"X $\frac{3}{8}$ " DET A/S-11	12"x12"X $\frac{3}{8}$ " DET H/S-11	SEE WALL ELEVATIONS	DET S/S-11
SC-10	STEEL	6"x12"X $\frac{1}{2}$ "	12"x12"X $\frac{3}{8}$ " DET A/S-11 DET H/S-11	18"x18"X $\frac{3}{8}$ " DET H.1/S-11	SEE WALL ELEVATIONS	DET S/S-11
SC-11	STEEL	6"x12"X $\frac{1}{2}$ "	12"x12"X $\frac{3}{8}$ " DET R.2/S-11 DET A/S-11	18"x18"X $\frac{3}{8}$ " DET H.1/S-11	SEE WALL ELEVATIONS	DET S/S-11
SC-12	STEEL	6"x6"X $\frac{1}{8}$ "	8"x14"X $\frac{1}{2}$ " DET R.6/S-11 DET A/S-11	14"x14"X $\frac{1}{2}$ " DET G/S-11	SEE WALL ELEVATIONS	DET S/S-11
SC-13	STEEL	6"x6"X $\frac{1}{8}$ "	8"x14"X $\frac{1}{2}$ " DET R.6/S-11 DET A/S-11	16"x16"X $\frac{3}{8}$ " DET H.7/S-11		DET S/S-11
SC-14	STEEL	6"x6"X $\frac{1}{2}$ "	8"x14"X $\frac{1}{2}$ " DET R.6/S-11 DET A/S-11	16"x16"X $\frac{3}{8}$ " DET H.7/S-11	14"x14"X $\frac{1}{2}$ " DET G/S-11 SIMILAR	DET S/S-11
SC-15	STEEL	6"x6"X $\frac{1}{2}$ "	12"x12"X $\frac{3}{8}$ " DET A/S-11	12"x12"X $\frac{3}{8}$ " DET H.2/S-11	14"x14"X $\frac{1}{2}$ " DET G/S-11 SIMILAR	DET S/S-11

FOOTING SCHEDULE

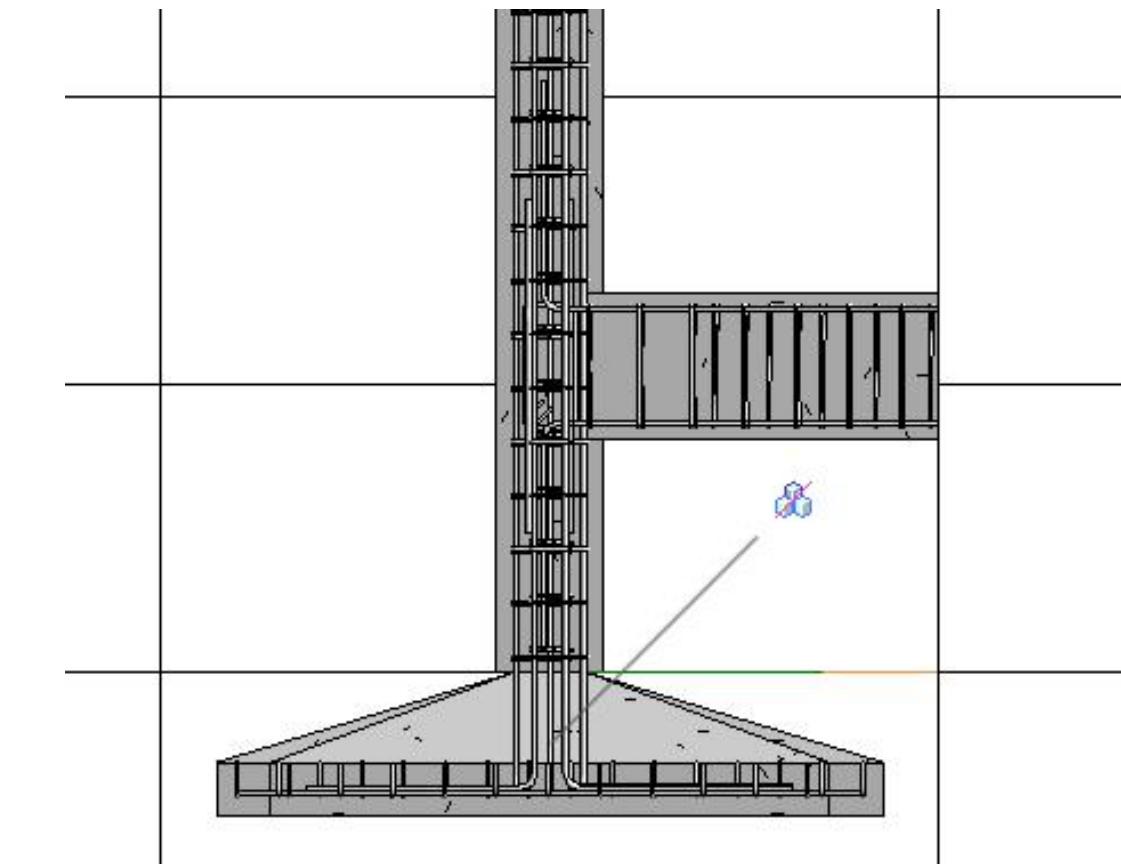
MARK	SIZE (IN)	DEPTH (IN)	LONGITUDINAL REINFORCEMENT (BARS)	TRANSVERSE (BOT. U.O.N.)	REMARKS
WF-16	16"	16" MIN	2#8		MONOLITHIC
WF-16A	16"	16" MIN	2#5		MONOLITHIC
WF-36	36"	16" MIN	2#8	#4@12"	MONOLITHIC
WF-36A	36"	12"	4#6	#4@14"	MONOLITHIC SEE SECT 4/S-7
WF-36B	36"	15"	5#5	#4@12"	MONOLITHIC SEE DET J/S-17
WF-42	42"	15"	4#5	#4@12"	MONOLITHIC
WF-48	48"	12"	4#5	#4@12"	MONOLITHIC
WF-48A	48"	12"	4#5	#4@12"	SEE SECT 4/S-7
WF-49E	48"	16"	5#5	#5@12"	MONOLITHIC DET J/S-07
WF-49G	48"	16"	7#8(B#8)*	#6@10"	DEVELOP 4"-8" INTO WF-48B
WF-49D	48"	16"	5#8(B)	#5@12"	
F-1	4'-0" x 4'-0"	12" MIN	5#5	5#5	SEE SECT 4/S-7
F-2	4'-0" x 6'-0"	12" MIN	8#5	8#5	SEE SECT 4/S-7
F-3	4'-0" x 4'-0"	12" MIN	5#5	5#5	SEE SECT 4/S-7
F-4	4'-0" x 4'-0"	12" MIN	5#5	5#5	SEE SECT 4/S-7
F-5	4'-0" x 4'-0"	12" MIN	5#5	5#5	SEE SECT 4/S-7
F-6	4'-0" x 4'-0"	12"/16"	5#5	5#5	SEE DET A/S-11
F-7	SEE SECT 2/S-8	12"	#5@0"(T#8)	#5@0"(T#8)	
F-8	5'-0" x 5'-0"	16"	5#6	5#6	
F-9	5'-0" x 5'-0"	12"	5#5	5#5	
F-10	4'-9" x 4'-9"	12"	5#5	5#5	
F-11	5'-0" x 5'-0"	12"	7#5	7#5	
F-12	5'-8" x 5'-8"	14"	6#6	6#6	
F-13	4'-6" x 4'-6"	12"	5#5	5#5	NON MONOLITHIC
F-14	4'-0" x 4'-0"	12" MIN	4#8	5#5	SECT 4/S-7
F-15	5'-0" x 5'-0"	12" MIN	6#5	6#5	SECT 4/S-7
F-16	5'-0" x 5'-0"	14" MIN	6#6	6#6	
F-17	4'-0" x 4'-0"	12"	4#5	4#5	NON MONOLITHIC
F-18	7'-0" x 7'-0"	19" MIN	2#6	2#6	DET A/S-11 SIM.
F-19	6'-6" x 6'-6"	19" MIN	5#6	5#6	DET A/S-11 SIM.
F-20	7'-4" x 7'-4"	20"	10#6	10#6	DET A/S-11 SIM
F-21	5'-0" x 5'-0"	16"	6#5	6#5	DET A/S-11
F-22	4'-6" x 4'-6"	16"	5#5	5#5	DET A/S-11
F-23	4'-0" x 4'-0"	16"	5#5	5#5	DET A/S-11

Specifies beam dimensions,
reinforcement details, and
placement.
Helps in ensuring structural
stability and weight distribution.

Details footing sizes,
reinforcement, and
depth specifications.

MARK	SIZE (IN.)	REINFORCEMENTS			NOTES
		TOP	BOTTOM	"C"("E")	
B-1	8"x24"*	2#7	2#7		#3 BAL @ 6.5"
B-300	12"x18"	2#6	2#6	2#5	#4 BAL @ 8"
B-600	8"x16"	2#6	2#6		#3 BAL @ 7"
B-4	8"x12"	2#5	2#5		#3 3@4", BAL @ 12"
B-3	6"x60"	4#5@6"	4#5@6"		#3 BAL @ 6"
2B-1	9"x24"	2#7	2#7		#4 BAL @ 10"
2B-2	8"x16"(MIN)*	2#6	2#6		4@6", BAL @ 12" SEE ARCHITECTURAL & DET T/S-11.1
2B-2A	8"x16(MIN)*	2#6	2#6		6@6", BAL @ 12" SEE ARCHITECTURAL T/S-11.1 & SECT 11/S-02
2B-3	8"x48*	2#6	2#6		#4 BAL @ 16" *VERIFY

3D VIEW OF REINFORCEMENT



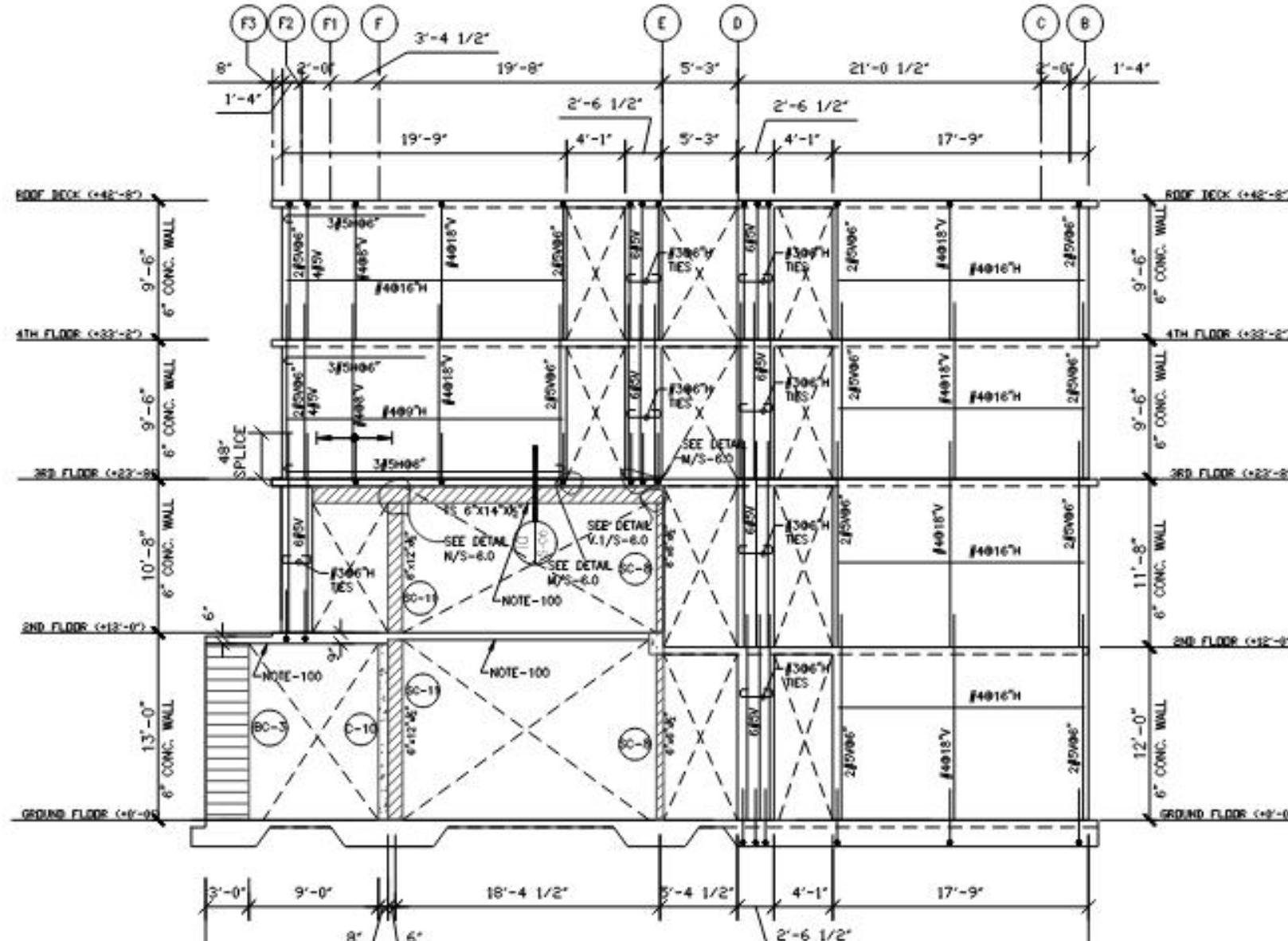
A 3D representation
of structural
reinforcement in
columns and footings.



