

1 SITE PLAN
1/8" = 1'-0"

LEGEND OF LINES

---	PROPERTY LINE
- - - -	EDGE OF BUILDING WALL
- · - · -	LINE OF EASEMENTS
---	EDGE OF ROOF

ABBREVIATIONS

ADJ. SH.	ADJUSTABLE SHELF	J.T.	JOINT	CONT.	CONTINUOUS	R.O.	ROUGH OPENING
A/C	AIR CONDITION	JST.	JOIST	C.	COURSES	R.S.	ROUGH SAWN
ALT.	ALTERNATE	LAM. PL.	LAMINATED PLASTIC	D.L.	DEAD LOAD	SHLF.	SHELF
▲	STEEL ANGLE	L.L.	LIVE LOAD	DET.	DETAIL	SH. OR SHING.	SHINGLE
AWN.	AWNING	M.O.	MASONRY OPENING	DIA. OR -	DIAMETER	SIM.	SIMILAR
BR.	BRICK	MTL.	MATERIAL	DM.	DIMENSION	SL. GL. DR.	SLIDING GLASS DOOR
BM.	BEAM	M.C. OR MED. CAB.	MEDICINE CABINET	D.W.	DISH WASHER	S.R.O.	SHEET ROCK OPENING
BRG.	BEARING	MET.	METAL	D.H.	DOUBLE HUNG	STD.	STANDARD
CSMT.	CASEMENT	N.T.S.	NOT TO SCALE	D.S.	DOWN SPOUT	STL.	STEEL
CLG.	CEILING	O.C.	ON CENTER	E.A.	EACH	TEMP.	TEMPERED
<	CENTER LINE	OPNG.	OPENING	EQ.	EQUAL	THLD.	THRESHOLD
S.C.	STEEL CHANNEL	O.H.	OVERHEAD	EXP.	EXPANSION	T&G	TONGUE & GROOVE
CLO.	CLOSET	PC.	PIECES	EXT.	EXTERIOR	TR.	TREADS
C.P.	CLOTHES POLE	PL.	PLATE	FIN.	FINISHED	U.C.	UNDER CABINET
COL.	COLUMN	PLWD. OR P.W.	PLYWOOD	F.P.	FIREPLACE	W.C.	WATER CLOSET
OOMP.	COMPOSITION	P.S.F.	POUNDS PER SQUARE FOOT	FL.	FLOOR	W.H.	WATER HEATER
CONC.	CONCRETE	P.S.I.	POUNDS PER SQUARE INCH	F.D.	FLOOR DRAIN	W.P.	WEATHERPROOF
CONSTR.	CONSTRUCTION	REINF.	REINFORCING	FTG.	FOOTING	W.S.	WEATHERSTRIPPING
C.J.	CONSTRUCTION JOINT	R.	RISERS	FDN.	FOUNDATION	W.F.	WIDE FLANGE
GL.	GLASS	W.I.	WROUGHT IRON	HGT.	HEIGHT	WD.	WOOD
GYP. BD.	GYP. BOARD	WTR.	WATER			H.M.	HOLLOW METAL

GENERAL CONSTRUCTION NOTES

- ALL MATERIALS, HARDWARE, APPLIANCES AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS, INCLUDING BLOCKING, NAILERS, MOLDING ETC. IN ORDER TO MEET THE REQUIREMENTS EVEN IF THEY ARE NOT INDICATED ON THESE PLANS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PAINT ALL SURFACES THAT REQUIRES PROTECTION FROM THE ELEMENTS WITH THE APPROPRIATE PLAN INCLUDING NECESSARY PRIMER COATS AND BACK PRIMING WHERE REQUIRED.
- CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY FLASHING INCLUDED (BUT NOT LIMITED TO) THRU FLASHING, STEP FLASHING, COUNTER FLASHING, CAP FLASHING, BASE FLASHING AND FLEXIBLE FLASHING WHERE NECESSARY TO MAKE A WATER TIGHT BUILDING. PROTECT MATERIAL WHICH ARE SENSITIVE TO DETERIORATION, AND TO MAKE TRANSITION AT DISSIMILAR MATERIALS.
- CONTRACTOR TO SEAL WITH THE APPROPRIATE TYPE OF CAULK AT ALL LOCATIONS NECESSARY TO PREVENT THE PENETRATION OF MOISTURE AND AT THE TRANSITION OF DISSIMILAR MATERIALS.
- CONTRACTOR TO PROVIDE AND INSTALL ALL LOCKING AND SECURITY DEVICES REQUIRED BY FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND REQUIREMENTS.
- CONTRACTOR TO PROVIDE AND INSTALL ALL GLASS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND REQUIREMENTS.
- CONTRACTOR TO MEET ALL THE REQUIREMENTS OF THE BUILDING CODE AND FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND REQUIREMENTS, EVEN IF IT REQUIRES LABOR AND / OR MATERIALS NOT INDICATED ON THE PLANS.
- CONTRACTOR MUST CONSTRUCT THIS PROJECT FROM WRITTEN DIMENSIONS ON THIS PLAN. DO NOT SCALE THE DRAWINGS.
- ALL MECHANICAL AND ELECTRICAL SUBCONTRACTORS SHALL HAVE A CURRENT MASTER'S LICENSE IN GOOD STANDINGS WITH THE LOCAL GOVERNING BODY.
- ALL BEDROOM WINDOWS SHALL COMPLY WITH THE BUILDING CODE WHEN USED AS A MEANS OF ESCAPE OR RESCUE. MINIMUM NET CLEAR OPENING SHALL BE NO LESS THAN 5.7 SQUARE FEET. MINIMUM CLEAR OPENING HEIGHT SHALL NOT BE LESS THAN 24", MINIMUM CLEAR OPENING WIDTH SHALL NOT BE LESS THAN 20". THE FINISHED SILL HEIGHT SHALL NOT EXCEED 4" ABOVE FINISH FLOOR.
- ALL GLASS SLIDING DOORS AND SIDELIGHTS SUBJECT TO IMPACT SHALL BE TEMPERED AND COMPLY WITH THE BUILDING CODE.
- CONTRACTOR TO PROVIDE VENTILATION AT ALL BATH AND UTILITY ROOMS THROUGH NATURAL OR MECHANICAL MEANS AND COMPLY WITH THE BUILDING CODE.
- CONTRACTOR SHALL APPLY 1/2" FIRE CODE GYPSUM BOARD TO WALLS AND CEILINGS OF USABLE SPACE UNDER STAIRS AND TO WALL AND CEILING OF ATTACHED GARAGE ADJON LIVING SPACES.
- PROVIDE 3/8" FIRE RETARDANT PLYWOOD ON EXPOSED PANEL OF ATTIC ACCESS. OPENING SHALL BE A MIN. OF 6'-0" MEASURED ON A HORIZONTAL PLANE FROM A GAS WATER HEATER OR GAS APPLIANCE. PER IRC R309.2.

- SAFETY**
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR STRICT COMPLIANCE BY ALL TRADES INVOLVED WITH THIS PROJECT AS NOTED HEREIN, AND MUST TAKE ALL NECESSARY MEASURES TO ENSURE THE SAFETY OF PERSONS ON OR NEAR THIS JOB SITE.
 - A. OCCUPATIONAL SAFETY AND HEALTH**
CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION PRACTICES AS REQUIRED BY THE RULES AND REGULATIONS SET FORTH BY O.S.H.A. SAFETY CODES, LATEST EDITION.
 - B. ELECTRICAL POWER SAFETY PRACTICES**
 - O.S.H.A. REGULATIONS
 - FOR POWER LINES OF 50,000 VOLTS AND BELOW, THE MINIMUM CLEARANCE BETWEEN THE LINES AND ANY PART OF A CRANE OR LOAD MUST BE TEN (10) FEET. AN EXCEPTION TO THIS REQUIREMENT IS WHEN THE LINES HAVE BEEN DE-ENERGIZED AND GROUND.
 - THE ELECTRIC UTILITY COMPANY MUST BE NOTIFIED AND INFORMED OF OPERATIONS NEAR THE LINES BEFORE WORK BEGINS.
 - EVERY OVERHEAD WIRE MUST BE CONSIDERED TO BE ENERGIZED, UNLESS AND UNTIL THE UTILITY COMPANY INDICATES THAT IT IS NOT ENERGIZED, AND THE LINE IS GROUND.
 - VIOLATORS OR SUBJECT TO CRIMINAL PENALTIES.
 - TEXAS LAW
 - TEXAS LAW PROHIBITS ANY WORK DONE AROUND POWER LINES, IF AT ANY TIME IT IS POSSIBLE THAT A WORKER TOOL, EQUIPMENT, MACHINE OR MATERIAL MAY COME WITHIN SIX (6) FEET OF THE LINES.
 - THE LAW FURTHER PROHIBITS THE OPERATION OF CRANES OR SIMILAR EQUIPMENT WITHIN TEN (10) FEET OF THE LINES.
 - THE ONLY EXCEPTION TO THESE REQUIREMENTS IS WHEN THE DANGER OF CONTACTING THESE LINES HAS BEEN PROPERLY GUARDED AGAINST. THOSE PARTIES RESPONSIBLE FOR THE WORK MUST NOTIFY THE ELECTRIC UTILITY COMPANY AT LEAST 48 HOURS BEFORE THE WORK BEGINS TO ARRANGE FOR MEASURES TO GUARD AGAINST CONTACTING THE LINES. THE WORK MAY NOT BEGIN UNTIL THOSE PARTIES AND THE UTILITY COMPANY HAVE NEGOTIATED AND TAKEN PROPER SAFETY PRECAUTIONS, SUCH AS DE-ENERGIZING THE LINES.
 - IF A VIOLATION OF THE LAW RESULTS IN CONTACT WITH A POWER LINE, ALL RESPONSIBLE PARTIES ARE SUBJECT TO CRIMINAL PENALTIES. THEY ARE ALSO LIABLE TO THE UTILITY COMPANY FOR ALL LIABILITY IT INCURS DUE TO THE CONTACT.
 - CODE OF FEDERAL REGULATION, TITLE 24, PART 1910.180, 1926.416 AND 1926.550.
 - TEXAS HEALTH AND SAFETY CODE, CHAPTER 752.

- SITE CONDITIONS**
- PRIOR TO STARTING CONSTRUCTION
- CALL ALL LOCAL UTILITY COMPANIES PRIOR TO EXCAVATION TO VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES AND EASEMENTS.
 - CONTACT WATER, POWER, SANITARY SEWER, NATURAL GAS AND STORM DRAIN PROVIDERS FOR VERIFICATION OF SIZE, LOCATION AND CAPACITY AND TAP REQUIREMENTS.
 - CONTACT LOCAL FACILITY CONTROL AUTHORITIES FOR MINIMUM FINISH FLOOR ELEVATIONS PRIOR TO SETTING FORMS.
- SITE WORK**
- THE SITE IS TO BE STRIPPED OF ALL VEGETATION UNDER FOUNDATION AREA AS REQUIRED.
 - ALL UNDERGROUND UTILITY EXCAVATIONS ARE TO BE BACKFILLED WITH SAND TO 12" ABOVE THE UTILITY WORK, AND THEN WITH COMPACTED EARTH TO GRADE.
 - LEAVE NO EXCAVATION FOR UTILITIES OR FOOTINGS OPEN OVERNIGHT. COVER ALL OPEN BEING WORKED WITH 3/4" PLYWOOD OR EQUAL.
 - KEEP SITE CLEAR OF TRASH, SCRAP BUILDING MATERIAL AND DEBRIS AT ALL TIMES.
 - PROTECT ALL TREES AND SHRUBS TO BE SAVED WITH BARRIERS ERRECTED A MINIMUM OF 5'-0" FROM THE TRUNK.
 - LEAVE SITE GRADE WITH TOP SOIL WITHIN 12" OF FINISHED FLOOR SLOPED AWAY FROM THE STRUCTURE AT 1" PER FOOT TO A DISTANCE OF 6'-0" FROM THE FOUNDATION.