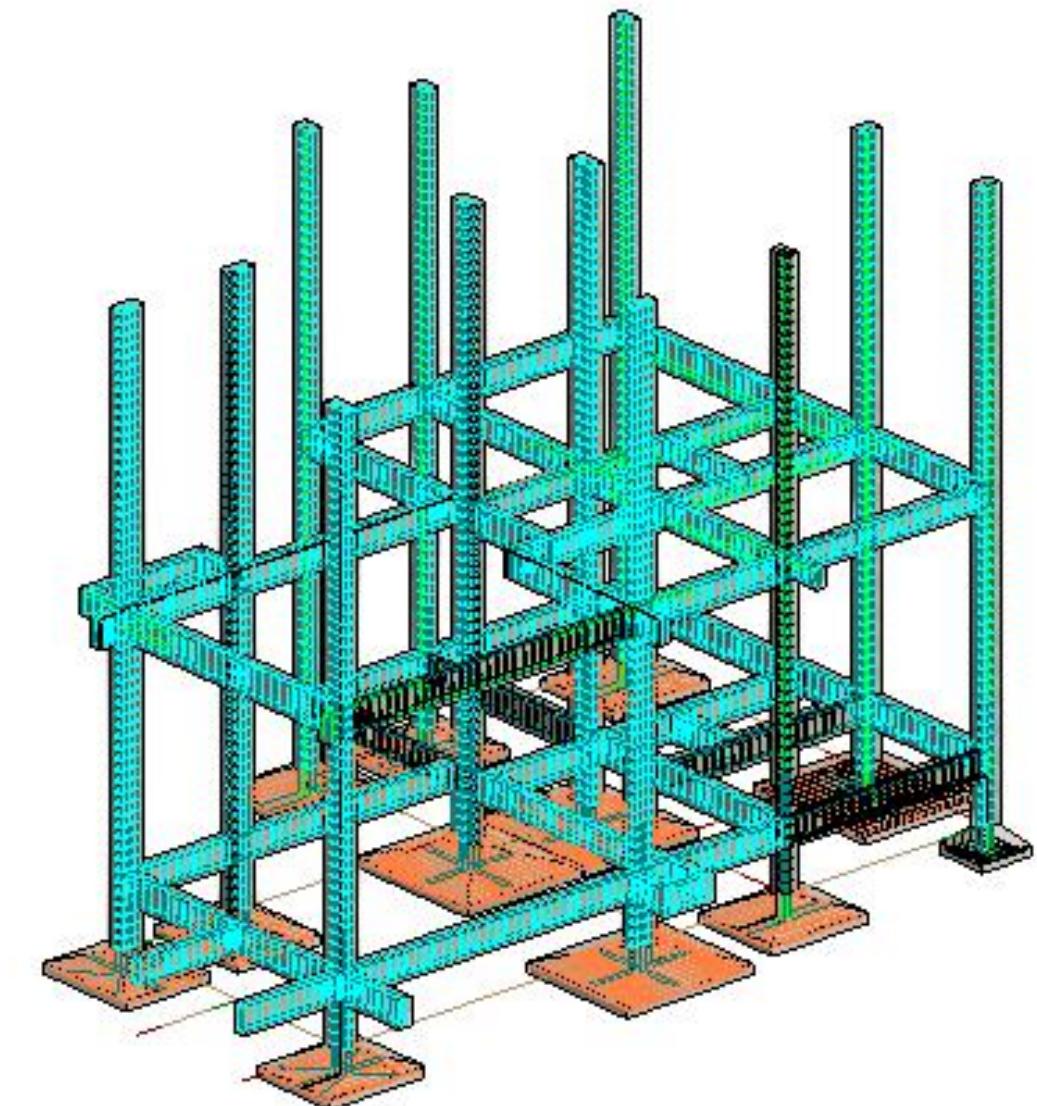
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Detailes construction drawing, which is essential
for executing the structural and architectural
design accurately.



A 3D representation of structural
reinforcement in columns and footings.





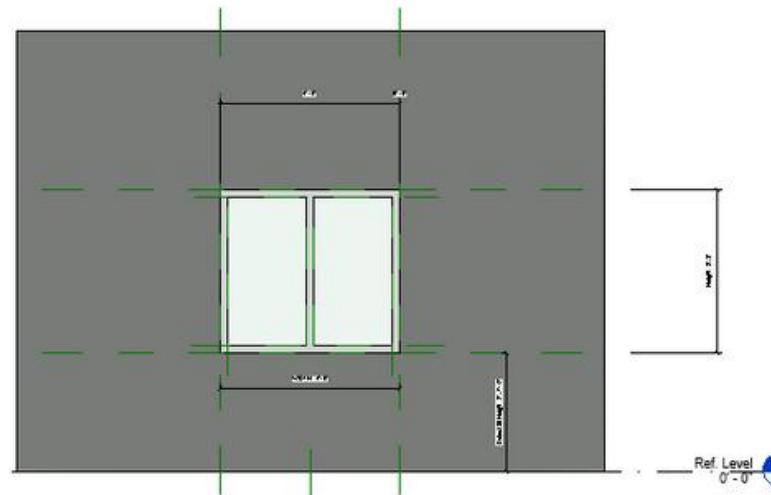
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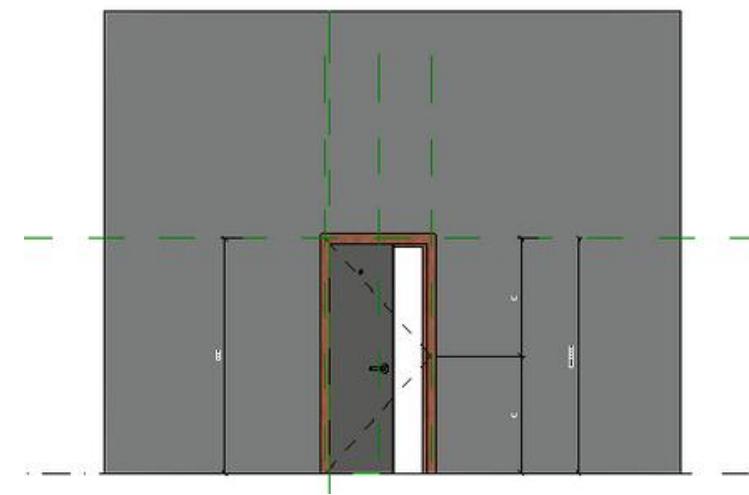
04

FAMLIY CREATION

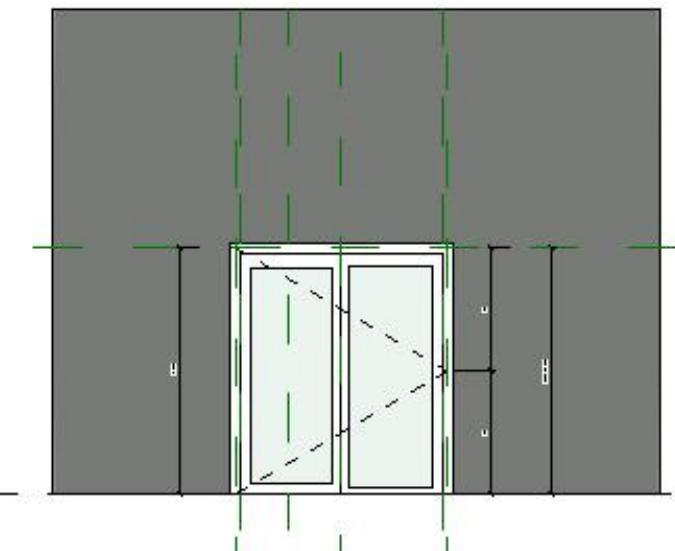
PARAMETRIC WINDOW FAMILY



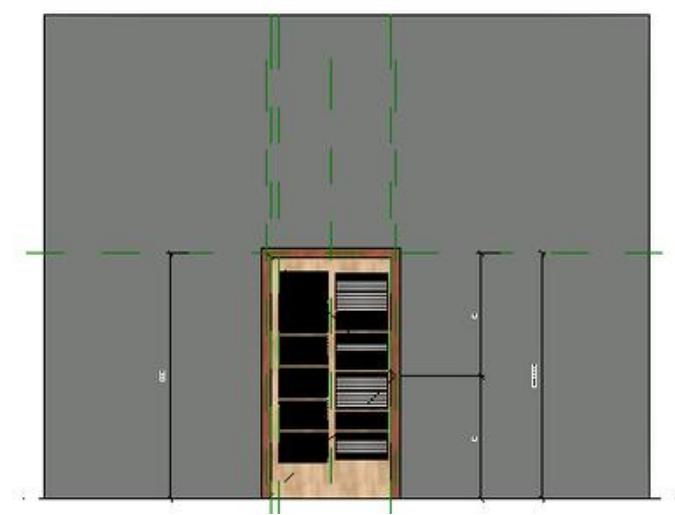
PARAMETRIC DOOR FAMILY



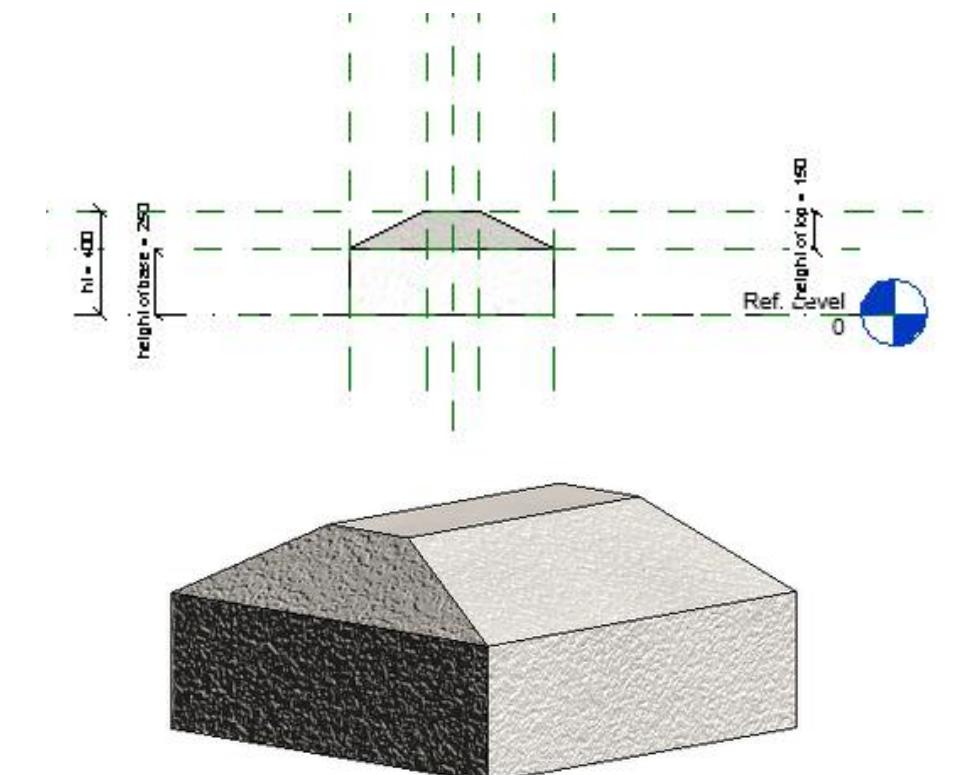
PARAMETRIC DOOR FAMILY



PARAMETRIC DOOR FAMILY



TRAPEZOIDAL FOOTING



TAPERED FOOTING





MECHANICAL

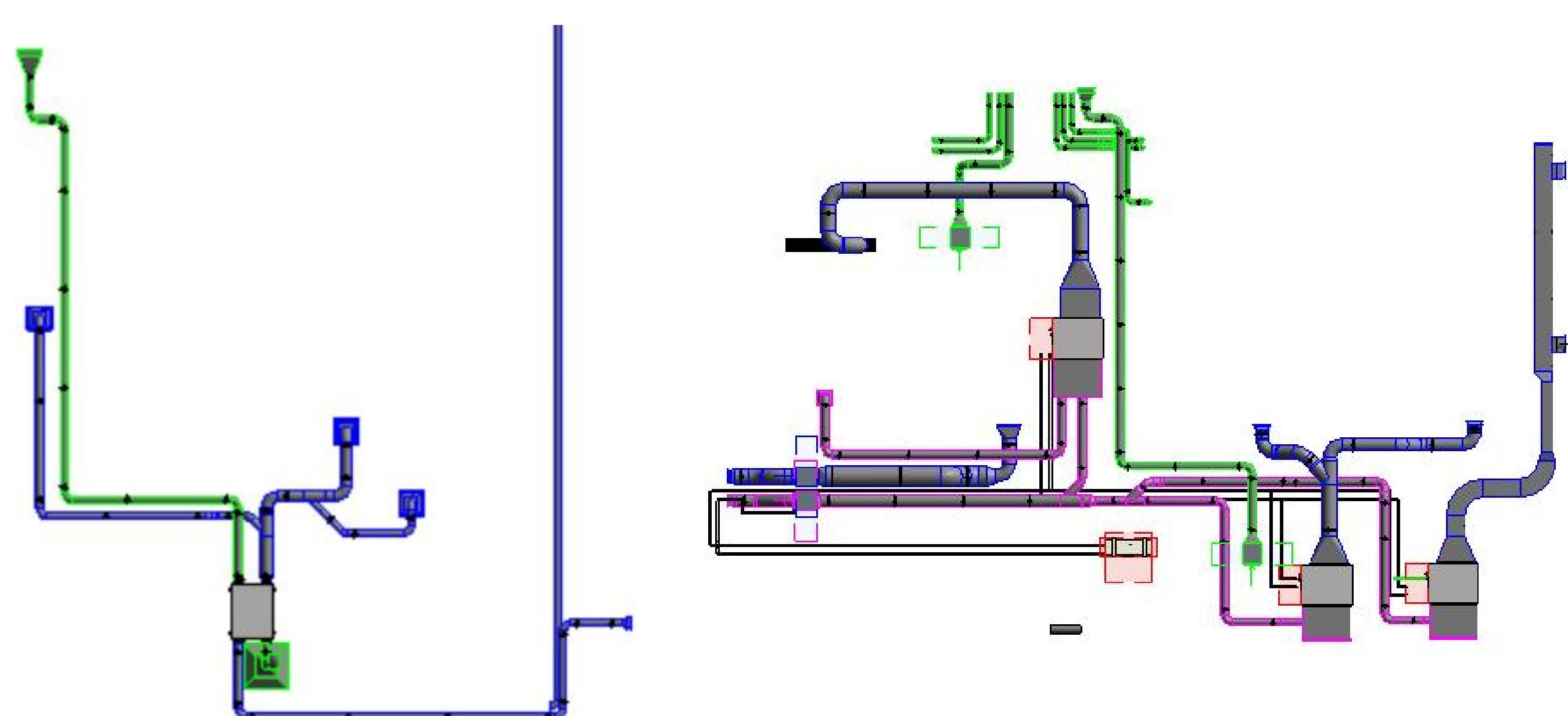
05

3D

MODELLING

A visual representation of the HVAC (Heating, Ventilation, and Air Conditioning) system.

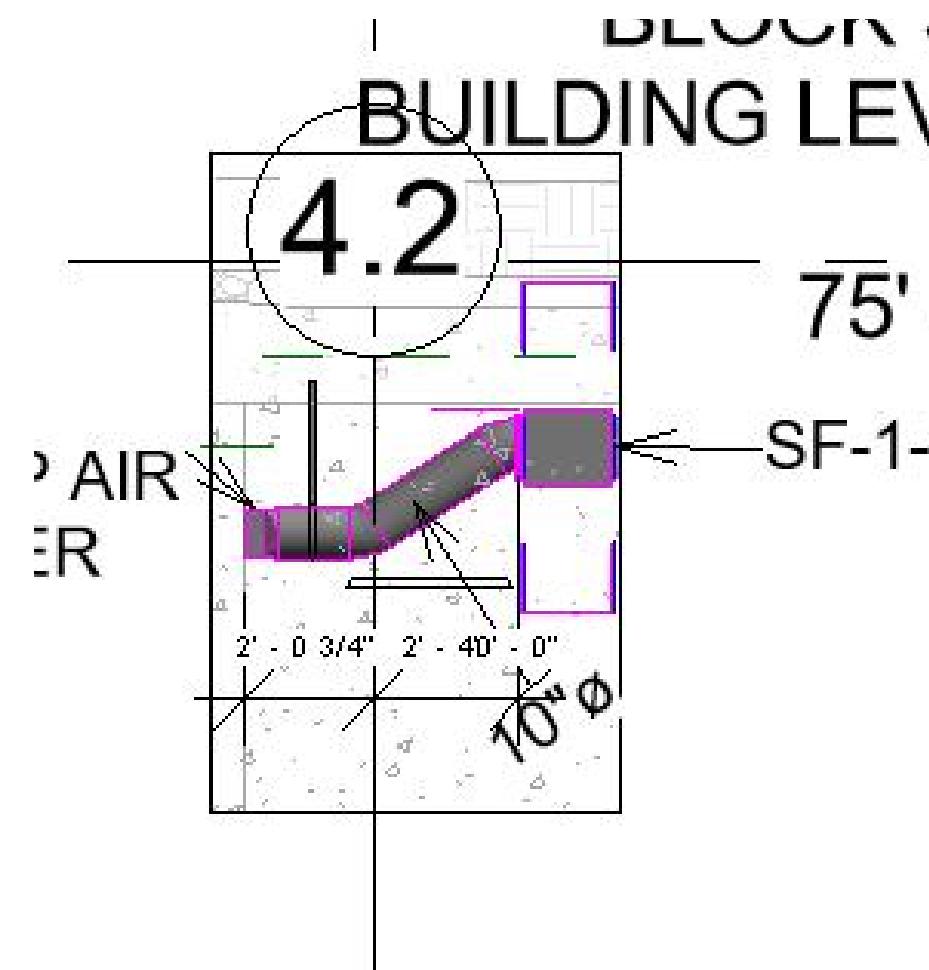
Shows the routing of ducts, fittings, and mechanical components



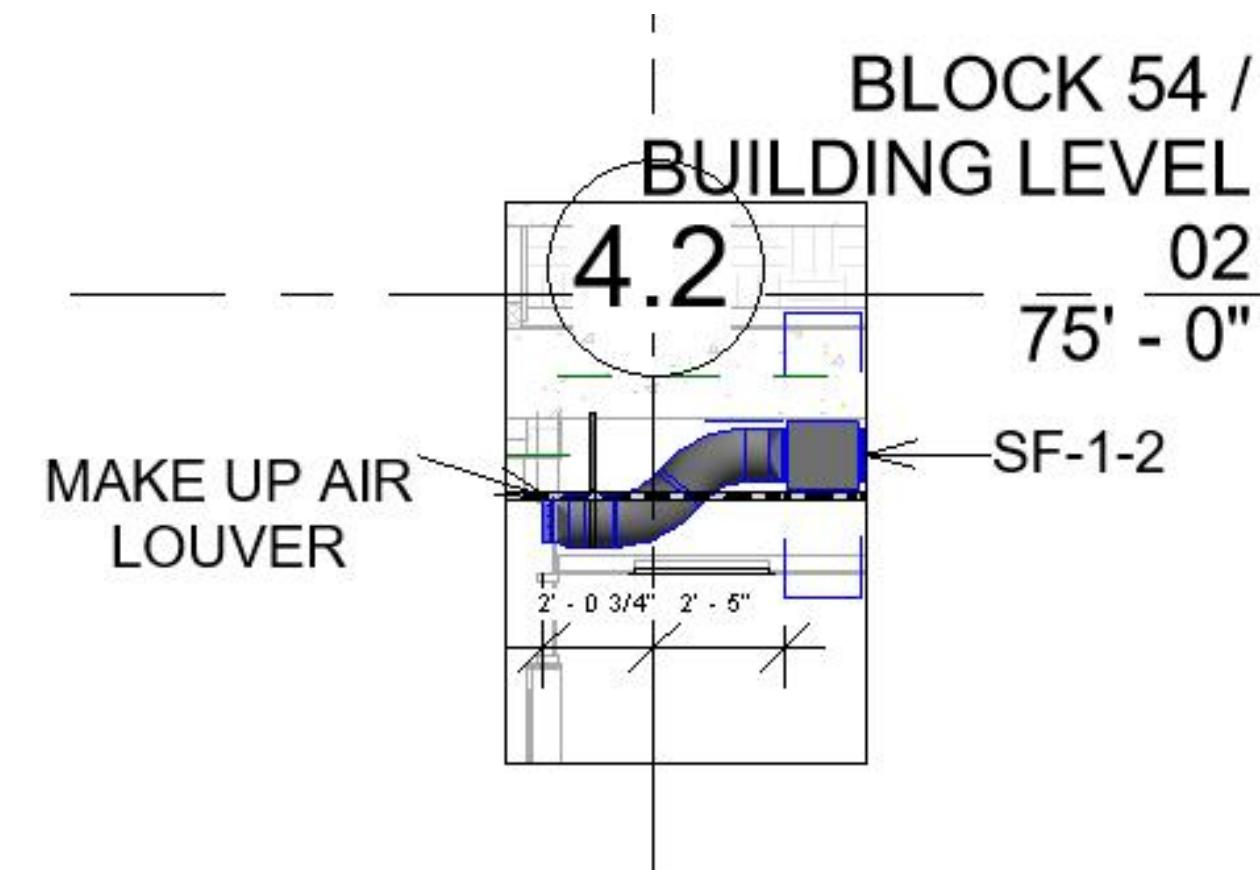
This showcases a 3D visualization and sectional details of mechanical ductwork and fittings, essential for HVAC system installation.



SECTIONAL VIEW OF FITTINGS



SECTIONAL VIEW OF FITTINGS



This shows the schedules for duct material & insulation

Duct Material Schedule

Location	System(s)	Shape	Sizes	Materials	Joints	Insulation
Indoor - Common Areas	Supply, Return	Rectangular	All	Galvanized Sheet Metal	TDF, Duct-Mate, or equal (installation contractor's choice)	External
Indoor - Common Areas	Supply, Return	Round	All	Galvanized Sheet Metal	Slip Couplings with Screws/Rivets	External
Indoor - Common Areas	Exhaust	Rectangular	All	Galvanized Sheet Metal	TDF, Duct-Mate, or equal (installation contractor's choice)	None
Indoor - Common Areas	Exhaust	Round	All	Galvanized Sheet Metal	Slip Couplings with Screws/Rivets	None
Indoor - Common Areas	All, last 5-feet before air register	Round	All	Thermaflex M-KE or equal	Slip Couplings with Screws/Rivets	External
Indoor - Residential Units	Supply	Round	All	Thermaflex M-KE or equal	Slip Couplings with Screws/Rivets	External
Indoor - Residential Units	Bathroom Exhaust	Round	All	Aluma Flex	Slip Couplings with Screws/Rivets	None
Indoor - Residential Units	Kitchen Exhaust	Round	All	Galvanized Sheet Metal	Slip Couplings with Screws/Rivets	None

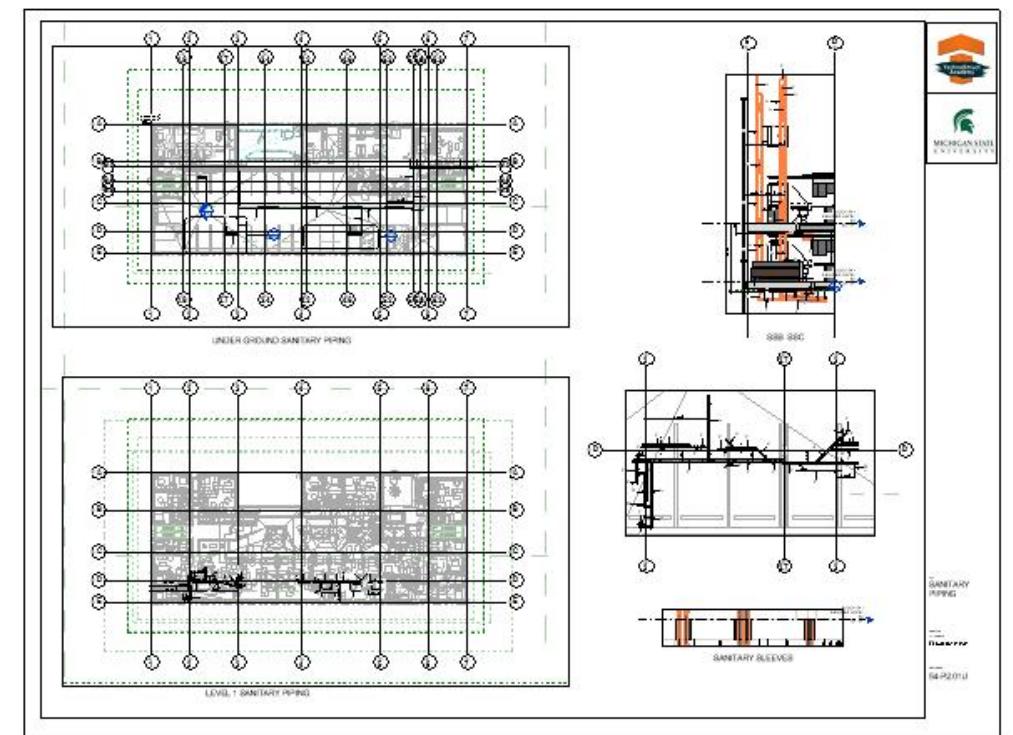
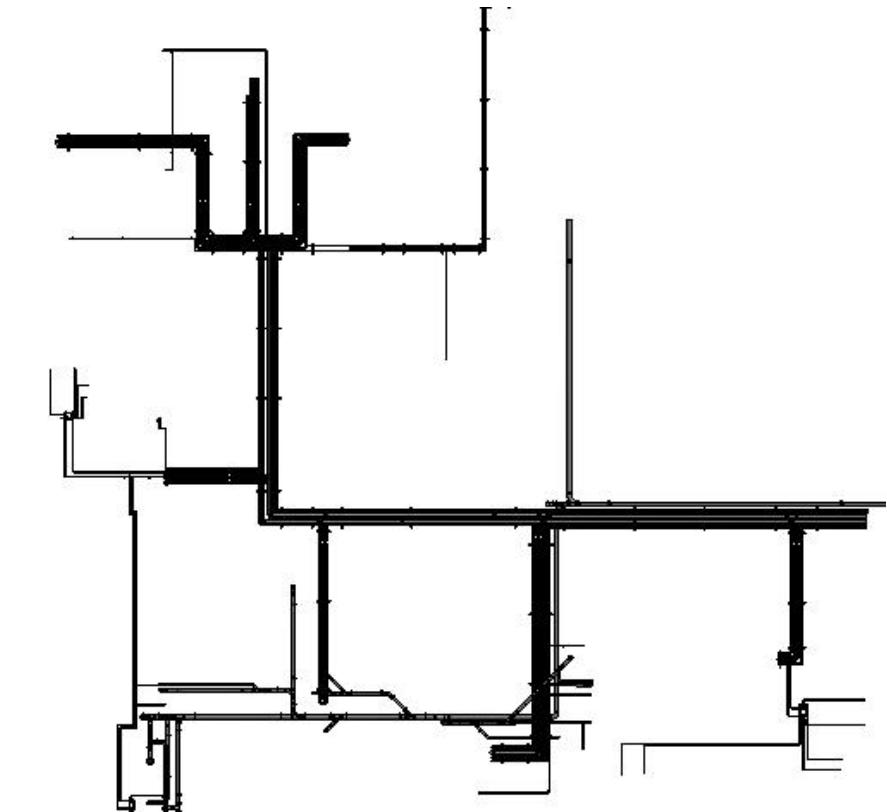
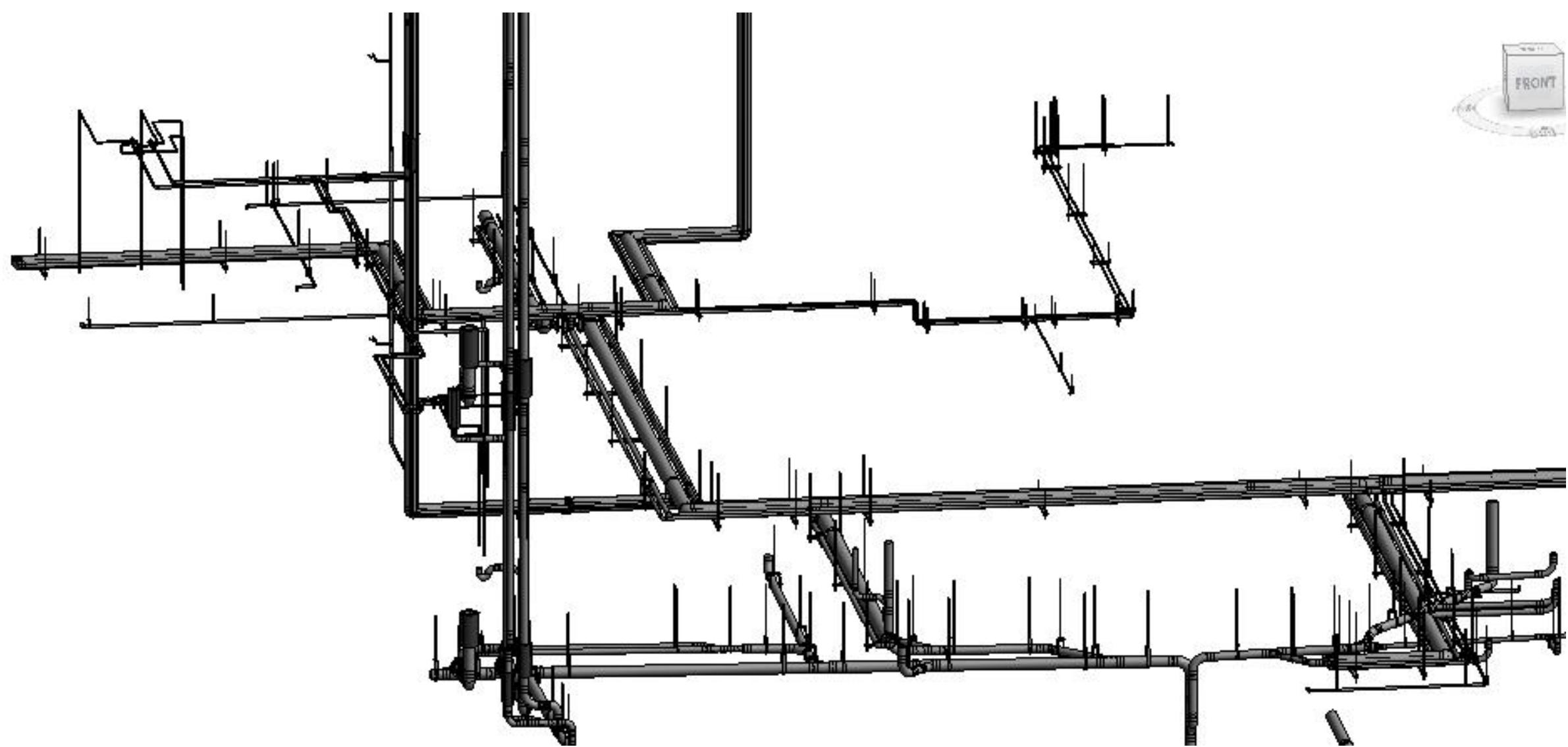
Duct Insulation Schedule