- APPLY TERMITE PROTECTION BEFORE POURING THE FOUNDATION, AND APPLY AROUND THE FOUNDATION AFTER FINAL GRADING.
 - INSTALL ALL WALKS AND DRIVES WITH A NON-SLIP FINISH AND SLOPE THE SURFACES TO DRAIN AT A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE ON THE PLANS. EXPANSION NOT TO EXCEED 10'-0" O.C. FROM WALKS 15'-0" O.C. FOR DRIVES.
- FOUNDATION NOTES**
- NOT USED
 - EXCAVATION FOR SLABS AND BEAMS SHALL BE SMOOTH AND FREE OF DEBRIS PRIOR TO INSTALLATION OF POLYETHYLENE VAPOR BARRIER.
 - VAPOR BARRIER TO OVERLAP JOINTS A MINIMUM OF 12" WITH PINS OR ADHESIVE STRIPS TO SECURE JOINTS. PATCH ALL PENETRATIONS AROUND PIERS AND PLUMBER RISERS, AND CHECK FOR TEARS PRIOR TO POURING CONCRETE.
 - ALL REINFORCEMENT BARS AND MESH SHALL BE PLACED ON CHAIRS. LIFTING OF MESH DURING POUR IS ALLOWED.
 - REFER TO STRUCTURAL DRAWINGS FOR ALL REINFORCEMENT SIZE, QUANTITY AND PLACEMENT, ALL CONCRETE STRENGTH AND MIXING REQUIREMENTS, AND ALL BEAM OR FOOTING SIZES AND SLAB THICKNESS.
 - PROTECT SLAB FINISH FROM ADVERSE WEATHER CONDITIONS UNTIL FINAL SET.
- WALL FRAMING NOTES**
- ALL NON-LOAD BEARING PARTITIONS SHALL BE 2 X 4 STUDS AT 16" O.C. (RE: STRUCTURAL DRAWINGS)
 - ALL LOAD BEARING PARTITION SHALL BE 2 X 4 STUDS AT 16" O.C. OR 12" O.C. (RE: STRUCTURAL DRAWINGS)
 - NOT USED
 - REFER TO STRUCTURAL DRAWINGS FOR ALL FOUNDATION ANCHOR BOLT SIZES, LOCATION AND SPACING.
 - WOOD FRAMING SIZES, VERTICAL FRAMING, HORIZONTAL FRAMING, FIRESTOPS, ANCHORAGE, FURRING AND CONNECTIONS NOT SHOWN ON DOCUMENTS SHALL BE AS PER LOCAL BUILDING CODE MINIMUM REQUIREMENTS.
 - ALL PLYWOOD FLOOR SHEATHING SHALL BE 23/32" (NOM. 3/4") STANDARD CDX GRADE WITH EXTERIOR GLUE, PANEL INDEX 4824 CONFORMING TO U.S. PS-1 STAMPED WITH DPPA GRADE TRADEMARK. (RE: STRUCTURAL DRAWINGS)
 - ALL PLYWOOD ROOF SHEATHING SHALL BE 7/16" TECH SHIELD OSB. PANEL INDEX 3216 CONFORMING TO U.S. PS-1 STAMPED WITH DSSA GRADE TRADEMARK. (RE: STRUCTURAL DRAWING)
 - NOT USED
 - PROVIDE EXPANSIVE FOAM INSULATION AT WINDOWS, EXTERIOR DOORS, TEES, CORNERS, PLATES AND PENETRATIONS.
 - ALL STUDS SHALL BE SOUTHERN YELLOW PINE, STUD GRADE LUMBER WITH MOISTURE CONTENT OF 15% KILN DRIED.
 - ALL OTHER STRUCTURAL LUMBER SHALL BE HIP, RIDGE AND VALLEY MEMBERS #2, BEAM AND GIRDERS #2, ALL OTHER LUMBER #3 UNLESS INDICATED OTHERWISE ON THE PLANS.
 - ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO THE WEATHER SHALL BE PRESSURE TREATED LUMBER.
 - SLOPE ALL CONCRETE PATIOS, PORCHES, AND FLATWORK AWAY FROM EXTERIOR WALLS.
 - INSTALL WALL BRACING, PLYWOOD SHEATHING AND SHEAR PANELS AS SPECIFIED BY STRUCTURAL ENGINEER.

- MASONRY NOTES**
- STONE VENEER (IF APPLICABLE) SHALL BE ATTACHED TO PLYWOOD SUBSTRATE PER MANUFACTURER'S SPECIFICATIONS.
 - CONTRACTOR SHALL PROVIDE STEEL LINTELS SIZED BY STRUCTURAL ENGINEER ABOVE ALL MASONRY OPENINGS WITH MINIMUM BEARING ON EACH SIDE.
- WATERPROOFING AND MOISTURE CONTROL**
- INSTALL METAL GUTTERS AND DOWNSPOUTS AT ALL HORIZONTAL FASCIAS SIZED TO COMPLY WITH LOCAL RAINFALL AVERAGES.
 - PROVIDE 24 GA. GALV. MTL. FLASHING OVER ALL OPENING IN EXTERIOR WALL. SEAL HORIZONTAL AND VERTICAL DOORS AND WINDOW FLANGES TO SHEATHING WITH SELF ADHESIVE FLASHING.
 - CAULK PERIMETER ALL EXTERIOR WALL OPENINGS WITH SEALANT THAT REMAINS FLEXIBLE.
 - WHERE WOOD FRAMED WALLS ARE SUBJECTED TO WATER SPLASH, PROTECT FRAMING WITH WATERPROOF BUILDING PAPER.
 - FLASH ALL ROOF AND WALL INTERSECTIONS WITH 22 GA. GALV. MTL. FLASHING. INSTALL 22 GA. GALV. MTL. FLASHING IN ALL ROOF VALLEYS.
- ROOF NOTES**
- ALL RAFTERS SHALL BE 2 X 6 2 S.Y.P. AT 16" O.C. UNLESS NOTED OTHERWISE. COLLAR TIES SHALL BE 2 X 6 MIN. AT 32" O.C. LOCATED IN THE UPPER THIRD OF THE ATTIC AREA.
 - CONTRACTOR SHALL INSTALL ADEQUATE ATTIC VENTILATION BASED ON AN AREA 1/300 OF THE SPACE VENTILATED. PROVIDE 50% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTS IN THE UPPER PORTION OF THE ATTIC SPACE AT LEAST 36" ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR VENTS. CONTRACTOR TO INSTALL SOLAR ATTIC VENTS AS REQUIRED.
 - RAFTERS SHALL BE BRACED WITH PURLINS THE SAME SIZE AS THE RAFTERS THEY ARE SUPPORTING. PURLINS SHALL BE BRACED WITH MINIMUM 2 - 2 X 4 T-BRACES AT 48" O.C. MAX. ALL RAFTER SPLICES SHALL BE BRACED DOWN TO A LOAD BEARING WALL.
 - ALL HIPS, RIDGES, AND VALLEYS SHALL BE ONE MILL SIZE LARGER THAN THE LARGEST RAFTER THEY ARE SUPPORTING. PROVIDE 2 - 2 X 4 MIN. JACKPOST SUPPORT DOWN TO LOAD BEARING WALL.
 - ALL BUILDING SHALL HAVE GUTTERS AND DOWNSPOUTS.

- ELECTRICAL NOTES**
- GROUND FAULT CIRCUIT INTERRUPTER PROTECTION IS REQUIRED AT ALL BATHROOMS, GARAGES, KITCHENS, BARS AND OUTDOOR LOCATIONS. BATHROOM REQUIRE AT LEAST ONE GFCI RECEPTACLE ADJACENT TO EACH BASIN LOCATION. OUTDOOR GFCI OUTLETS ARE REQUIRED TO BE INSTALLED AT THE FRONT AND BACK OF THE DWELLING.
 - RECEPTACLE OUTLETS ARE REQUIRED IN HABITABLE ROOMS SPACED SO THAT NO POINT ALONG A FLOOR LINE IN ANY WALL SPACE THAT IS MORE THAN 6'-0", MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2'-0" OR MORE IN WIDTH. RECEPTACLES LOCATED AT KITCHEN COUNTERS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS NO MORE THAN 2'-0" MEASURED HORIZONTALLY FROM AN OUTLET IN SPACE. HALLWAYS OF 10'-0" OR MORE IN LENGTH REQUIRE AT LEAST ONE RECEPTACLE OUTLET.
 - SMOKE DETECTORS SHALL BE HARDWIRED INTO THE DWELLING ELECTRICAL SYSTEM AND SHALL BE INTERCONNECTED SO AS TO SOUND AN ALARM IN ALL THE DETECTORS WHEN ONE IS ACTIVATED. SMOKE DETECTORS SHALL BE LOCATED IN ONE SLEEPING ROOM AT ONE POINT CENTRALLY LOCATED IN THE CORRIDOR GIVING ACCESS TO EACH SLEEPING AREA IN TWO STORY DWELLINGS A SMOKE DETECTOR MUST BE INSTALLED ON EACH LEVEL.

PROJECT DESCRIPTION

RESIDENCE:	THE EAST OF 62 FT OF LOTS 1075 AND 1076, BLOCK 10, KASHMERE GARDENS	UNIT A	UNIT B
LEGAL DESCRIPTION	4615 COLLINGSWORTH STREET	TOTAL LIVING	1258 SQ. FT.
CITY / STATE:	HOUSTON, TEXAS 77026	TOTAL COVERED	1291 SQ. FT.
BUILDING CODES	IRC 2012 WITH AMENDMENTS	BEDROOMS:	2 BEDROOM / UNIT
ELECTRICAL CODE	NEC 2020	GARAGE:	NA
PLUMBING CODE	IPC 2012	FRAME:	WOOD FRAME
MECHANICAL CODE	IMC 2012	STORIES:	1 STORY
OTHER:	IECC 2015	BATHS:	2 BATHS / UNIT
		FIREPLACE:	NONE
		EXTERIOR:	HARD SIDING BRICK

SHEET INDEX

SHEET #	SHEET NAME
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A1.01	COH SITE DETAILS
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A2.01	DOORS & WINDOWS SCHEDULES
A3.00	ELECTRICAL PLAN, SYMBOLS & NOTES
A4.00	EXTERIOR ELEVATIONS & NOTES
A5.00	BUILDING SECTIONS, ROOF PLAN & NOTES
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S2	STRUCTURAL FRAMING PLANS
S2.1	STRUCTURAL FRAMING PLANS
S3	TYPICAL FRAMING DETAILS & NOTES
S4	NAILING SCHEDULE

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PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026

PROFESSIONAL SEAL

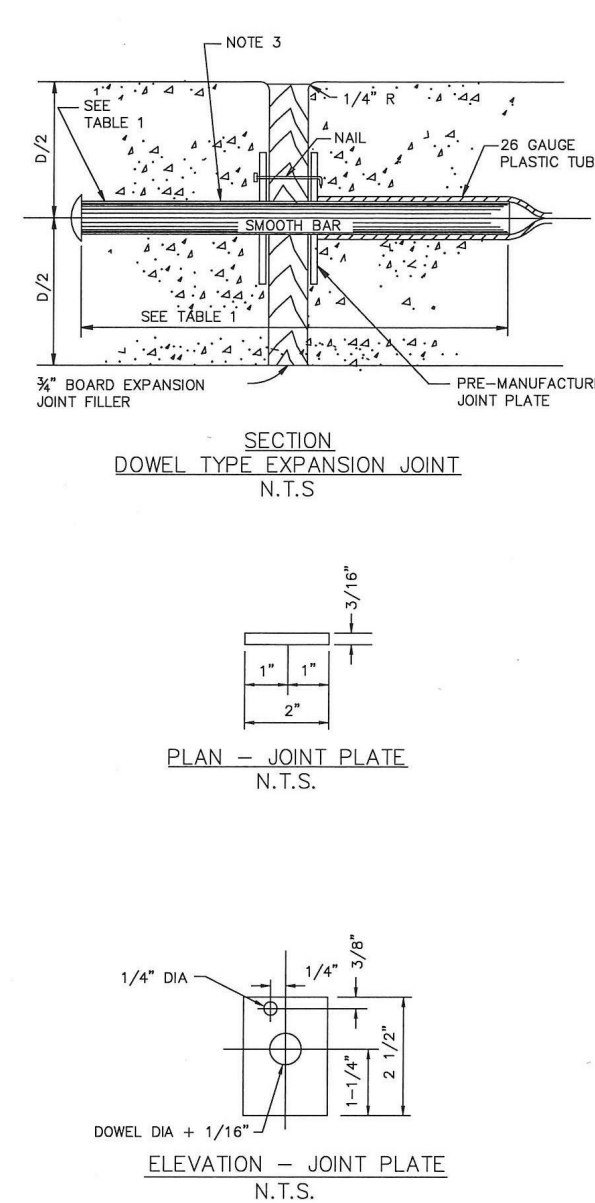
MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

PROJECT NO.	220210
CAD DRAWING FILE:	4615-COLLINGSWORTH.RVT
DRAWN BY:	SEM
CHECKED BY:	JVM

SCALE	As indicated
SHEET TITLE	SITE PLAN, PROJECT DATA & GENERAL NOTES

20/2022 7:09:14 AM

02752-02



- NOTES:
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
 2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 3 FEET MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5 FEET.
 3. CENTER DOWEL HORIZONTALLY ON JOINT.
 4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN A 2 INCH MINIMUM COVER.