Duct Location	Insulation R-value	Internal Lining Owens Corning Model (for reference only, equivalent products are acceptable)	External Lining Johns Manville Model (for reference only, equivalent products are acceptable)	Minimum Thickness
<i>Space heating systems for locations with less than 4,500 Heating Degree Days (like San Francisco Bay Area)</i>				
On roof or exterior of building	2.1	Duct Liner Board	Microtite EQ PSK Faced	0.5
Attics, garages, and crawl spaces	2.1	Duct Liner Board	Microtite EQ PSK Faced	0.5
Inside exterior envelope wall cavities	2.1	Duct Liner Board	Microtite EQ PSK Faced	0.5
Within conditioned spaces, interior wall cavities, and return ducts in air plenums.	None required	None required	None required	None required
Cement slab or underground	None required	None required	None required	None required
<i>Space cooling-only or combination cooling and heating systems</i>				
On roof or exterior of building	6.3	Duct Liner Board	Microtite EQ PSK Faced	1.6
Attics, garages, and crawl spaces	2.1	Duct Liner Board	Microtite EQ PSK Faced	0.5
Inside exterior envelope wall cavities	2.1	Duct Liner Board	Microtite EQ PSK Faced	0.5
Within conditioned spaces, interior wall cavities, and return ducts in air plenums.	None required	None required	None required	None required
Cement slab or underground	None required	None required	None required	None required



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PLUMBING



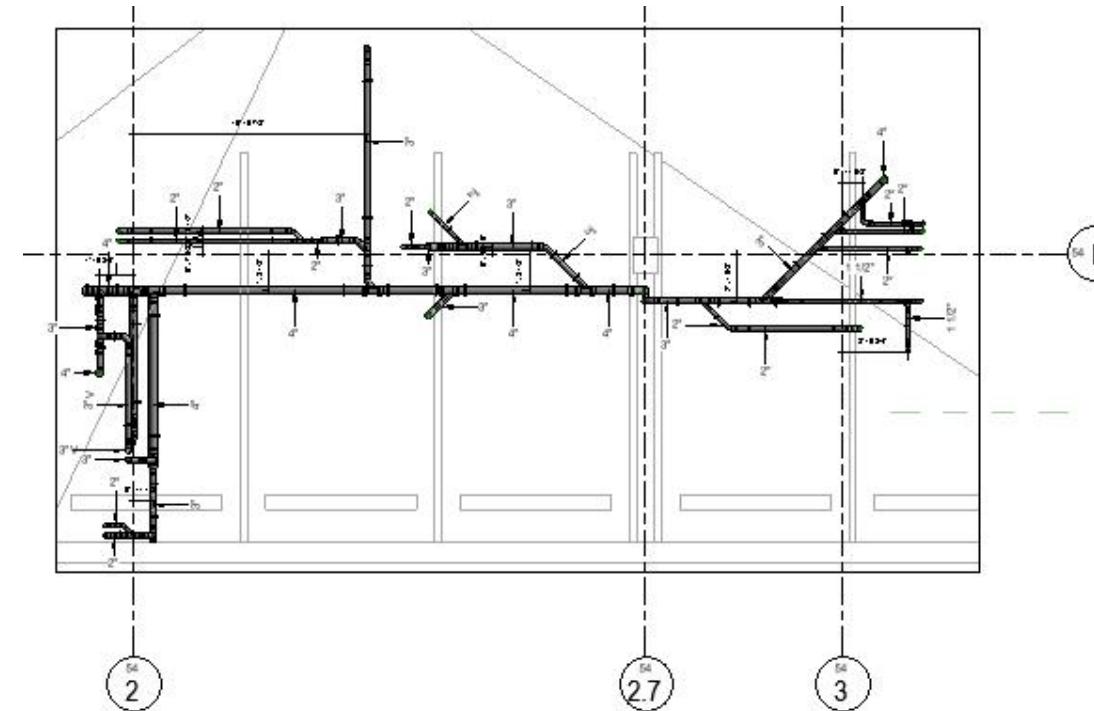
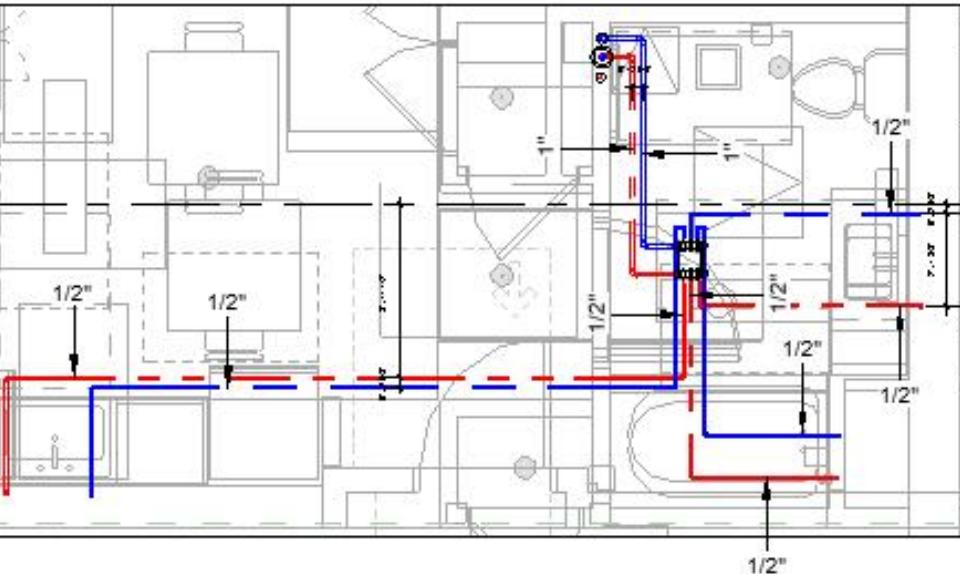
A fully coordinated 3D model displaying the entire plumbing network.

Shows water supply, drainage, venting, and fixture connections.

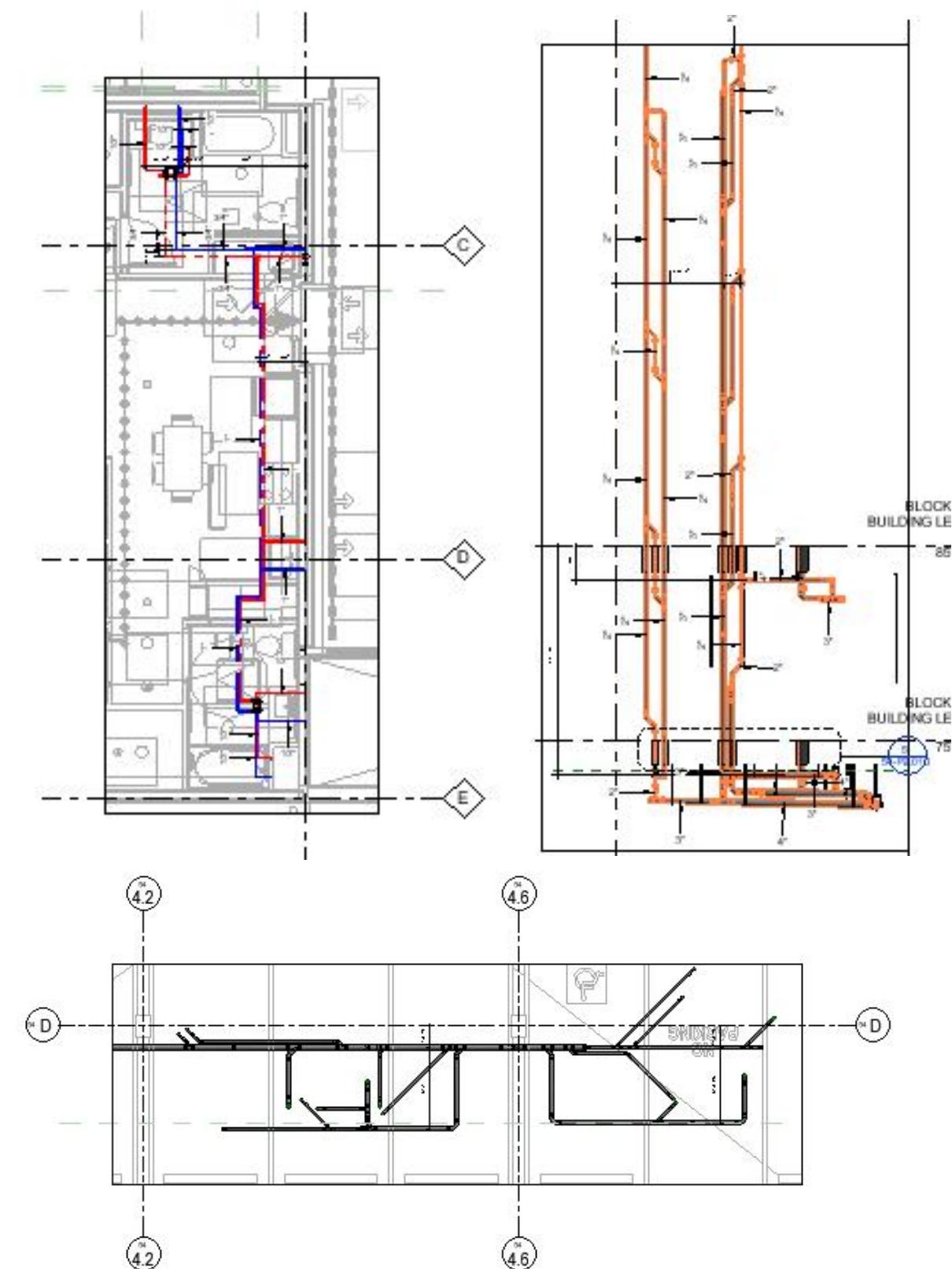
Different colors indicate various pipe systems, helping in clash detection and spatial planning.