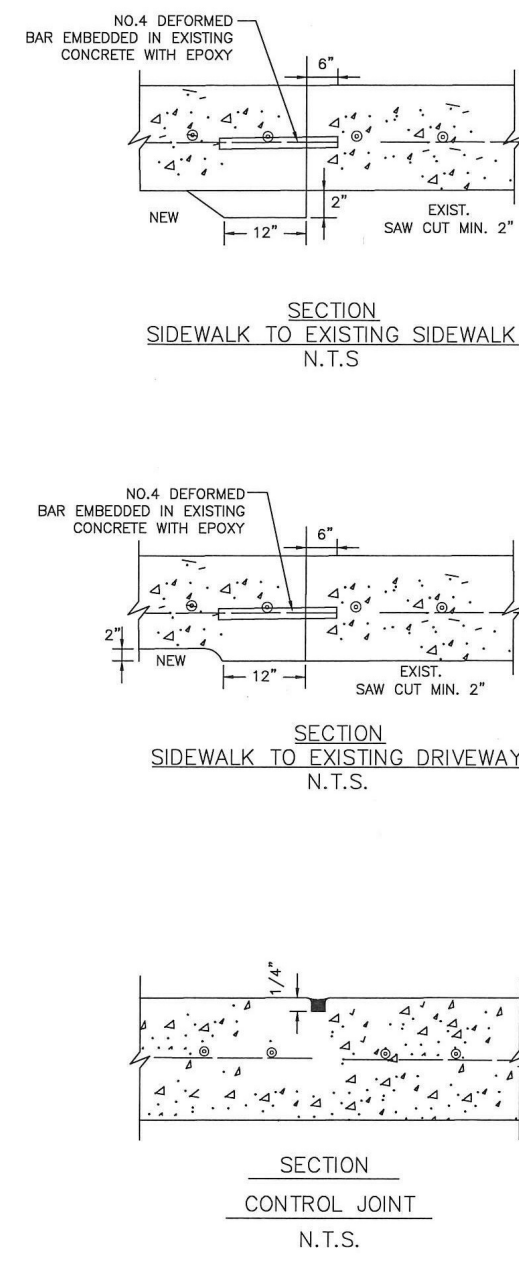
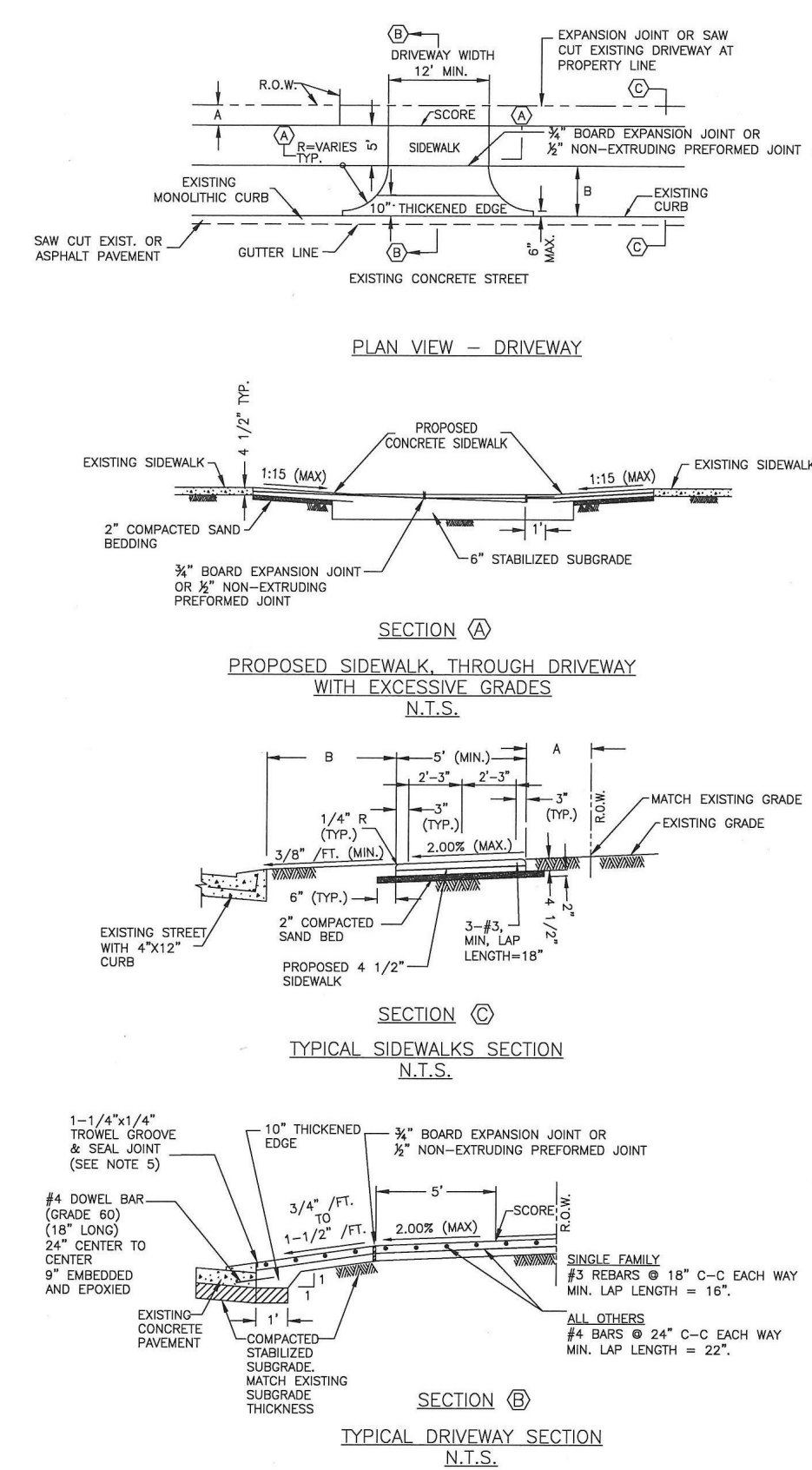


TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL DIAMETER (IN)	DOWEL LENGTH (IN)	DOWEL SPACING (IN)
4 1/2	1/2	18	12
5	1/2	18	12
6	3/4	18	12
8	1	18	12

SIDEWALK EXPANSION AND CONSTRUCTION JOINT DETAILS N.T.S.

02754-01A



- NOTES:
1. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SEE NOTE 2) ACCORDING TO DM REQUIREMENT, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
 2. DRIVEWAYS SHALL BE 4" THICK FOR SINGLE FAMILY.
 3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
 4. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM THE PROPOSED EDGE OF DRIVEWAY AND 12" FROM THE PROPOSED EDGE OF SIDEWALK. THE INNER DOWEL BARS ARE TO BE LOCATED 12" FROM THE PROPOSED DRIVEWAY AND 12" FROM THE PROPOSED SIDEWALK. THE REMAINING BARS TO EXTEND TO BARS RETURN BOTH SIDES.
 5. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
 6. EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALK SHALL BE ACCORDING TO DRAWING NO. 02752-02.
 7. REFER CHAPTER 17 DESIGN REQUIREMENTS FOR A AND B.
 8. CEMENT STABILIZED SAND 1.5 SACKS OF CEMENT PER TON OF DRY SAND.
 9. ALL RAMP AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTER REQUIREMENTS SHALL GOVERN.
 10. CURB RAMP THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02752-02 THROUGH 02754-01A

APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DEPUTY DIRECTOR

DIRECTOR OF HOUSTON PUBLIC WORKS

EFFECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

DRIVEWAY / LOCAL RESIDENTIAL STREETS N.T.S.

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PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026