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DETAIL VIEW OF DOMESTIC & SANITARY PIPING



PLUMBING LEGEND		
SYMBOL	ABBREV.	DESCRIPTION
— S OR #	S.S. OR WASTE ABOVE FLOOR	
— S OR #	S.S. OR MATE BELOW FLOOR	
SD	SD	STORM DRAIN
SD	SD	STORM DRAIN BELOW GRADE
OD	OD	OVERFLOW DRAIN
PD	PD	PLANTER DRAIN
RWL	RWL	RAINWATER LEADER
V	V	VENT
CW	CW	COLD WATER
HWR	HWR	HOT WATER
HWR	HWR	HOT WATER RETURN
NG	NG	NATURAL GAS LINE
IW	IW	INDIRECT WASTE
CD	CD	CONDENSATE DRAIN
PW	PW	PUNIFORM WASTE
PS	PS	PUNIFORM STORM
●	FCD	FLOOR CLEANOUT
(1)	GCD	GRADE CLEANOUT
	WCD	WALL CLEANOUT
H.B.	H.B.	HOSE BIBB
BV	BV	BALL VALVE
SV	SV	SHUT OFF VALVE
BV	BV	BUTTERFLY VALVE
CV	CV	CHECK VALVE
PRV	PRV	PRESSURE REDUCING VALVE
PTW	PTW	PRESS. TEMP. REDUC. VALVE
(5)	GC	GAR. COCK
-OD-HM-	FCV	FLOW CONTROL VALVE / GAT. SETTER
-OD-	CIRCUIT (CXT.) SETTER	
BFP	BFP	BACKFLOW PREVENTOR
BFBP	BFBP	RED. PRESS. BACKFLOW PREVENTOR
SV	SV	SOLENOID VALVE
DN	DN	DOWN
O	RISE	
④	WATER METER/PUB. WATER METER	
██████	TD	TRENCH DRAIN
████	FD	FLUOR DRAIN
████	FS	FLUOR SINK
↖	RD	ROOF DRAIN
██████	OD	OVERFLOW DRAIN
██████	FPC	FLEXIBLE PIPE CONNECTION
LTS	FS	FLOW SWITCH
④	P.C.	POINT OF CONNECTION
ABV	ABOVE	
AG	AGFA DRAIN	
AG	AG	AG FAIR
A.P.	A.P.	ACCESS PANEL
BTUH	BTUH	THERMAL HEATING UNIT
BP	BP	BOOSTER PUMP
CONT	CONT	CONTRALATION
GPH	GPH	CUBIC FEET PER HOUR
GLG	GLG	CEILING
CP	CP	CIRCULATION PUMP
DS	DS	DRAIN SPOT
DCW	DCW	DOMESTIC COLD WATER
DHW	DHW	DOMESTIC HOT WATER
DFU	DFU	DRAINAGE FIXTURE UNIT
(E)	(E)	PREF. "E" DENOTES EXISTING
EMH	EMH	ELECTRIC WATER HEATER
FU	FU	FOOTURE UNIT
FCL	FCL	FAN COIL UNIT
HWP	HWP	HOT WATER PUMP
HWT	HWT	HOT WATER STORAGE TANK
HE	HE	HEAT EXCHANGER
INW	INW	INSTANTNEOUS WATER HEATER
IE	IE	INVERT ELEVATION
M.H.	M.H.	MANHOLE
N.I.C.	N.I.C.	NOT IN CONTRACT
NPW	NPW	NON-POTABLE WATER
RW	RW	RECLAIMED WATER
SS	SS	SANITARY SCHED
ST	ST	STORAGE TANK
SP	SP	SOUP PUMP
EP	EP	EJECTOR PUMP
TD	TD	TRAP DRAINED
TYP	TYP	TYPICAL
UTR	UTR	UP TO ROOT
VTR	VTR	VENT THRU ROOF
WH	WH	WATER HEATER
WHA	WHA	WATER HAMMER ARRESTER
WM	WM	WALL MOUNTED

PIPE INSULATION SCHEDULE			
CODE CYCLE	2016 - CALIFORNIA ENERGY STANDARDS NONRESIDENTIAL MANUAL REFER TO TABLE 120.3-A		
TEMP RANGE (°F)	105-140		
INSUL SCH	NOMINAL PIPE DIAMETER	INSULATION THICKENERS	
	< 1"	1"	
	1" TO 1-1/2"	1-1/2"	
	> 1-1/2"	2" ◊	

NOTES:

◊ GOVERNING CODE (SUPERCEDED TITLE-24) 2016 CPC, TABLE 609.11.2

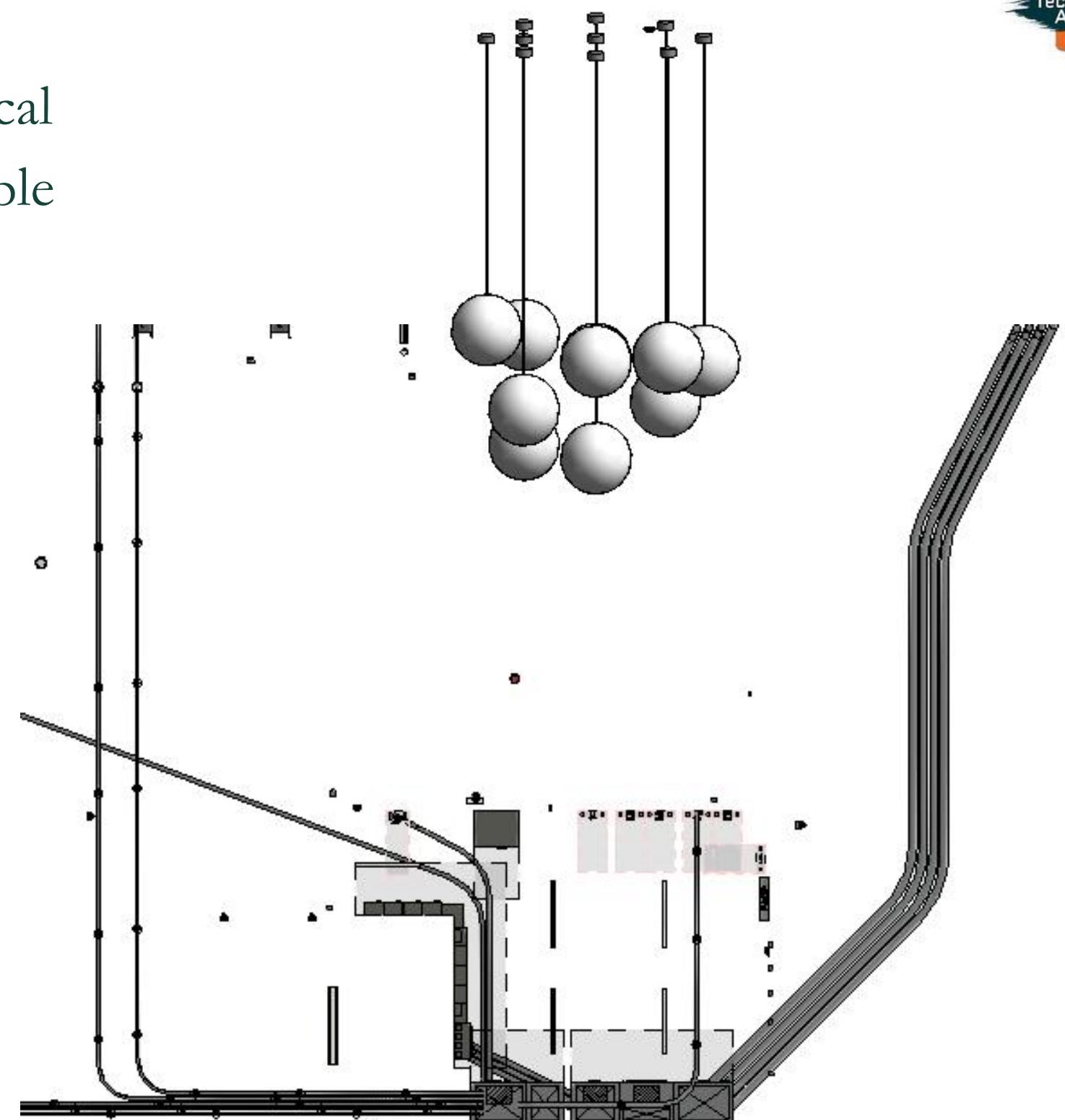
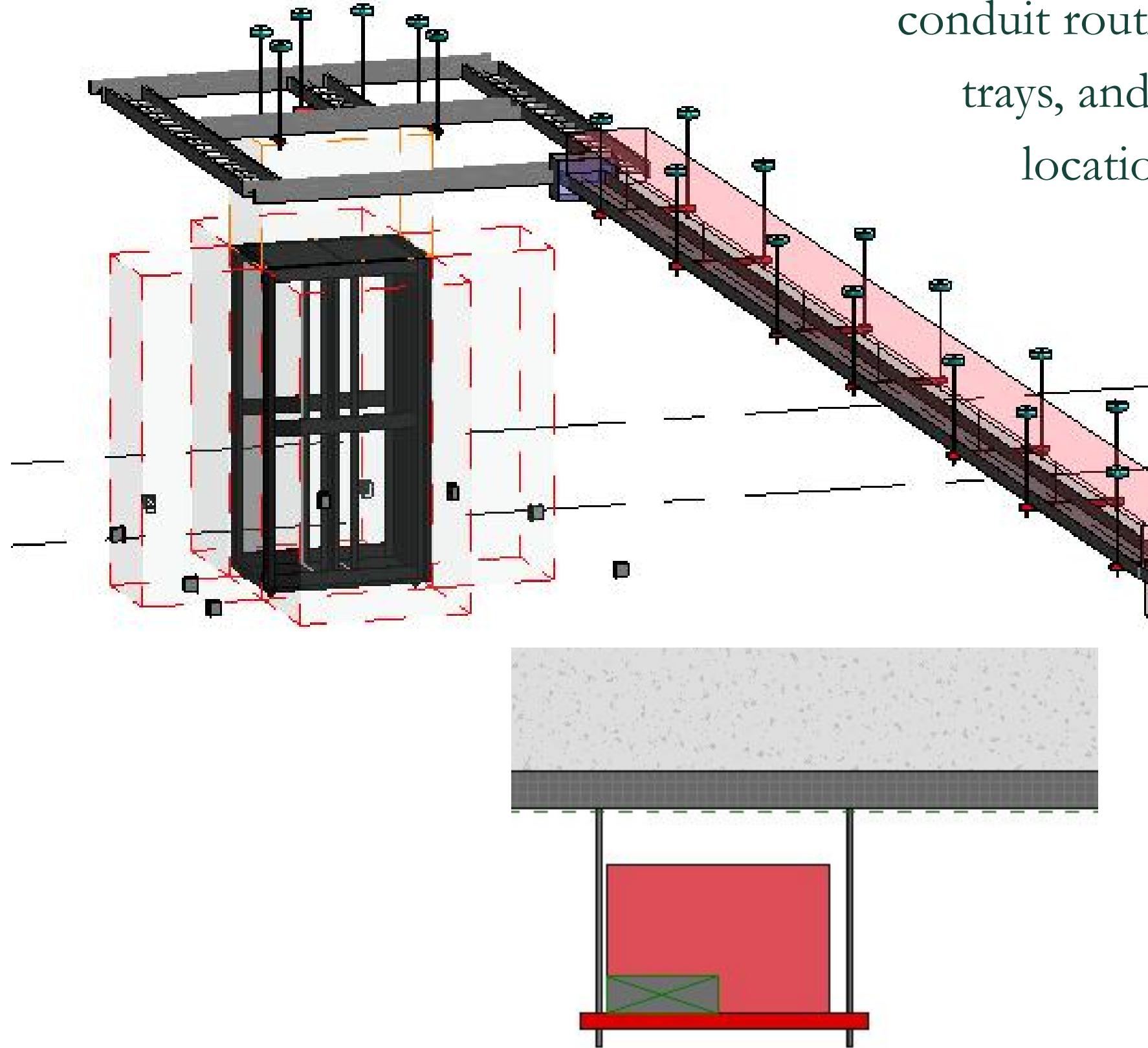
◊ PER CPC ALL HOT WATER TO BE INSULATED



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ELECTRICAL

Displays the electrical
conduit routing, cable
trays, and panel
locations.