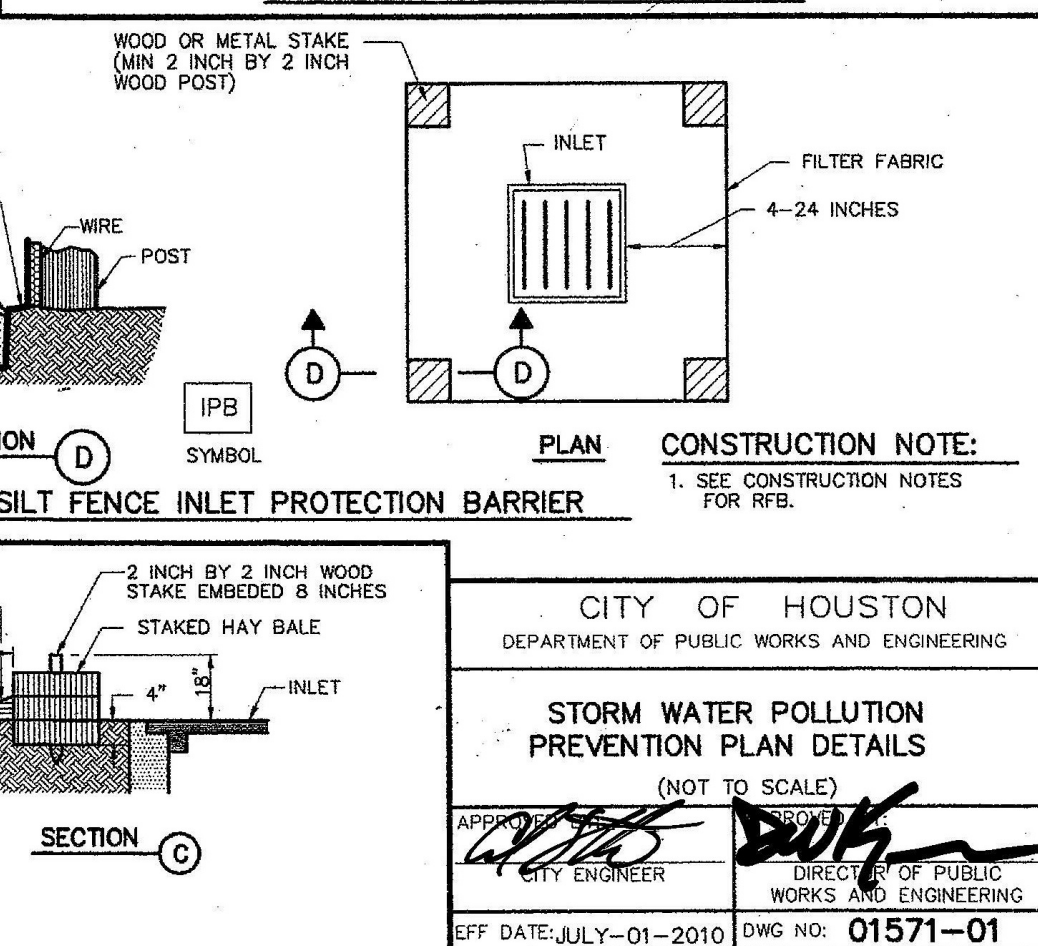
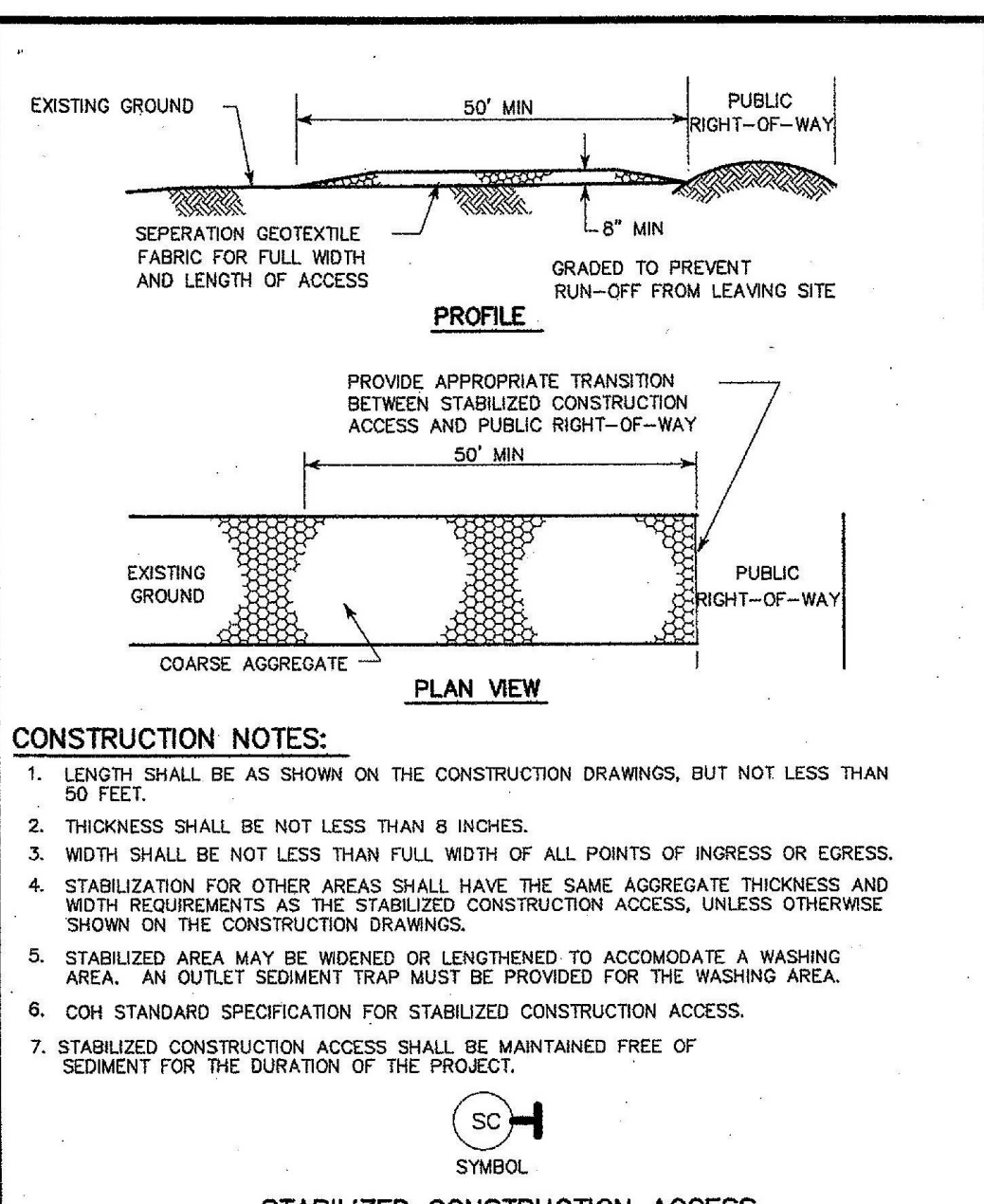
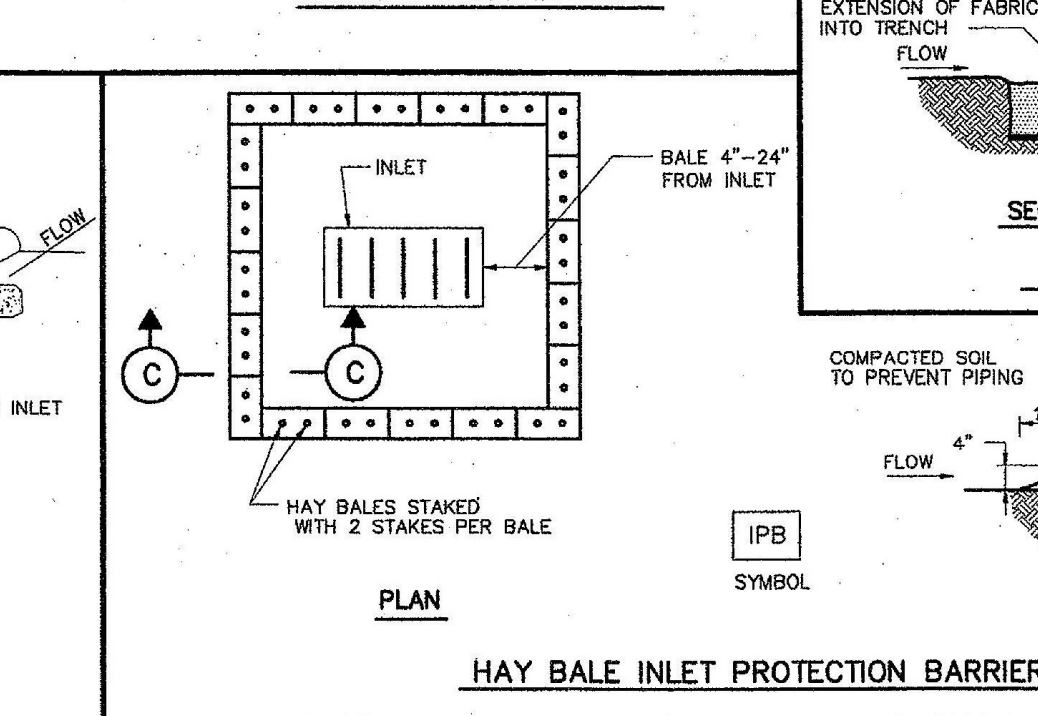
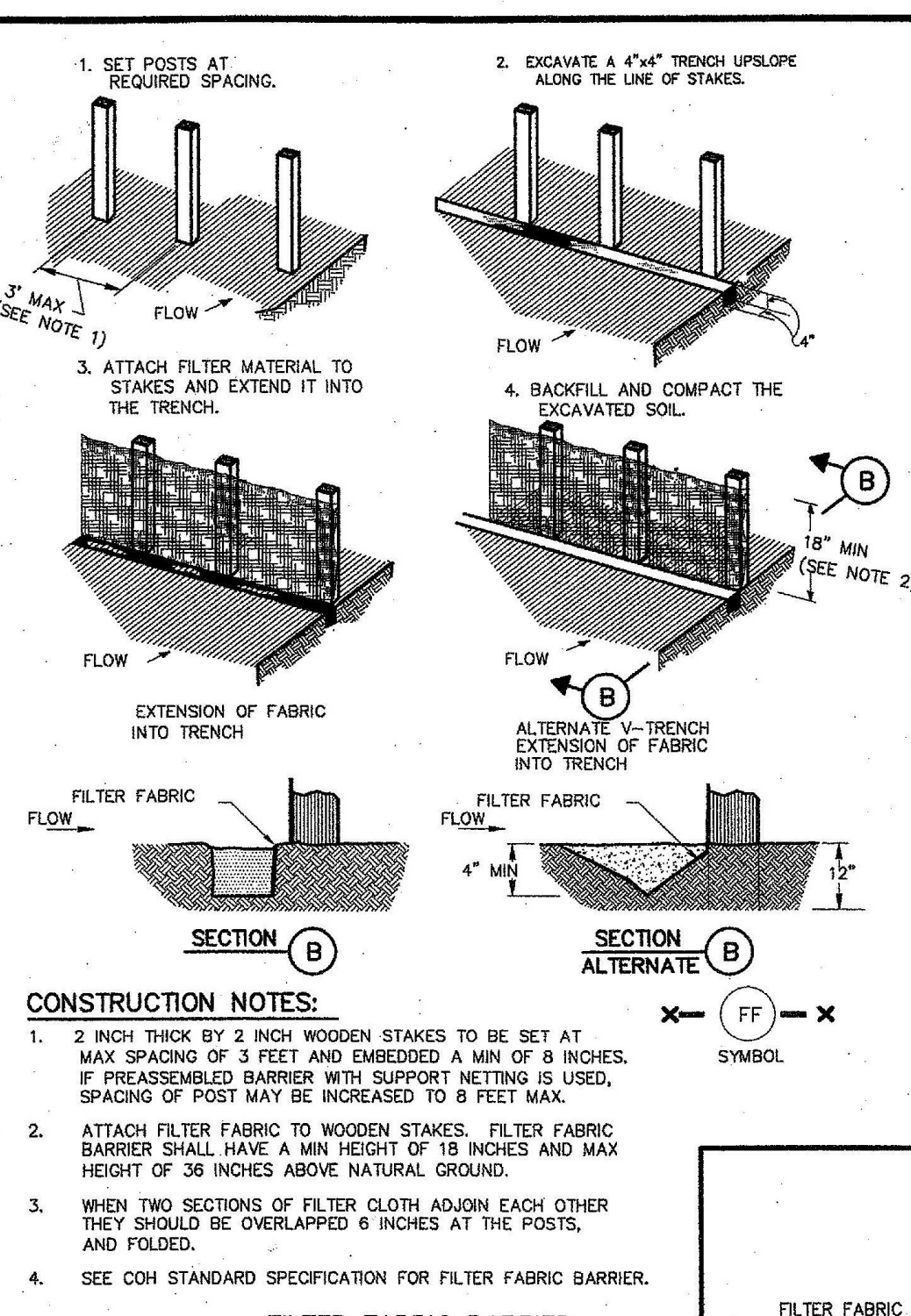
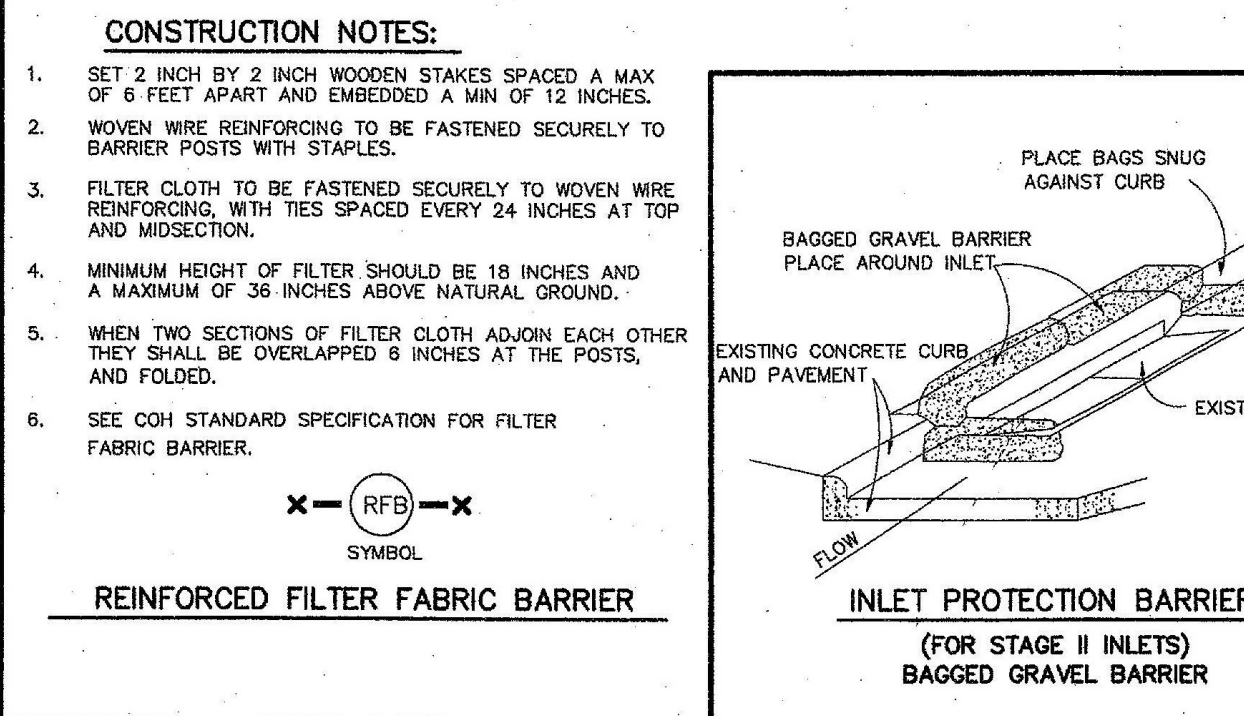
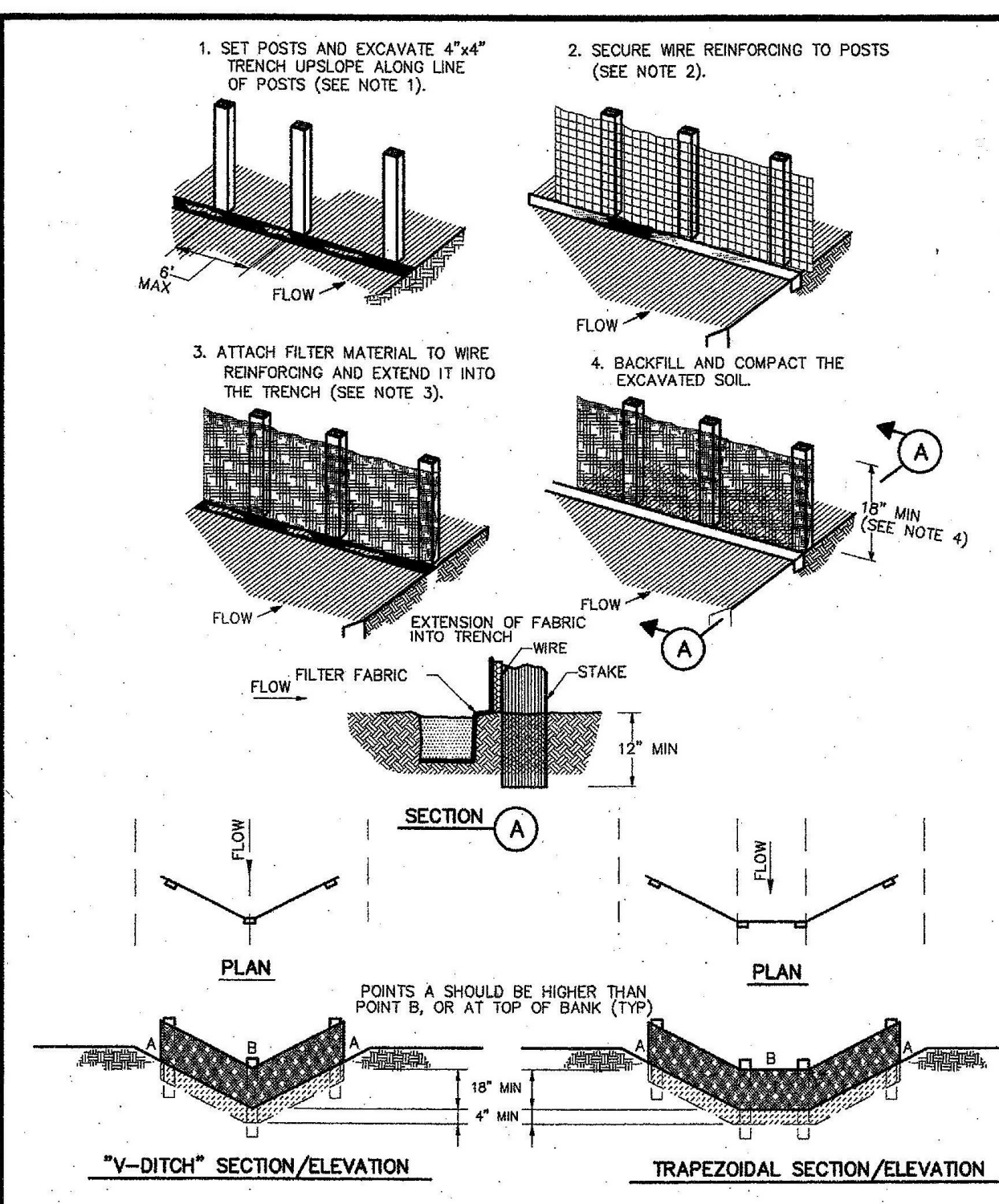
PROFESSIONAL SEAL

MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

PROJECT NO. 220210
CAD DRAWING FILE: 4615-COLLINGSWORTH.RVT
DRAWN BY: AGL
CHECKED BY: JVM

SCALE
SHEET TITLE
COH SITE DETAILS

A1.01
SHEET 2 OF 13 TOTAL SHEETS



- CONSTRUCTION NOTES:
1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 12 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
 2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
 4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

- CONSTRUCTION NOTES:
1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
 2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
 3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
 4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
 5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
 6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
 7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION
PREVENTION PLAN DETAILS
(NOT TO SCALE)

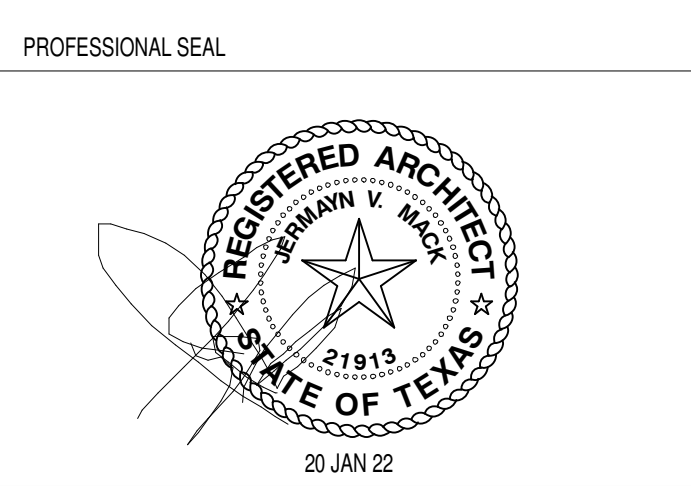
APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 01571-01

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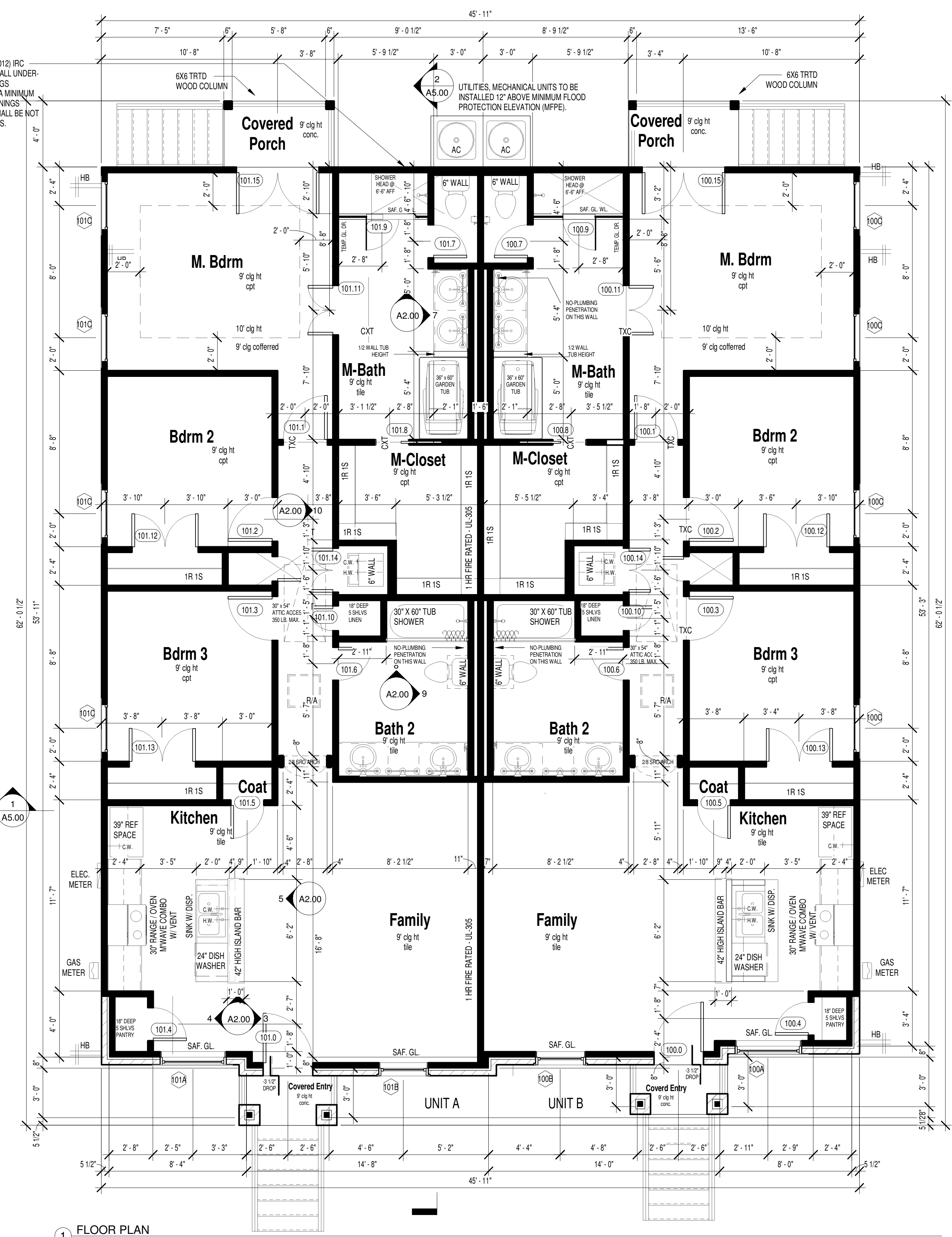
PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026



MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

PROJECT NO.	220210
CAD DRAWING FILE:	4615-COLLINGSWORTH.RVT
DRAWN BY:	LNG
CHECKED BY:	JVM

SCALE	1/4" = 1'-0"
SHEET TITLE	FLOOR PLAN, INTERIOR ELEVATIONS & NOTES



1 FLOOR PLAN
1/4" = 1'-0"

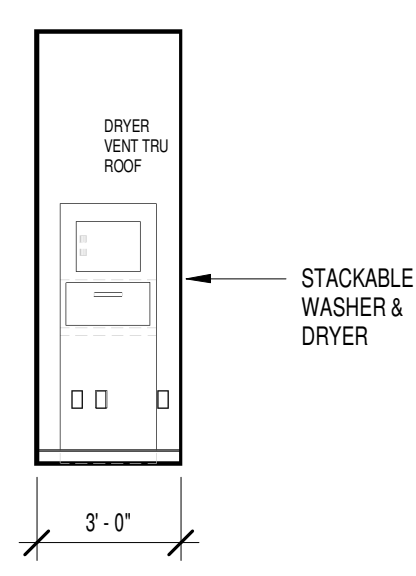
FLOOR PLAN NOTES

- 9' CEILING HTS. UNLESS NOTED OTHERWISE.
- SEE SCHEDULES FOR HEADER HTS. @ WINDOWS AND DOORS
- SHOWER STALLS AND TUB WALLS TO BE FINISHED WITH NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 72" ABOVE FLOOR OVER CONC. BACKERBOARD. ALL GLASS AT TUBS AND SHOWERS SHALL BE TEMPERED SAFETY GLASS AND COMPLY W/ IRC 2012 SECT. R308.
- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE. CONTRACTOR TO VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND NOTIFY DESIGNER OF ANY VARIATIONS FROM THE DIMENSIONS OR CONDITIONS SHOWN ON THE DRAWINGS PRESENTED HEREIN.
- LOCATE WATER HEATER(S) IN ATTIC ABOVE A LOAD BEARING PARTITION W/ ACCESS TO AND WORKING CLEARANCE IN A PAN W/ A RELIEF LINE TO OUTSIDE OR STORM SEWER LINE. INSTALLATION TO CONFORM W/ IRC 2012 SEC. P2803.
- ALL EXTERIOR WALL TO BE 2 X 4'S U.N.O. W/ 5/8" GYP. BOARD TYPE "X" AT WEI AREAS.
- HOLD BATHROOMS & UTILITY ROOM SUB-FLOOR FLUSH W/ TOP OF TRUSSES FOR TILE FLOOR.
- PROVIDE MOLDING PER SPECIFICATIONS.
- PROVIDE ATTIC ACCESS WITH A MIN. CLEAR OPENING OF 30" X 54". PROVIDE MIN. HEAD CLEARANCE OF 30" WHERE SERVICING MECH. EQUIP. THE MIN. SIZE OF A PULL DOWN STAIR IS 30" X 54" AND TO HAVE MIN. LOAD CAPACITY OF 350 LBS. LARGE ENOUGH TO ALLOW REMOVAL OF LARGEST APPLIANCE. SEE IRC 2012 SEC. 807 AND SEC. M1305.1.3.
- LOCATE WATER HEATER(S) IN ATTIC ABOVE A LOAD BEARING PARTITION W/ ACCESS TO AND WORKING CLEARANCE IN A PAN W/ A RELIEF LINE TO OUTSIDE OR STORM SEWER LINE. INSTALLATION TO CONFORM W/ IRC 2012 SEC. P2803.
- LOCATE H.V.A.C. EQUIPMENT IN ATTIC. PROVIDE 3/4" PLYWOOD DECKING IN ATTIC AS NEEDED FOR MECH. EQUIPMENT.
- PROVIDE 24" WIDE PLYWOOD WALKWAY TO ACCESS ALL MECH. EQUIP. LOCATED IN ATTIC MAX. DIST. FROM ATTIC ACCESS TO EQUIP. SHALL NOT EXCEED 20'-0". PROVIDE A 30" WIDE SERVICE PLATFORM AT SERVICE SIDE OF ALL EQUIPMENT IN ATTIC.
- MIN. EGRESS ROUTE @ WINDOWS TO BE 20" W X 24" H W/ SILL HT. LESS THAN 44" A.F.F. PER R310.1.1.5.7 S.F. NET OPENING.
- ALL GAS VALVES- 1/4 TURN BEFORE THE APPLIANCE.
- ALL INSULATION SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY RATING NOT TO EXCEED 450.
- ALL SMOKE DETECTORS SHALL BE HARD-WIRED, INTERCONNECTED AND WITH BATTERY BACK-UP.

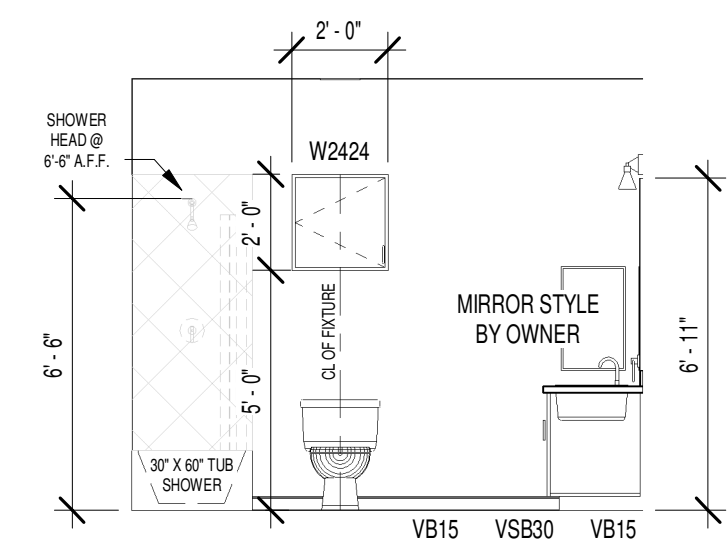
AREA CALCULATIONS

	UNIT A	UNIT B
FLOOR PLAN	1258 SQ. FT.	1246 SQ. FT.
TOTAL LIVING	1258 SQ. FT.	1246 SQ. FT. = 2504 SQ. FT.
COVERED ENTRY	18 SQ. FT.	18 SQ. FT.
BACK PORCH	27 SQ. FT.	27 SQ. FT.
GARAGE	NA	NA
TOTAL COVERED	1303 SQ. FT.	1291 SQ. FT. = 2594 SQ. FT.