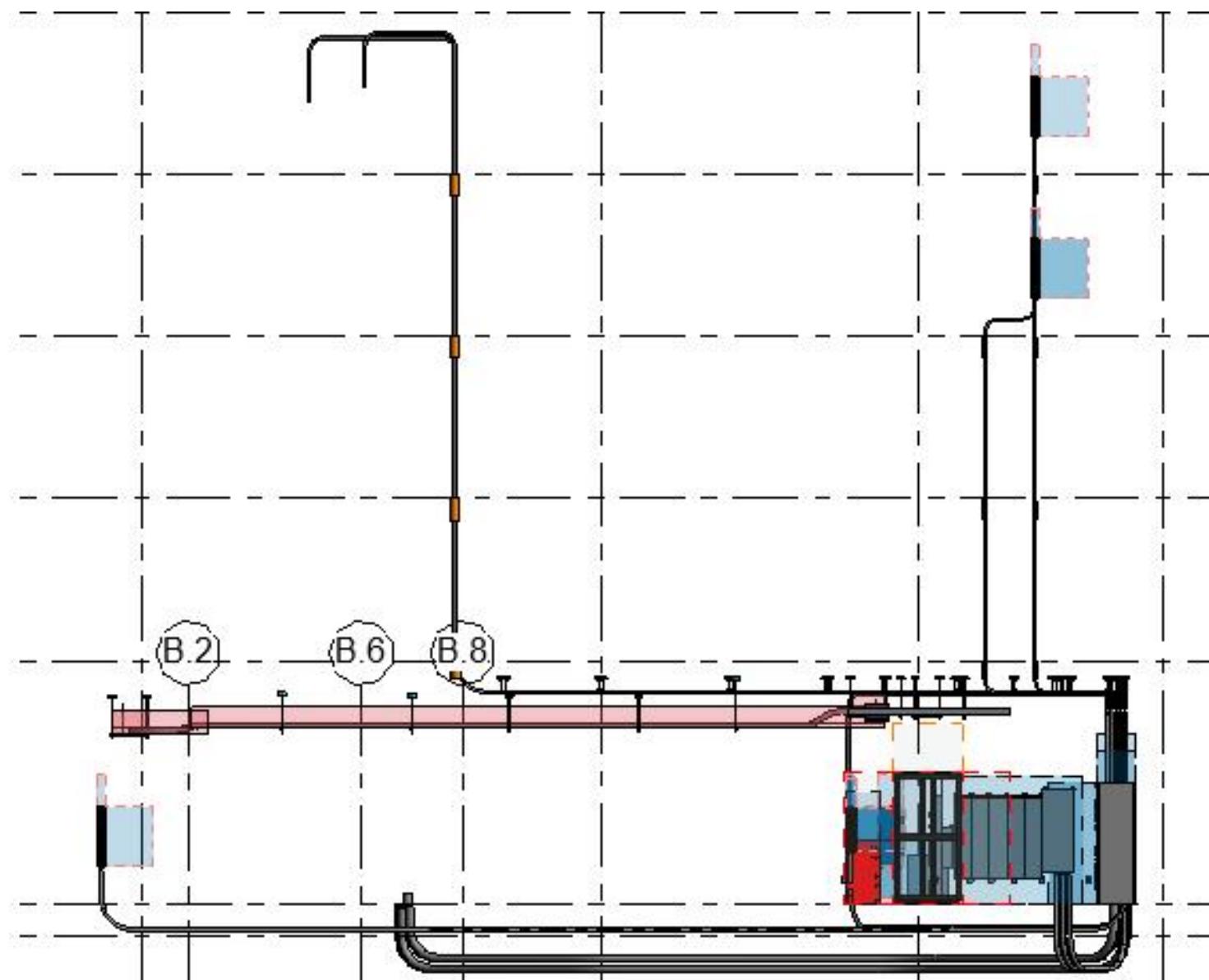




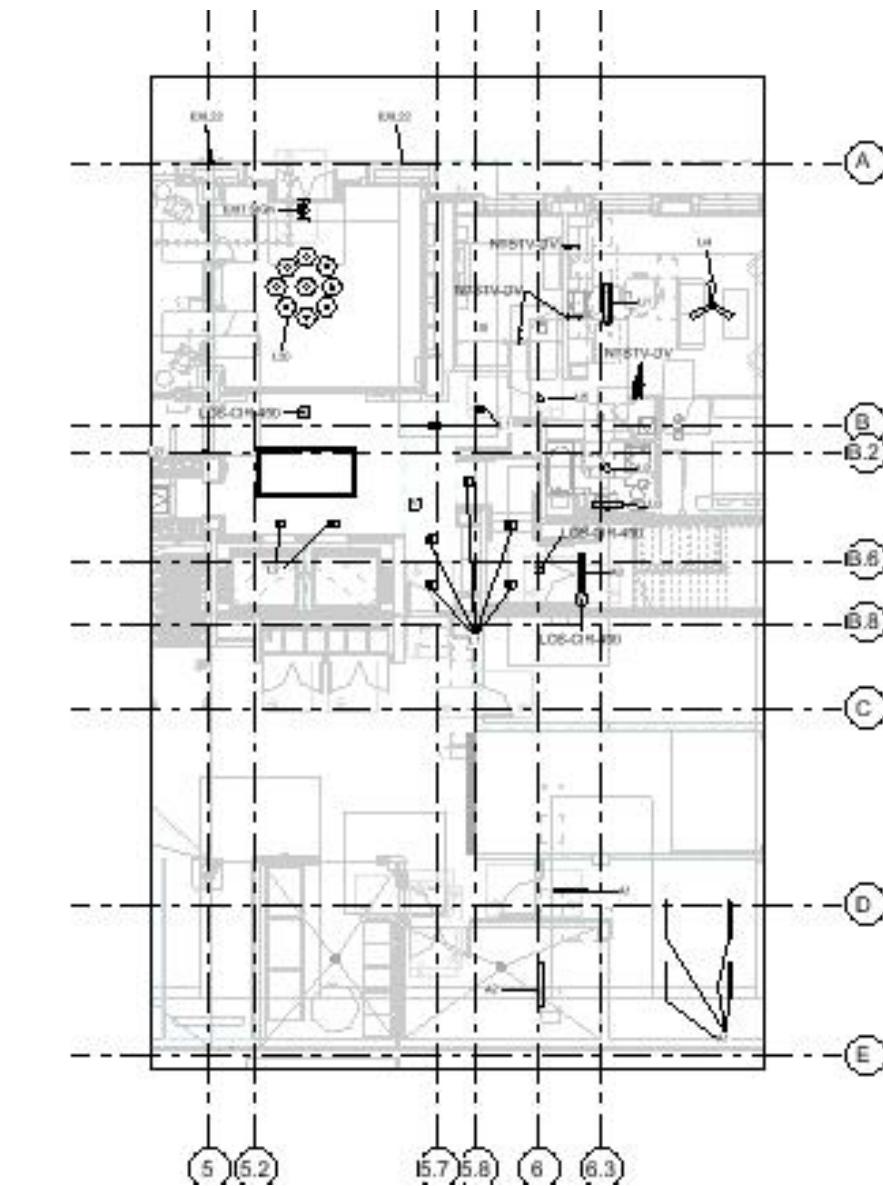
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DETAIL VIEW OF CONDUIT & FIXTURES



CONDUIT 3D VIEW

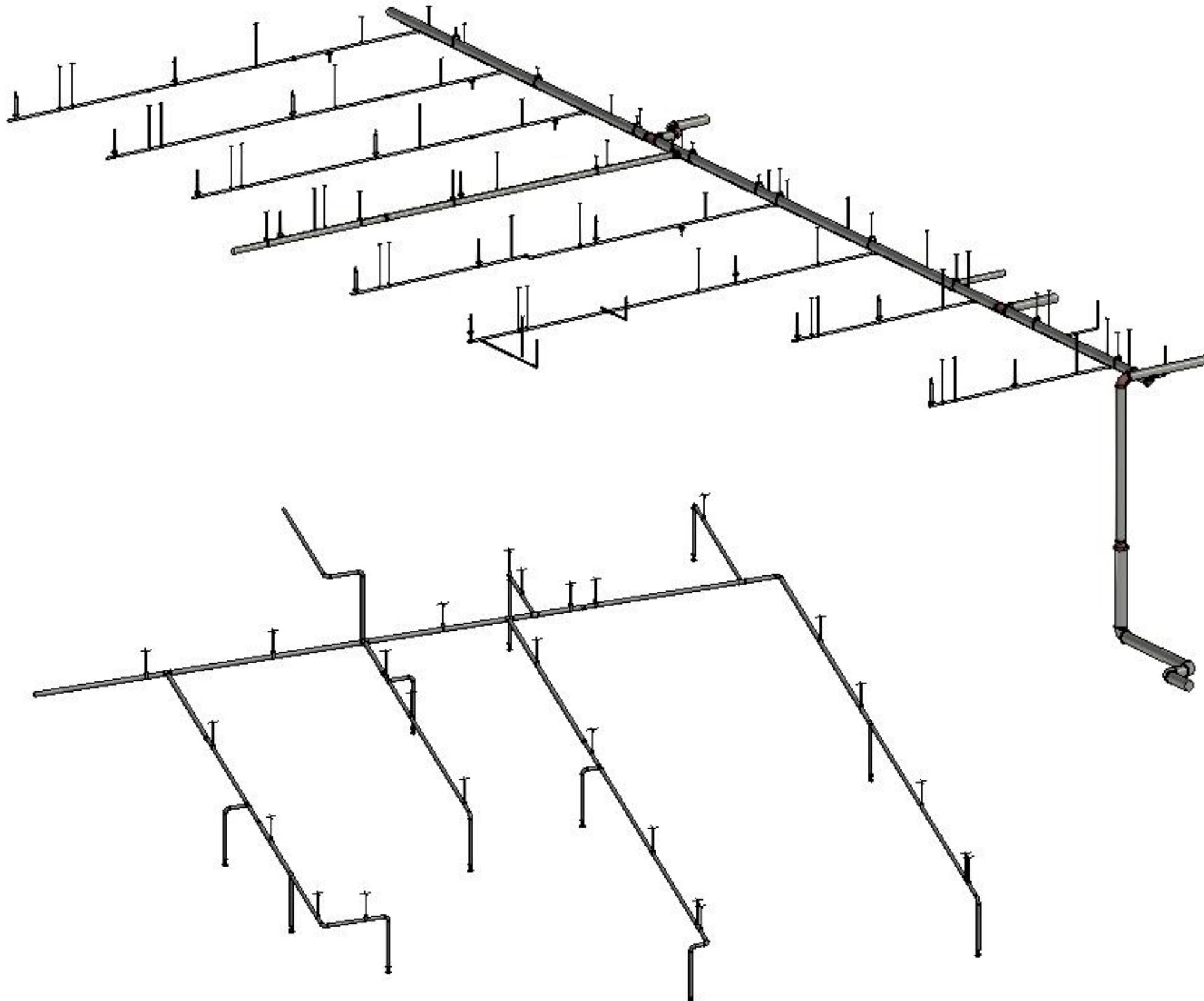


ELECTRICAL FIXTURES

This sheet provides a detailed view of electrical conduits and fixtures, focusing on the 3D routing of electrical systems.



FIRE PROTECTION



SYMBOLS AND ABBREVIATIONS	
GROOVED COUPLING	2-WAY SWAY BRACE
GROOVED CAP	4-WAY SWAY BRACE
GROOVED ELBOW	BRANCH LINE RESTRAINT
SCREWED PLUG	BOTTOM OF BEAM TO CENTERLINE OF PIPE
SYSTEM RISER	BOTTOM OF JOIST (OR PURLIN) TO CENTERLINE OF PIPE
HYDRAULIC CALC. NODE POINT	BOTTOM OF DECK TO CENTERLINE OF PIPE
HANGER DESIGNATION	HANGER ROD LESS THAN 6" TO SERVE AS LATERAL SWAY BRACE

Sprinkler Schedule	
	Description
<input checked="" type="checkbox"/>	Trash Chute Sprinkler - Provided by Chute manufacturer
<input checked="" type="checkbox"/>	Tyco 1/2 Light Pendant Temperature - 155 Finish - B Quick Response Model - TY-FRB SIN - TY3231 K Factor - 5.6
<input checked="" type="checkbox"/>	Tyco 1/2 Ordinary Concealed Temperature - 155 Finish - BZ Quick Response Model - RFII SIN - TY3531 K Factor - 5.6
<input checked="" type="checkbox"/>	Tyco 1/2 Ordinary Upright Temperature - 155 Finish - B Quick Response Model - TY-FRB SIN - TY3131 K Factor - 5.6
<input checked="" type="checkbox"/>	Tyco 1/2 Residential Concealed Temperature - 160 Finish - B Fast Response Model - LFII SIN - TY3596 K Factor - 4.9

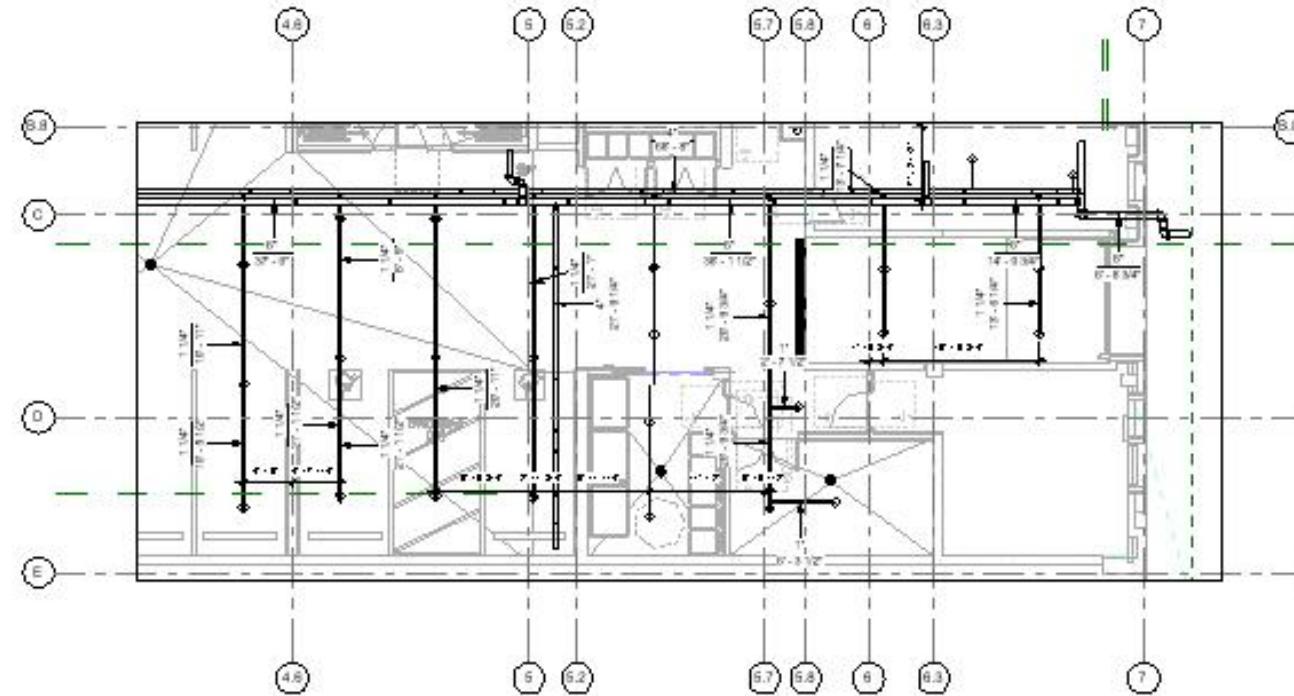
This sheet presents a detailed fire protection system layout, including the sprinkler system and fire suppression elements.
Displays fire sprinkler distribution across the building
Identifies pipe routing, sprinkler head locations, and control valves.