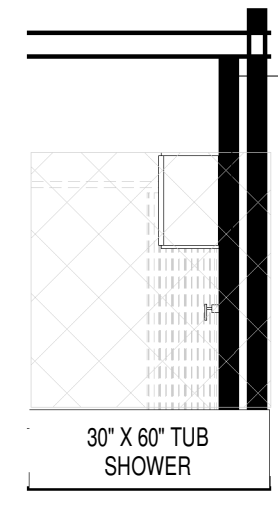
10 UTILITY ELEVATION
1/4" = 1'-0"



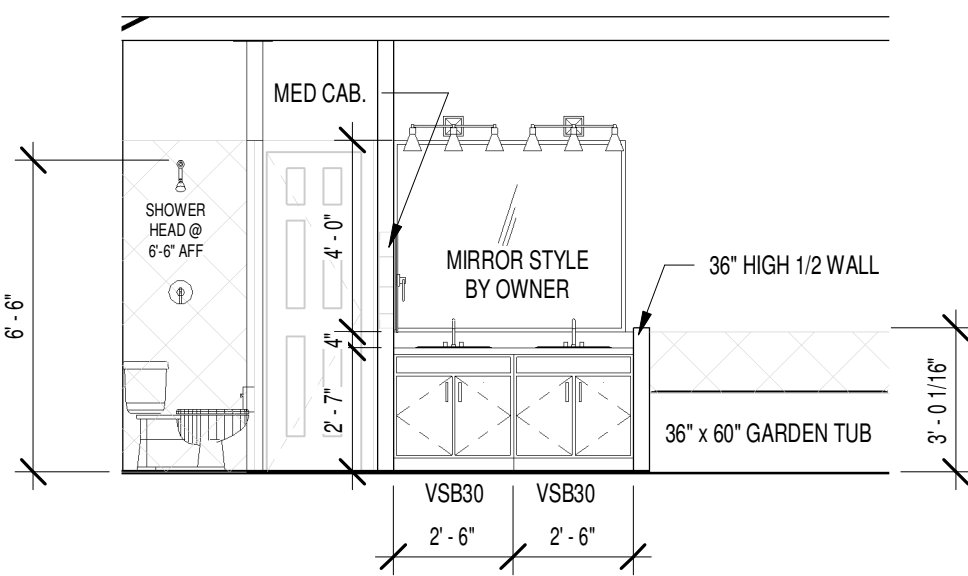
9 BATH 2 EAST ELEVATION
1/4" = 1'-0"



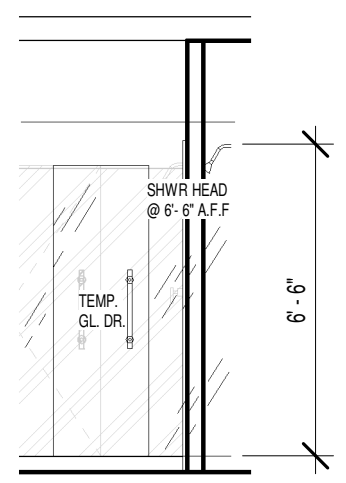
8 BATH 2 NORTH ELEVATION
1/4" = 1'-0"



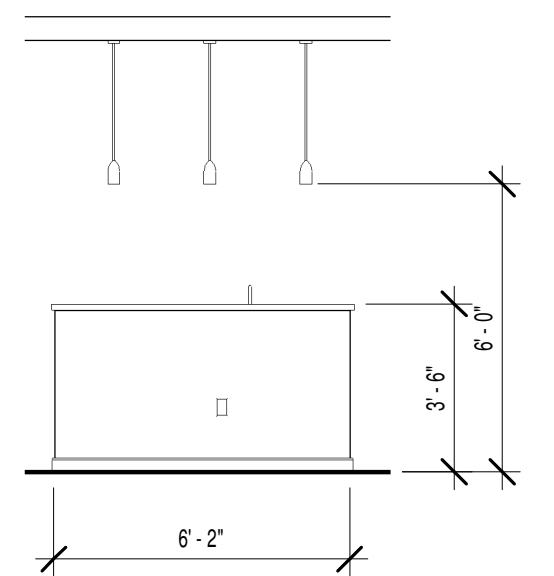
7 M-BATH EAST ELEVATION
1/4" = 1'-0"



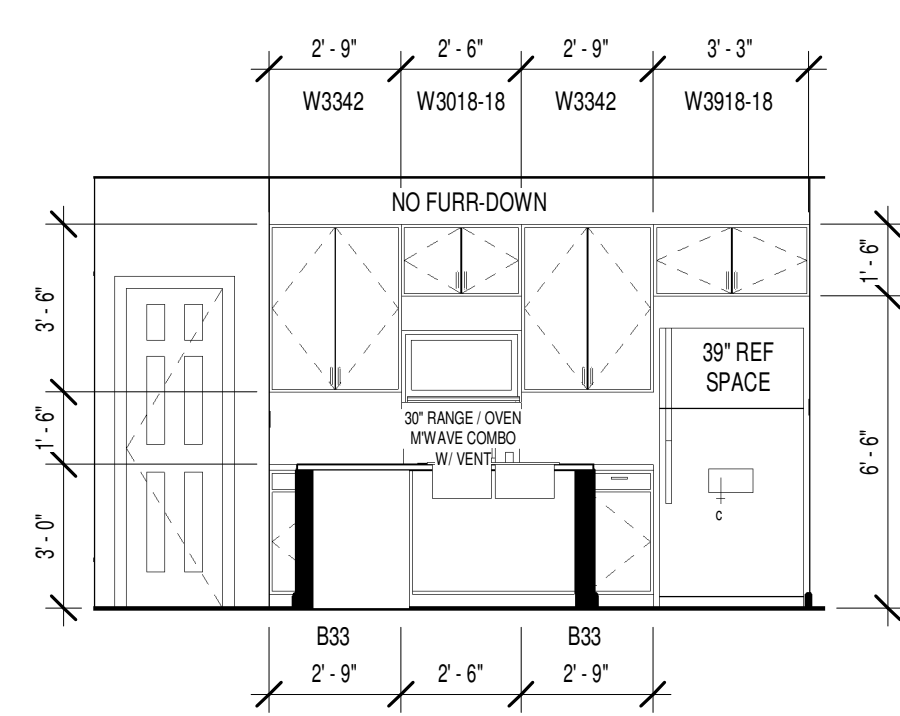
6 M-BATH NORTH ELEVATION
1/4" = 1'-0"



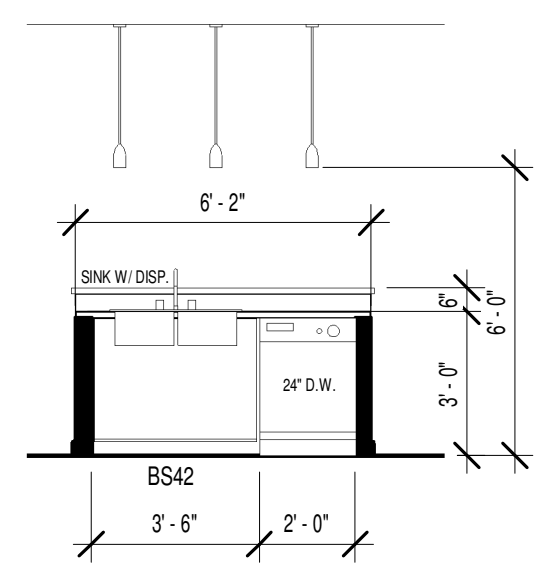
5 ISLAND BAR WEST ELEVATION
1/4" = 1'-0"



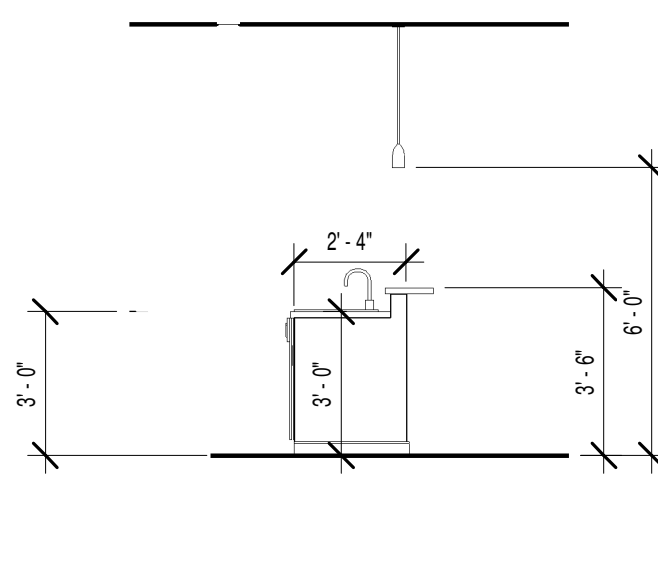
4 KITCHEN WEST ELEVATION
1/4" = 1'-0"



3 ISLAND BAR EAST ELEVATION
1/4" = 1'-0"



2 KITCHEN NORTH ELEVATION
1/4" = 1'-0"



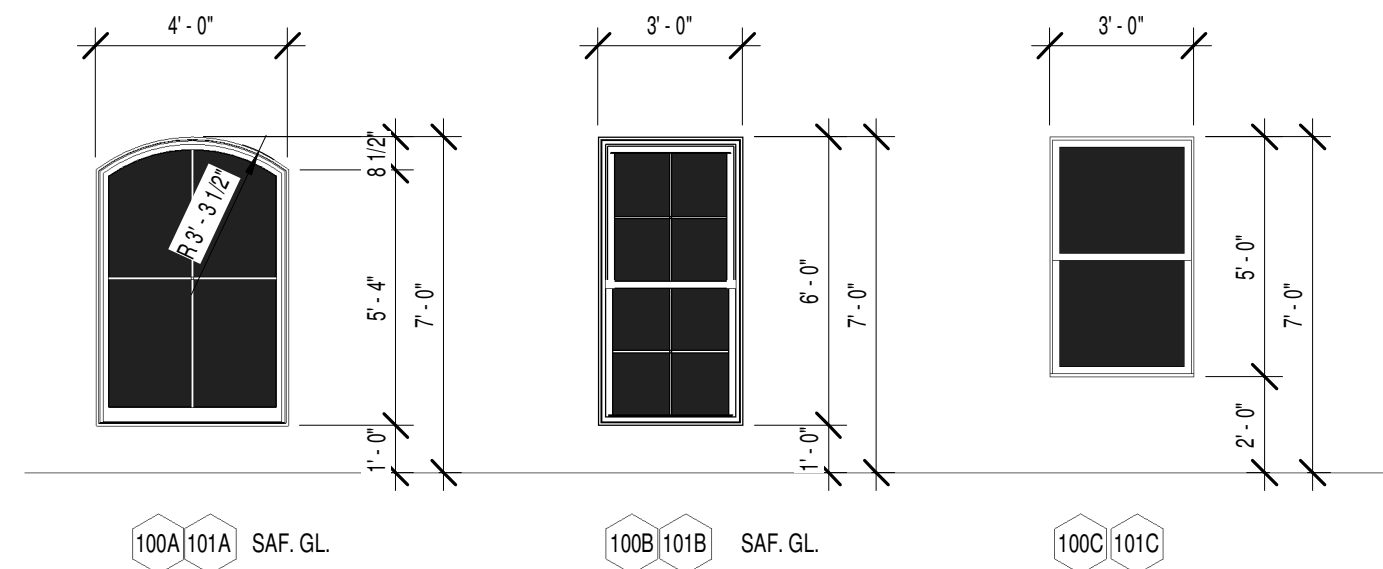
NOTE: ALL INTERIOR ELEVATIONS ARE REVERSED FOR SIMILAR PLAN

ROOM FINISH SCHEDULE

ROOM NAME	FLOORING	BASE	CROWN	PLAN NORTH WALL		PLAN SOUTH WALL		PLAN EAST WALL		PLAN WEST WALL		CEILING			REMARKS
				MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	HEIGHT	FINISH	
COVERED ENTRY	CONCRETE			1/2" GYP BD W/ BRICK		1/2" GYP BD		1/2" GYP BD W/ BRICK		1/2" GYP BD		1/2" GYP BD	9'-0"	TEXTURED/PAINT	
FAMILY	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
KITCHEN	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
BREAKFAST	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
M-BEDROOM	CARPET	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0" collered to 10'	TEXTURED/PAINT	
BEDROOM 2 & 3	CARPET	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
M-BATH	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	PROVIDE CEMENTIOUS BACKER BD BEHIND WALLS ON RECEIVING TILE
PANTRY	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
SHO	TILE			1/2" GYP BD	TILE	1/2" GYP BD	TILE	1/2" GYP BD	TILE	1/2" GYP BD	TILE	1/2" GYP BD	9'-0"	TEXTURED/PAINT	PROVIDE CEMENTIOUS BACKER BD BEHIND WALLS ON RECEIVING TILE
BATH 2	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	PROVIDE CEMENTIOUS BACKER BD BEHIND WALLS ON RECEIVING TILE
CLOSET 2	CARPET	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
CLOSET 3	CARPET	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
HALL	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	
UTILITY	TILE	4" MDF		1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	TEXTURED/PAINT	1/2" GYP BD	9'-0"	TEXTURED/PAINT	

UNIT B WINDOW SCHEDULE						
MARK	COUNT	WIDTH	HEIGHT	HEAD HEIGHT	DESCRIPTION	
100A	1	4'-0"	6'-0"	7'-0"	VINYL DIVIDER LIGHT FIXED ARCHED TOP WINDOW (SAFETY GLASS)	
100B	1	3'-0"	6'-0"	7'-0"	VINYL DIVIDER LIGHT SINGLE HUNG WINDOW (SAFETY GLASS)	
100C	3	3'-0"	5'-0"	7'-0"	VINYL SINGLE LIGHT SINGLE HUNG WINDOW	
Grand total: 5						

UNIT A WINDOW SCHEDULE						
MARK	COUNT	WIDTH	HEIGHT	HEAD HEIGHT	Description	
101A	1	4'-0"	6'-0"	7'-0"	VINYL DIVIDER LIGHT FIXED ARCHED TOP WINDOW (SAFETY GLASS)	
101B	1	3'-0"	6'-0"	7'-0"	VINYL DIVIDER LIGHT SINGLE HUNG WINDOW (SAFETY GLASS)	
101C	4	3'-0"	5'-0"	7'-0"	VINYL SINGLE LIGHT SINGLE HUNG WINDOW	
Grand total: 6						

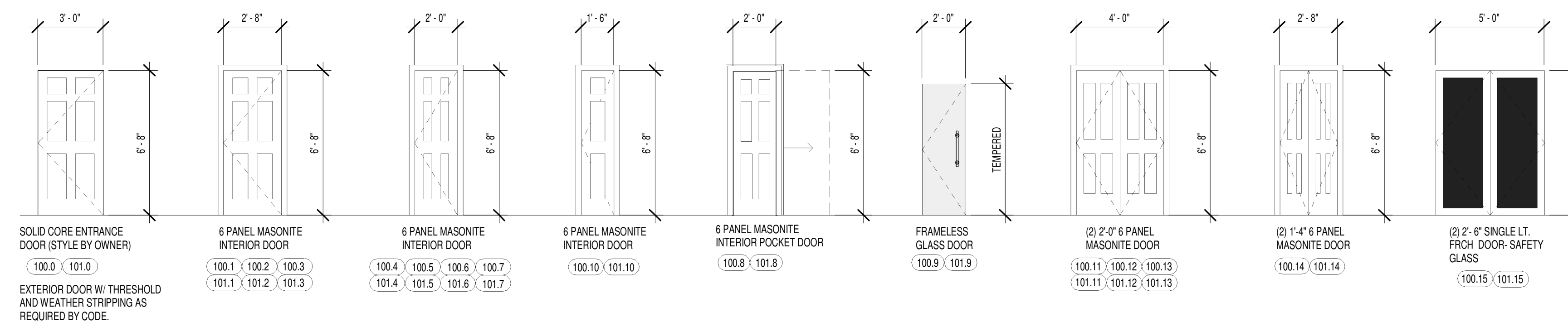


- NOTES:
- ALL WINDOWS WITHIN 18" FROM FINISH FLOOR SHALL BE SAFETY GLASS.
 - ALL WINDOWS ARE TO BE VINYL FIBERGLASS FRAME WITH DOUBLE PANE LOW-E GLASS PER RESCHECK REPORT.