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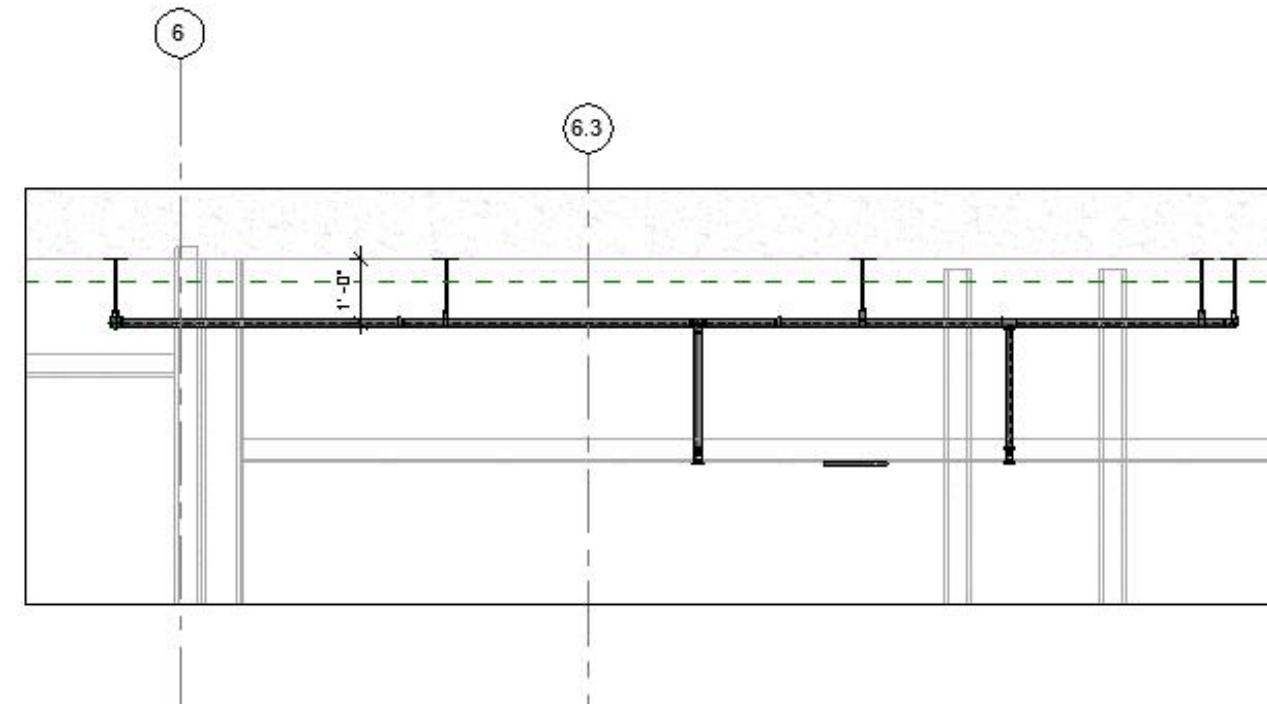


DETAIL VIEW OF FIRE PROTECTION

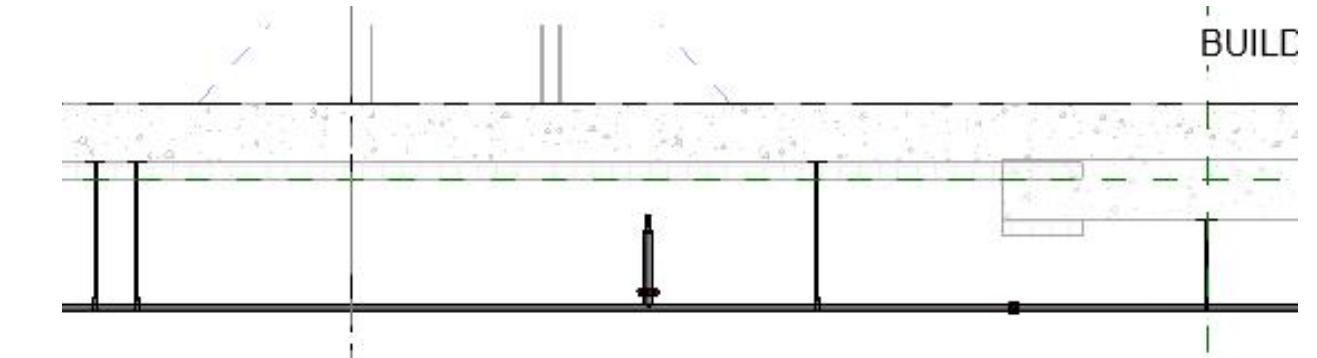


This sheet provides a detailed breakdown of the fire protection system, focusing on sprinkler placement, pipe routing, and sectional views.

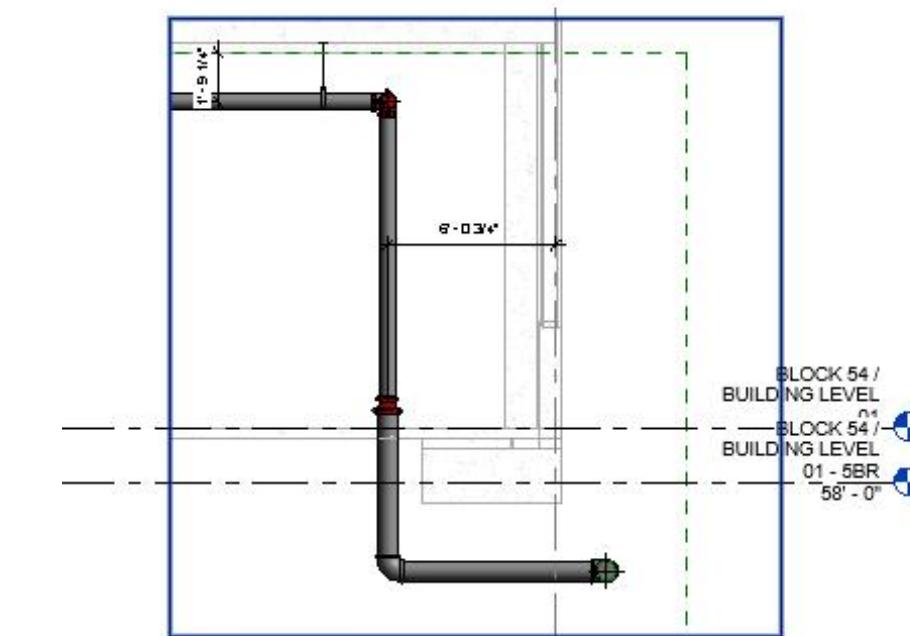
PLACEMENT OF HANGERS AND SPRINKLERS



PLACEMENT OF UPRIGHT SPRINKLERS



SECTIONAL VIEW





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06

RENDER VIEW

RENDERED VIEW
USING ENSCAPE
FRONT, BACK, LEFT
VIEW OF BLOCK 54





07

CLASH REPORT

CLASH REPORT GENERATED BY NAVIS WORKS FOR PLUMBING AND FIRE PROTECTION DISCIPLINES

Clash Report		Clash Report		Clash Report		Clash Report	
Report Batch		Grid Location - 5BR Date Created 6-B.8 : BLOCK 54 / BUILDING LEVEL 01 2025/2/13 16:22		Name Distance Description Status Clash Point Grid Location Clash6 -11.193mm Hard Active 128447.397mm, 123336.685mm, - 5BR Date Created 2025/2/13 16:22		Name Distance Description Status Clash Point Grid Location Clash6 -11.193mm Hard Active 128447.397mm, 123336.685mm, - 5BR Date Created 2025/2/13 16:22	
P vs FP Clash Tolerance 10.000mm Total 9 New 4 Active 5 Reviewed 0 Approved 0 Resolved 0 Type Hard Status Old		 Item 1 Element ID 1030411 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L01.nwc ->MEP Fabrication Pipework ->No-Hub Pipe ->Default ->No-Hub Pipe ->No-Hub Pipe: 11' - 5 3/4" ->Solid Item Name No-Hub Pipe: 11' - 5 3/4" Item Type Solid		 Item 2 Element ID 1635334 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L01.nwc ->Pipes ->Pipe Types ->Hcad1 FP Mains - Welded ->Pipe Types ->Carbon Steel Item Name Carbon Steel Item Type Line		 Item 1 Element ID 1681155 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L01.nwc ->Insulation ->Insulation ->Fabrication Skin: Type L Hard Copper: 5' - 3" ->Default(1) Item Name Default(1) Item Type Solid	
Item 1 Element ID 1138823 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L01.nwc ->Insulation ->Insulation ->Fabrication Skin: Type L Hard Copper: 13' - 4" ->Default(1) Item Name Default(1) Item Type Solid		 Item 2 Element ID 1217618 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L01.nwc ->Pipes ->Pipe Types ->Hcad1 FP Lines - Welded ->Pipe Types ->Carbon Steel Item Name Carbon Steel Item Type Line		 Item 1 Element ID 1992025 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L01.nwc ->Pipe Accessories ->R2T1 Trapeze support_ ->R2T1 ->R2T1 Trapeze support_ ->R2T1 ->ISAT Footprint Item Name ISAT Footprint Item Type Solid		 Item 2 Element ID 1138823 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L01.nwc ->Insulation ->Insulation ->Fabrication Skin: Type L Hard Copper: 13' - 4" ->Default(1) Item Name Default(1) Item Type Solid	
Item 2 Element ID 1217660 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L01.nwc ->Pipes ->Pipe Types ->Hcad1 FP Lines - Welded ->Pipe Types ->Carbon Steel Item Name Carbon Steel Item Type Line		 Item 2 Element ID 1545557 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L01.nwc ->Flex Pipes ->Flex Pipe Round ->Flex - Round ->Flex Pipe Round ->Solid Item Name Flex Pipe Round Item Type Solid		 Item 2 Element ID 1667195 Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L01.nwc ->Pipe Accessories ->Basic EOL Restraint ->45 Degree ->Basic EOL Restraint ->45 Degree ->Solid			
Name Distance Description Status Clash Point Clash3 -14.100mm Hard Active 127183.024mm, 123296.449mm, 22043.308mm Grid Location D-5.7 : BLOCK 54 / BUILDING LEVEL 01 - 5BR Date Created 2025/2/13 16:22		Name Distance Description Status Clash Point Clash5 -12.044mm Hard Active 111381.733mm, 110375.930mm, 22053.450mm Grid Location B-4.6 : BLOCK 54 / BUILDING LEVEL 01 - 5BR Date Created 2025/2/13 16:22		Name Distance Description Status Clash Point Clash8 -10.740mm Hard Active 127306.442mm, 123391.995mm, 22111.862mm Grid Location D-5.7 : BLOCK 54 / BUILDING LEVEL 01 - 5BR Date Created 2025/2/13 16:22			
Name Distance Description Status Clash Point Clash4 -12.966mm Hard Active 118185.059mm, 125836.182mm, 22095.198mm							



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CLASH REPORT GENERATED BY NAVIS WORKS
FOR PLUMBING VS MECHANICAL DISCIPLINES
ACTIVE CLASHES

3/10/25, 11:02 AM

Clash Report

AUTODESK®
NAVISWORKS® Clash Report

p vs m	Tolerance	Clashes	New	Active	Reviewed	Approved	Resolved	Type	Status
	0.005m	20	10	10	0	0	0	Hard	Old

Image	Clash Name	Status	Distance	Grid Location	Item 1		Item 2		Layer	Item Name	Item Type
					Description	Date Found	Clash Point	Item ID	Layer	Item Name	Item Type
	Clash1	Active	-0.014	B-4.6 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 14" - 10 3/4"	2025/2/13 16:49	x:111.440, y:109.717, z:22.128	1655732	Entity Handle: _3D 1FC06A	_3D	Round Strap Hanger
	Clash2	Active	-0.013	6-B : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 10" - 11"	2025/2/13 16:49	x:110.690, y:126.633, z:22.065	1975796	ISAT Footprint Entity Handle: _SA_Flex_INS _SA_Flex_INS Flex		
	Clash3	Active	-0.011	B-1.8 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 10' - 11"	2025/2/13 16:49	x:107.459, y:75.441, z:22.131	1044188	Entity Handle: _SA_Flex_INS _SA_Flex_INS Flex		
	Clash4	Active	-0.011	B-2.6.3 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 11 1/4"	2025/2/13 16:49	x:113.525, y:129.751, z:22.055	1194392	Entity Handle: _RA_Flex_INS _RA_Flex_INS Flex		
	Clash5	Active	-0.010	6-B : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 11 1/4"	2025/2/13 16:49	x:110.813, y:126.769, z:22.074	2104710	Default(1) Entity Handle: _SA_Flex_INS _SA_Flex_INS Flex		
	Clash6	Active	-0.010	B-6.4.6 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 5' - 7 1/4"	2025/2/13 16:49	x:114.631, y:111.520, z:21.956	1991812	Entity Handle: _3D 1FC05C	_3D	Half Strap Hanger
	Clash7	Active	-0.010	B-2.6.3 : BLOCK 54 / BUILDING LEVEL 01	Reducing Sanitary Tee	2025/2/13 16:49	x:113.659, y:129.738, z:22.054	1235181	Entity Handle: _RA_Flex_INS _RA_Flex_INS Flex		
	Clash8	Active	-0.009	B-6.4.6 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 5' - 7 1/4"	2025/2/13 16:49	x:114.657, y:111.520, z:21.922	1991812	Entity Handle: _RA_3D 1FBFD5	_RA_3D	Subentity
	Clash9	Active	-0.009	B-2.6.3 : BLOCK 54 / BUILDING LEVEL 01	Type L Hard Copper: 1' - 2 1/4"	2025/2/13 16:49	x:112.013, y:129.542, z:21.965	2257341	Entity Handle: _SA_Flex_INS _SA_Flex_INS Flex		
	Clash13	Active	-0.008	B-6.3 : BLOCK 54 / BUILDING LEVEL 01	No-Hub Pipe: 12 8/16" - 13 1/2"	2025/2/13 16:49	x:110.904, y:128.863, z:21.802	1141627	Default(1) Entity Handle: _SA_Flex_INS _SA_Flex_INS Flex		

CLASH REPORT GENERATED BY NAVIS WORKS
FOR FIRE PROTECTION VS STRUCTURAL DISCIPLINES
ACTIVE CLASHES

3/10/25, 11:06 AM

Clash Report

AUTODESK®
NAVISWORKS® Clash Report

fp vs sc	Tolerance	Clashes	New	Active	Reviewed	Approved	Resolved	Type	Status
	0.005m	23	13	10	0	0	0	Hard	OK