WINDOW TYPES
1/4" = 1'-0"

UNIT B DOOR SCHEDULE					
MARK	WIDTH	HEIGHT	ROOM NAME	DESCRIPTION	
100.0	3'-0"	6'-8"	ENTRY	3068 S.C. DOOR (STYLE BY OWNER)	
100.1	2'-8"	6'-8"	M-BEDROOM	6 PANEL MASONITE INTERIOR DOOR	
100.2	2'-8"	6'-8"	BEDROOM 2	6 PANEL MASONITE INTERIOR DOOR	
100.3	2'-8"	6'-8"	BEDROOM 3	6 PANEL MASONITE INTERIOR DOOR	
100.4	2'-0"	6'-8"	PANTRY	6 PANEL MASONITE INTERIOR DOOR	
100.5	2'-0"	6'-8"	COAT	6 PANEL MASONITE INTERIOR DOOR	
100.6	2'-0"	6'-8"	BATH 2	6 PANEL MASONITE INTERIOR DOOR	
100.7	2'-0"	6'-8"	WATER CLOSET	6 PANEL MASONITE INTERIOR DOOR	
100.8	2'-0"	6'-8"	M-CLOSET	6 PANEL MASONITE POCKET INTERIOR DOOR	
100.9	2'-0"	6'-0"	SHOWER	FRAMELESS SHOWER GLASS DOOR (TEMPERED)	
100.10	1'-6"	6'-8"	LINEN	6 PANEL MASONITE INTERIOR DOOR	
100.11	3'-0"	6'-8"	M-BATH		
100.12	4'-0"	6'-8"	CLOSET 2	2-2/0 6 PANEL MASONITE INTERIOR DOOR	
100.13	4'-0"	6'-8"	CLOSET 3	2-2/0 6 PANEL MASONITE INTERIOR DOOR	
100.14	2'-8"	6'-8"	UTILITY	2-1/4 6 PANEL MASONITE INTERIOR DOOR	
100.15	5'-0"	6'-8"	M-BEDROOM	(2) 3'-0" SINGLE LT. FRCH. DOOR- SAFETY GLASS	
Grand total: 16					

UNIT A DOOR SCHEDULE					
MARK	WIDTH	HEIGHT	ROOM NAME	DESCRIPTION	
101.0	3'-0"	6'-8"	ENTRY	3068 S.C. DOOR (STYLE BY OWNER)	
101.1	2'-8"	6'-8"	M-BEDROOM	6 PANEL MASONITE INTERIOR DOOR	
101.2	2'-8"	6'-8"	BEDROOM 2	6 PANEL MASONITE INTERIOR DOOR	
101.3	2'-8"	6'-8"	BEDROOM 3	6 PANEL MASONITE INTERIOR DOOR	
101.4	2'-0"	6'-8"	PANTRY	6 PANEL MASONITE INTERIOR DOOR	
101.5	2'-0"	6'-8"	COAT	6 PANEL MASONITE INTERIOR DOOR	
101.6	2'-0"	6'-8"	BATH 2	6 PANEL MASONITE INTERIOR DOOR	
101.7	2'-0"	6'-8"	WATER CLOSET	6 PANEL MASONITE INTERIOR DOOR	
101.8	2'-0"	6'-8"	M-CLOSET	6 PANEL MASONITE POCKET INTERIOR DOOR	
101.9	2'-0"	6'-0"	SHOWER	FRAMELESS SHOWER GLASS DOOR (TEMPERED)	
101.10	1'-6"	6'-8"	LINEN	6 PANEL MASONITE INTERIOR DOOR	
101.11	3'-0"	6'-8"	M-BATH		
101.12	4'-0"	6'-8"	CLOSET 2	2-2/0 6 PANEL MASONITE INTERIOR DOOR	
101.13	4'-0"	6'-8"	CLOSET 3	2-2/0 6 PANEL MASONITE INTERIOR DOOR	
101.14	2'-8"	6'-8"	UTILITY	2-1/4 6 PANEL MASONITE INTERIOR DOOR	
101.15	5'-0"	6'-8"	M-BEDROOM	(2) 3'-0" SINGLE LT. FRCH. DOOR- SAFETY GLASS	
Grand total: 16					



DOOR TYPES
1/4" = 1'-0"

JMACK ARCHITECTS, LLC
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PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026

PROFESSIONAL SEAL

MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

PROJECT NO.	220210
CAD DRAWING FILE:	4615-COLLINGSWORTH.RVT
DRAWN BY:	LNG
CHECKED BY:	JVM

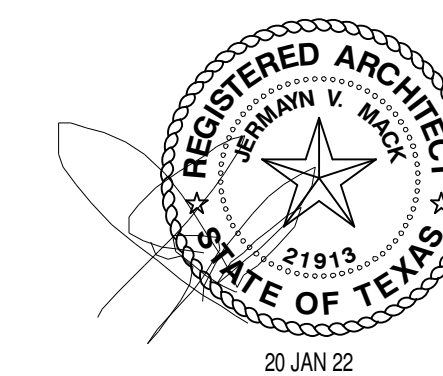
SCALE	As indicated
SHEET TITLE	DOORS & WINDOWS SCHEDULES

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 4615 COLLINGSWORTH STREET # A&B
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PROFESSIONAL SEAL



MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

PROJECT NO.	220210
CAD DRAWING FILE:	4615-COLLINGSWORTH.RVT
DRAWN BY:	LNG
CHECKED BY:	JVM

SCALE
 1/4" = 1'-0"

SHEET TITLE
 ELECTRICAL PLAN, SYMBOLS & NOTES

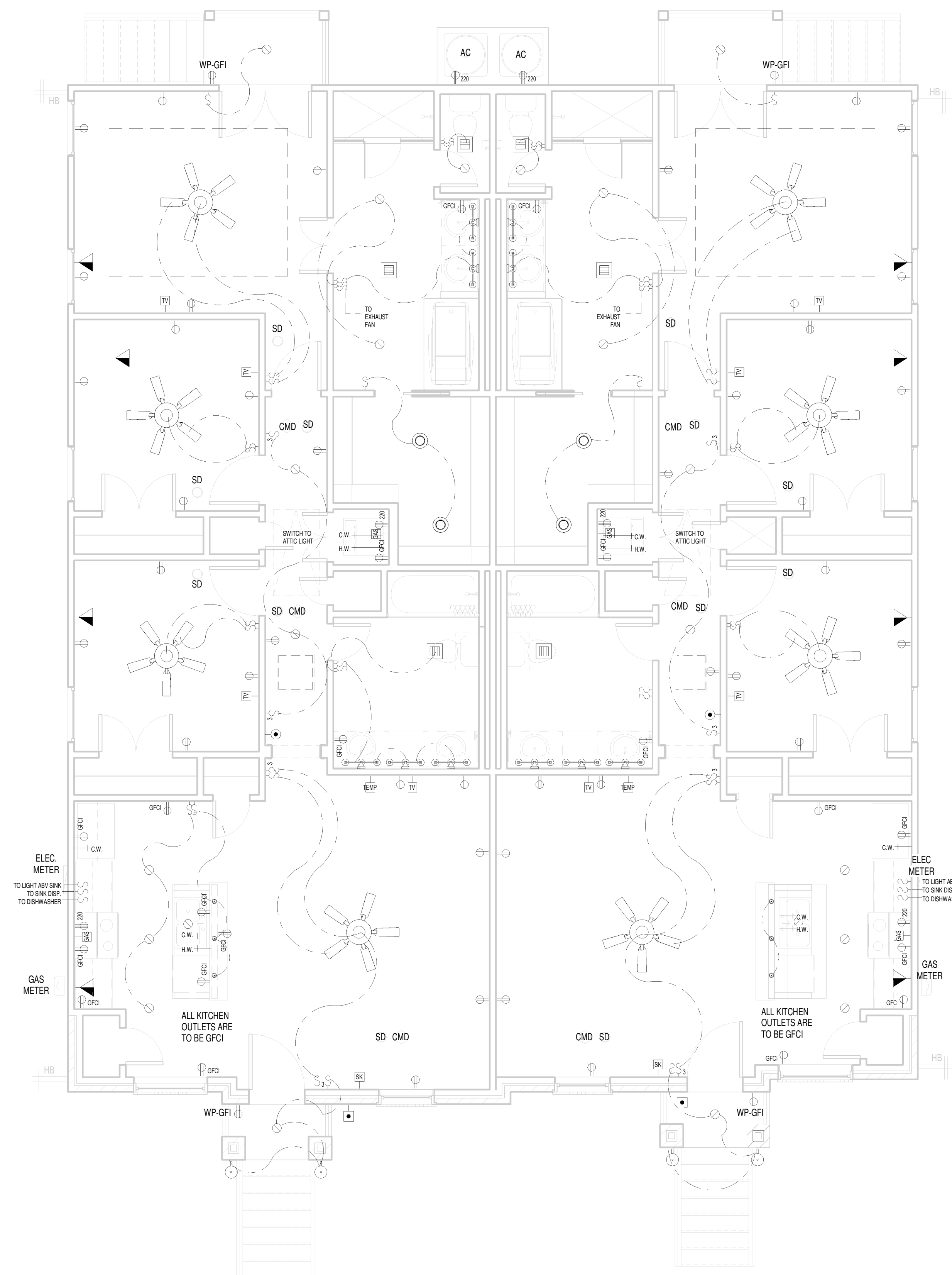
A3.00
 SHEET 5 OF 13 TOTAL SHEETS

ELECTRICAL NOTES

- ALL FLOOR OUTLETS TO BE MOUNTED VERTICALLY 14" A.F.F.
- ALL SLEEPING QUARTERS TO BE ARC-FAULT PROTECTED.
- PROVIDE G.F.C.I. PROTECTION AS REQUIRED.
- SMOKE DETECTORS REQUIRE 110V CONNECTION TO HOUSE WIRING, BATTERY BACK-UP & INTERCONNECTED. ALL SMOKE DETECTORS SHALL BE HARD-WIRED, INTERCONNECTED AND WITH BATTERY BACK-UP.
- VENT ALL EXHAUST FANS TO OUTSIDE.
- PROVIDE LIGHT FIXTURE AND SMOKE DETECTOR AT EACH WATER HEATER AND A/C UNIT IN ATTIC.
- PROVIDE ELEC. DISCONNECT AT EACH A/C UNIT.
- PROVIDE LOW VOLTAGE CIRCUIT FOR ALARM SYSTEM.
- PROVIDE LOW VOLTAGE CIRCUIT FOR INTERCOM / PHONE SYSTEM.
- ALLOW FOR 1 A/C PER UNIT.
- PROPOSED ELECTRICAL SERVICE TO CONNECT TO EXISTING ELECTRICAL SERVICE OR CONNECT TO UNDERGROUND SERVICE AS REQUIRED.
- FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRE APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGE.