Image	Clash Name	Status	Distance	Grid Location	Item 1		Item 2		Layer	Item Name	Item Type
					Description	Date Found	Clash Point	Item ID	Layer	Item Name	Item Type
	Clash1	Active	-0.185	S-B.8 : BLOCK 54 / BUILDING LEVEL 01	Carbon Steel Line	2025/2/14 07:46	x:118.038, y:115.600, z:21.908	1648375	Element ID: 3BoTfhrRz97P8OJzui2pV5	Undefined	CMU WALL BY OTHERS
	Clash2	Active	-0.108	2-B.2 : BLOCK 54 / BUILDING LEVEL 01	Carbon Steel Line	2025/2/14 07:46	x:112.534, y:77.549, z:22.048	1390783	Element ID: 0371rEl7rB0ukfMqgSU\$yS	Undefined	WALL
	Clash3	Active	-0.108	B-2.4.2 : BLOCK 54 / BUILDING LEVEL 01	Pipe Types Line	2025/2/14 07:46	x:112.230, y:101.184, z:22.034	1654421	Element ID: 0uU1us6yHAQx1B9Tfe8bw5	Undefined	WALL
	Clash4	Active	-0.108	B-8.1.8 : BLOCK 54 / BUILDING LEVEL 01	Carbon Steel Line	2025/2/14 07:46	x:117.114, y:74.364, z:22.039	1227392	Element ID: 21IKSfa_rAKA5mx6lPnVNL	Undefined	CMU WALL BY OTHERS
	Clash5	Active	-0.103	B-2.2.7 : BLOCK 54 / BUILDING LEVEL 01	Carbon Steel Line	2025/2/14 07:46	x:112.534, y:81.527, z:22.038	1391258	Element ID: 0371rEl7rB0ukfMqgSU\$yS	Undefined	WALL
	Clash6	Active	-0.097	B-2.2.7 : BLOCK 54 / BUILDING LEVEL 01	Carbon Steel Line	2025/2/14 07:46	x:112.534, y:84.818, z:22.023	1391454	Element ID: 3siqlvQDFxpE8xIsBhN8	Undefined	WALL
	Clash20	Active	-0.019	C-5.2 : BLOCK 54 / BUILDING LEVEL 01	30 Degree Solid	2025/2/14 07:46	x:118.835, y:120.144, z:22.166	1662714	Element ID: 1ny6Y2UK9FYxnq8GCwsonK	Undefined	SOFFIT
	Clash21	Active	-0.019	C-4.6 : BLOCK 54 / BUILDING LEVEL 01	30 Degree Solid	2025/2/14 07:46	x:119.285, y:112.286, z:22.439	1666055	Element ID: 1Lubfxo5L9RBPsYoJe1Fgm	Undefined	SLAB SLOPED
	Clash22	Active	-0.009	S-5.2 : BLOCK 54 / BUILDING LEVEL 01	Flex Pipe Round Solid	2025/2/14 07:46	x:113.656, y:115.338, z:22.166	1205267	Element ID: 3f375l_mf94PU7MrB2u5aj	Undefined	SOFFIT
	Clash23	Active	-0.009	S-5.2 : BLOCK 54 / BUILDING LEVEL 01	Flex Pipe Round Solid	2025/2/14 07:46	x:113.656, y:115.338, z:22.166	1205267	Element ID: 22Ukf1uzDAhx0uaCwRW0	Undefined	SOFFIT



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CLASH REPORT GENERATED BY NAVIS WORKS FOR PLUMBING VS ELECTRICAL LEVEL DISCIPLINES ACTIVE CLASHES

3/10/25, 11:11 AM Clash Report Report Batch

P VS E L2 Clash

Tolerance	5.000mm
Total	12
New	7
Active	5
Reviewed	0
Approved	0
Resolved	0
Type	Hard
Status	Old


- SBR Date Created 2025/2/17 14:06

Item 1

Element ID	2223634
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L02.nwc ->MEP Fabrication Pipework ->No-Hub Pipe ->Default ->No-Hub Pipe: 6' - 11 1/4" ->Solid
Item Name	No-Hub Pipe: 6' - 11 1/4"
Item Type	Solid

Item 2

Element ID	2461103
Layer	BLOCK 54 / BUILDING LEVEL 02
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->E-L02.nwc ->BLOCK 54 / BUILDING LEVEL 02 ->Electrical Fixtures ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->Composite Part
Item Name	DUPLEX GFCI ABOVE COUNTER
Item Type	Composite Part

Name Clash2 **Distance** -20.586mm

file:///C:/Users/HP PC/Desktop/Coordination Project/P VS E L2.html

3/10/25, 11:11 AM Clash Report

Path File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->E-L02.nwc ->BLOCK 54 / BUILDING LEVEL 02 ->Electrical Fixtures ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->Composite Part

Item Name DUPLEX GFCI ABOVE COUNTER **Item Type** Composite Part


- SBR Date Created 2025/2/17 14:06

Item 1

Element ID	1071581
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L02.nwc ->MEP Fabrication Pipework ->No-Hub Pipe ->Default ->No-Hub Pipe ->No-Hub Pipe: 9' - 11" ->Solid
Item Name	No-Hub Pipe: 9' - 11"
Item Type	Solid

Item 2

Element ID	2465852
Layer	BLOCK 54 / BUILDING LEVEL 02
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->E-L02.nwc ->BLOCK 54 / BUILDING LEVEL 02 ->Lighting Fixtures ->LF_U3-B ->SCONCE - 36IN ->LF_U3-B ->SCONCE - 36IN ->Solid
Item Name	SCONCE - 36IN
Item Type	Solid


- SBR Date Created 2025/2/17 14:06

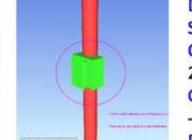
Item 1

Element ID	2119513
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L02.nwc ->MEP Fabrication Pipework ->No-Hub Pipe ->Default ->No-Hub Pipe ->No-Hub Pipe: 9' - 11" ->Solid

file:///C:/Users/HP PC/Desktop/Coordination Project/P VS E L2.html

3/10/25, 11:11 AM Clash Report

Description Hard **Status** Active **Clash Point** 24198.263mm **Grid Location** - SBR **Date Created** 2025/2/17 14:06

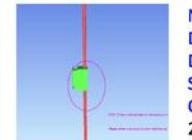

- SBR Date Created 2025/2/17 14:06

Item 1

Element ID	2106065
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L02.nwc ->MEP Fabrication Pipework ->No-Hub Pipe ->Default ->No-Hub Pipe ->No-Hub Pipe: 10' - 9 3/4" ->Solid
Item Name	No-Hub Pipe: 10' - 9 3/4"
Item Type	Solid

Item 2

Element ID	2440238
Layer	BLOCK 54 / BUILDING LEVEL 02
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->E-L02.nwc ->BLOCK 54 / BUILDING LEVEL 02 ->Electrical Fixtures ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->DUPLEX RECEPTACLE ->DUPLEX GFCI ABOVE COUNTER ->Composite Part
Item Name	DUPLEX GFCI ABOVE COUNTER
Item Type	Composite Part


- SBR Date Created 2025/2/17 14:06

Item 1

Element ID	2603131
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->P-L02.nwc ->MEP Fabrication Pipework ->Type L Hard Copper ->Default ->Type L Hard Copper ->Type L Hard Copper: 5' - 6" ->Solid
Item Name	Type L Hard Copper: 5' - 6"
Item Type	Solid

Item 2

Element ID	2393190
Layer	BLOCK 54 / BUILDING LEVEL 02

file:///C:/Users/HP PC/Desktop/Coordination Project/P VS E L2.html



CLASH REPORT GENERATED BY NAVIS WORKS FOR FIRE PROTECTION VS MECHANICAL LEVEL 2 DISCIPLINES ACTIVE CLASHES

3/10/25, 11:15 AM Clash Report

Report Batch

FP VS M L2 Clash

Tolerance	10.000mm
Total	69
New	64
Active	5
Reviewed	0
Approved	0
Resolved	0
Type	Hard
Status	Old

Clash1
Name: Clash1
Distance: -14.584mm
Description: Hard
Status: Active
Clash Point: 126177.773mm, 114444.545mm, 25427.264mm
Grid Location: 5-D : BLOCK 54 / BUILDING LEVEL 01 -
SBR Date Created: 2025/2/17 14:01

Item 1

Entity Handle	1FE37E
Layer	_RA_Flex_INS
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->M-L02.nwd ->_RA_Flex_INS ->Flex
Item Name	_RA_Flex_INS
Item Type	Flex

Item 2

Element ID	1413686
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L02.nwc ->Pipes ->Pipe Types ->Fire Prot Pipe - CPVC ->Pipe Types ->FP-Red
Item Name	FP-Red
Item Type	Line

Clash2
Name: Clash2
Distance: -14.569mm
Description: Hard
Status: Active
Clash Point: 120191.062mm, 111685.281mm, 25415.513mm

file:///C:/Users/HP PC/Desktop/Coordination Project/FP VS M L2.html

3/10/25, 11:15 AM Clash Report

Clash4

Name	Clash4
Distance	-13.796mm
Description	Hard
Status	Active
Clash Point	25447.709mm
Grid Location	4-C : BLOCK 54 / BUILDING LEVEL 01 -

SBR Date Created: 2025/2/17 14:01

Item 1

Entity Handle	1FE37E
Layer	_RA_Flex_INS
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->M-L02.nwd ->_RA_Flex_INS ->Flex
Item Name	_RA_Flex_INS
Item Type	Flex

Item 2

Element ID	1413686
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L02.nwc ->Pipes ->Pipe Types ->Fire Prot Pipe - CPVC ->Pipe Types ->FP-Red
Item Name	FP-Red
Item Type	Line

Clash6
Name: Clash6
Distance: -13.395mm
Description: Hard
Status: Active
Clash Point: 124423.263mm, 116607.084mm, 25520.308mm
Grid Location: 5-D : BLOCK 54 / BUILDING LEVEL 01 -
SBR Date Created: 2025/2/17 14:01

Item 1

Entity Handle	1FE363
Layer	_RA_Flex_INS
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->M-L02.nwd ->_RA_Flex_INS ->Flex
Item Name	_RA_Flex_INS
Item Type	Flex

Item 2

Element ID	1702885
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L02.nwc ->Pipes ->Pipe Accessories ->Basic Lateral Brace Over Pipe ->30 Degree ->Basic Lateral Brace Over Pipe ->30 Degree ->Solid

file:///C:/Users/HP PC/Desktop/Coordination Project/FP VS M L2.html

3/10/25, 11:15 AM Clash Report

C-4.6 : BLOCK 54 / BUILDING LEVEL 01

Grid Location	- 5BR
Date Created	2025/2/17 14:01

Item 1

Entity Handle	1FE3AB
Layer	_EA_Flex_INS
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->M-L02.nwd ->_EA_Flex_INS ->Flex
Item Name	_EA_Flex_INS
Item Type	Flex

Item 2

Element ID	1414853
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L02.nwc ->Pipes ->Pipe Types ->Fire Prot Pipe - CPVC ->Pipe Types ->FP-Red
Item Name	FP-Red
Item Type	Line

Clash3
Name: Clash3
Distance: -14.212mm
Description: Hard
Status: Active
Clash Point: 120182.869mm, 114505.106mm, 25413.367mm
Grid Location: 5-C : BLOCK 54 / BUILDING LEVEL 01 -
SBR Date Created: 2025/2/17 14:01

Item 1

Entity Handle	1FE3AE
Layer	_RA_Flex_INS
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->M-L02.nwd ->_RA_Flex_INS ->Flex
Item Name	_RA_Flex_INS
Item Type	Flex

Item 2

Element ID	1860133
Path	File ->PRAMOD 19FEB2025 NAVISWORKS INTERNSHIP.nwd ->FP-L02.nwc ->Pipes ->Pipe Types ->Fire Prot Pipe - CPVC ->Pipe Types ->FP-Red
Item Name	FP-Red
Item Type	Line

file:///C:/Users/HP PC/Desktop/Coordination Project/FP VS M L2.html



QUANTIFICATION USING NAVIS WORKS

TAKEOFF QUANTITIES

[+]	SC-L01.nwc	1
[+]	FR-L02.nwc	2
[+]	M-L01.nwd	3
[+]	P-L01.nwc	4
[+]	M-L02.nwd	5
[+]	P-L02.nwc	6
[+]	E-LUG.nwc	7
[+]	P-LUG.nwc	8
[+]	E-L01.nwc	9
[+]	FP-L01.nwc	10
[+]	E-L02.nwc	11
[+]	FP-L02.nwc	12

SAMPLE OF EXTRACTED QUANTITIES



08

4D SIMULATION

SEQUENCE OF WORK FLOW

4D SIMULATION WITH ANIMATION									
Tasks		Data Sources		Configure		Simulate			
Active	Name	Status	Planned Start	Planned End	Actual Start	Actual End	Task Type		
<input checked="" type="checkbox"/>	foundation		16-02-2025	19-02-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	plinth beam		20-02-2025	22-02-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	casing		23-02-2025	25-02-2025	N/A	N/A	Construct	 Sets->arch-	
<input checked="" type="checkbox"/>	str		26-02-2025	28-02-2025	N/A	N/A	Construct	 Sets->arch-	
<input checked="" type="checkbox"/>	roof		01-03-2025	02-03-2025	N/A	N/A	Construct	 Sets->arch-	
<input checked="" type="checkbox"/>	floor		03-03-2025	06-03-2025	N/A	N/A	Construct	 Sets->arch-	
<input checked="" type="checkbox"/>	PLUMBING UG		07-03-2025	08-03-2025	N/A	N/A	Construct	 Sets->PLUM	
<input checked="" type="checkbox"/>	conduct bg		09-03-2025	11-03-2025	N/A	N/A	Construct	 Sets->elec-	
<input checked="" type="checkbox"/>	conduct fitting bg		12-03-2025	14-03-2025	N/A	N/A	Construct	 Sets->elec-	
<input checked="" type="checkbox"/>	columns		15-03-2025	18-03-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	beams		19-03-2025	23-03-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	slab		24-03-2025	29-03-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	walls		30-03-2025	03-04-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	floor		04-04-2025	06-04-2025	N/A	N/A	Construct	 Sets->struct	
<input checked="" type="checkbox"/>	framing		07-04-2025	08-04-2025	N/A	N/A	Construct	 Sets->fram	
<input checked="" type="checkbox"/>	supports		09-04-2025	13-04-2025	N/A	N/A	Construct	 Sets->mech	
<input checked="" type="checkbox"/>	walls		11-09-2025	26-09-2025	N/A	N/A	Construct	 Sets->arch-	
<input checked="" type="checkbox"/>	ea		14-04-2025	16-04-2025	N/A	N/A	Construct	 Sets->mech	



Project Outcome

Hunters Point Shipyard Blocks 52 & 54

Enhanced Coordination & Accuracy:

- Resolved major clashes between disciplines using Navisworks, reducing rework and saving project time.

Optimized Construction Planning:

- Created a 4D BIM simulation to visualize and optimize the construction sequence, improving project scheduling.

Improved Documentation & Model Precision:

- Delivered high-quality shop drawings, bar bending schedules, and quantity take-offs, ensuring smooth construction

Better Visualization & Design Decision Making:

- Developed realistic rendered views using Enscape, helping stakeholders visualize the final design before construction

Efficiency & Cost Savings:

- Clash resolution and BIM coordination contributed to an estimated [X]% reduction in material waste and rework.



MICHIGAN STATE
UNIVERSITY



THANK YOU!!

“Kuppa Pramod Kumar”

Contact

📞 +91 8000222151

✉️ pramod4656@gmail.com

LinkedIn: <https://www.linkedin.com/in/kuppa-pramod-kumar-11155b22b/>

📍 Hyderabad, Telangana