ELECTRICAL LEGEND

	SECURITY KEY PAD		WALL MOUNTED FIXTURE		SURFACE MOUNTED LIGHT FIXTURE
	CATV OUTLET		WALL MOUNTED BATH FIXTURE		RECESSED CAN
	THERMOSTAT OUTLET		SINGLE SWITCH		CARBON MONOXIDE DETECTOR (CMD)
	DUPLEX OUTLET		THREE WAY SWITCH		SMOKED DETECTOR HARDWIRED INTERCONNECTED W/ BATTERY BACKUP
	GROUND FAULT INTERRUPTER		CEILING FAN		DOOR BELL CHIME
	220 OUTLET		HANGING PENDANT LIGHT FIXTURE		DOOR BELL BUTTON
	GFI SOFFIT OUTLET				EXHAUST FAN
					UNDER CABINET LIGHT
					PHONE/DATA SYMBOL

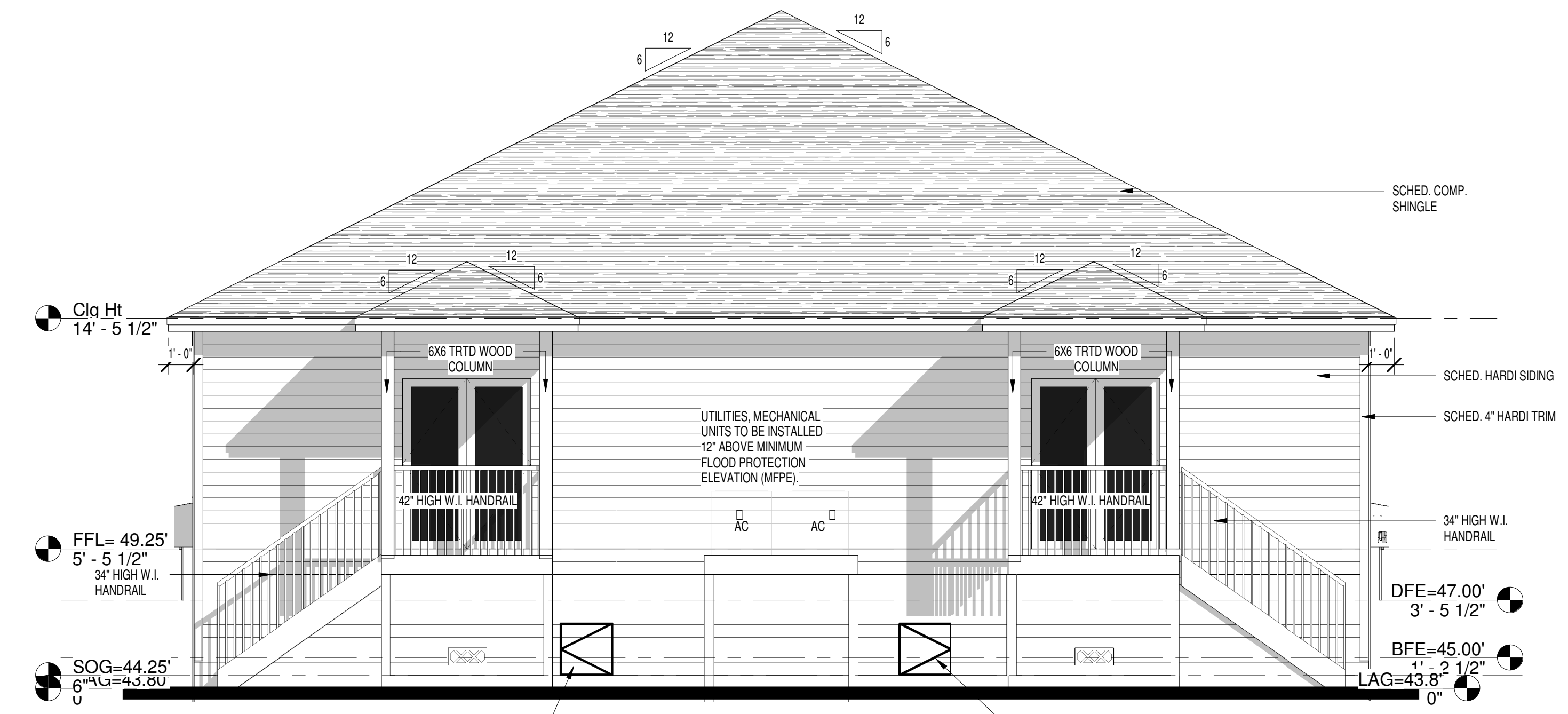


1 ELECTRICAL PLAN
 1/4" = 1'-0"

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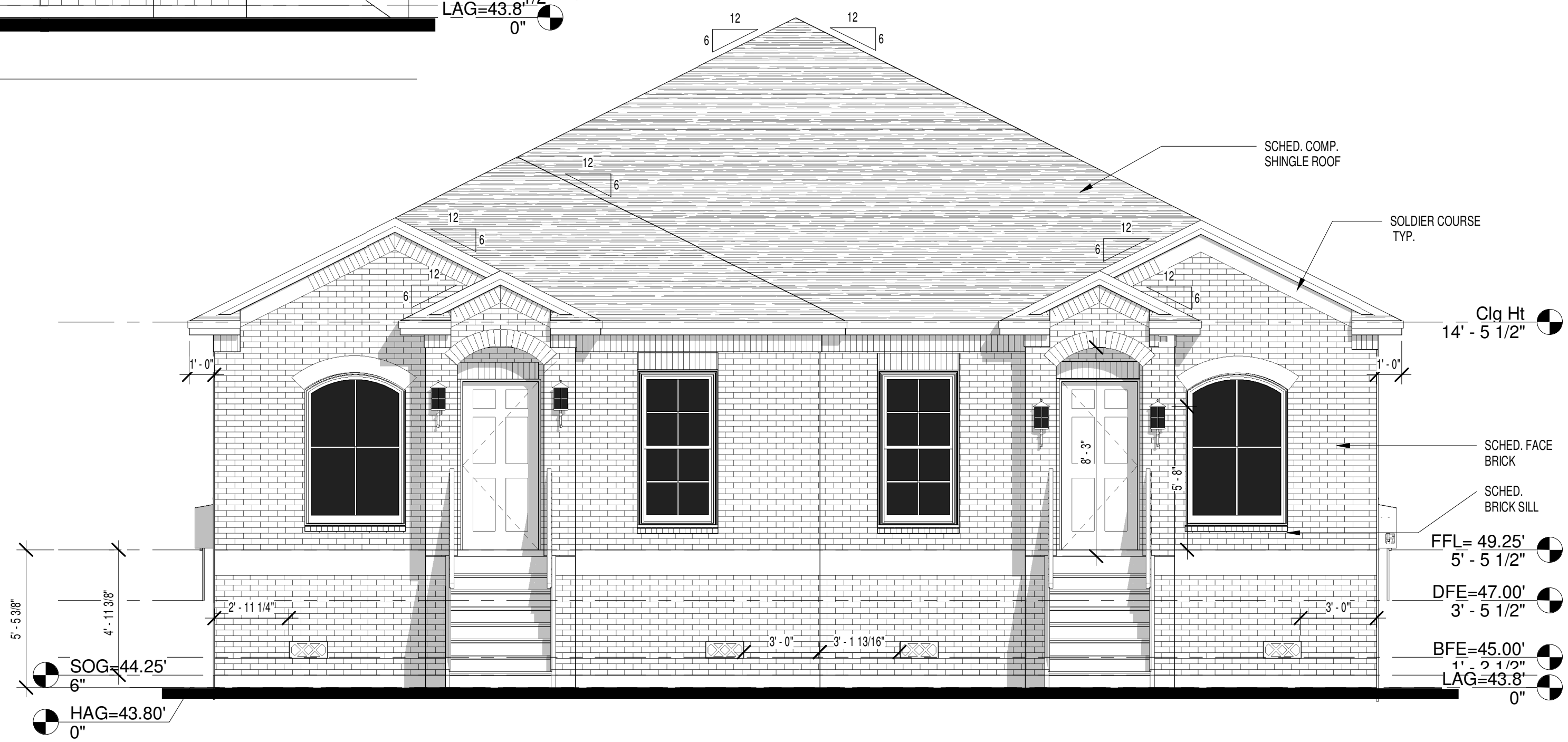
4 LEFT ELEVATION
1/4" = 1'-0"



2 REAR ELEVATION
1/4" = 1'-0"

CRAWL SPACE ACCESS (R408.4 2012) IRC
ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES.
ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM
OF 18 INCHES BY 24 INCHES. OPENINGS THROUGH A PERIMETER
WALL SHALL BE NOT LESS THAN 16 INCHES X 24 INCHES.

ELEVATION CERTIFICATE
HOUSE FF = 49.25'
TOP OF SLAB ON GRADE CONCRETE = 44.25'
100 YR BFE = 45.00'
500 YR WATER SURFACE ELEV = 47.00'
HAG = 43.80'
LAG = 43.80'



1 FRONT ELEVATION
1/4" = 1'-0"



3 RIGHT ELEVATION
1/4" = 1'-0"

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PROFESSIONAL SEAL
REGISTERED ARCHITECT
J. MACK
STATE OF TEXAS
21913
20 JAN 22

MARK	DATE	DESCRIPTION
1	20 JAN 22	ISSUED FOR PERMIT

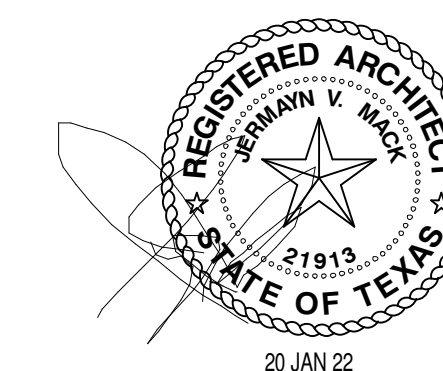
PROJECT NO.	220210
CAD DRAWING FILE:	4615-COLLINGSWORTH.RVT
DRAWN BY:	LNG
CHECKED BY:	JVM

SCALE	1/4" = 1'-0"
SHEET TITLE	EXTERIOR ELEVATIONS & NOTES

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PROPOSED DUPLEX
 4615 COLLINGSWORTH STREET # A&B
 HOUSTON, TEXAS 77026

PROFESSIONAL SEAL

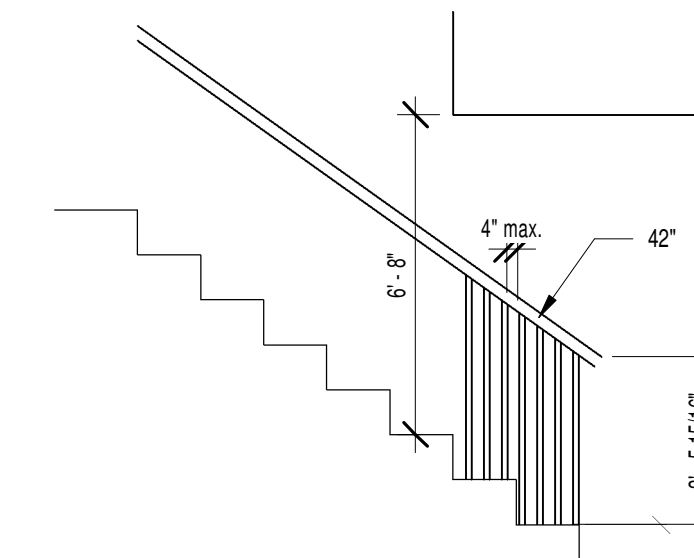


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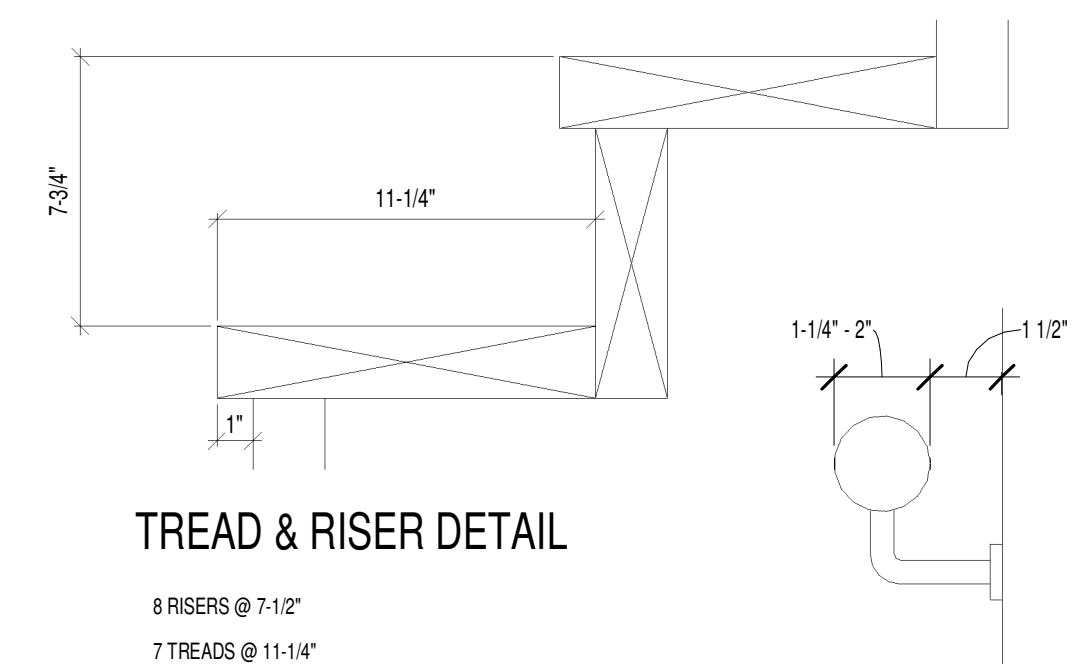
PROJECT NO.	220210
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SCALE	As indicated
SHEET TITLE	BUILDING SECTIONS, ROOF PLAN & NOTES

- PER R302.7.2012 IRC UNDER STAIR PROTECTION, PROVIDE UNDER STAIR PROTECTION TO ENCLOSED ACCESSIBLE SPACE W/ 1/2" GYPSUM BOARD.
- PER R011.7.5.2012 IRC STAIR RISE, RUN, STAIR MAXIMUM RISER HEIGHT SHALL BE 7 3/4" AND THE MINIMUM WIDTH FOR TREADS SHALL BE 10"
- PER R011.7.8.1.2012 IRC HEIGHT, HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864MM) AND NOT MORE THAN 38 INCHES (965MM).
- PER R011.7.8.3.2012 IRC GRIP SIZE, ALL REQUIRED HANDRAILS SHALL BE ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.
 TYPE I: HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1 1/4 INCHES (32MM) AND NOT GREATER THAN 2 INCHES (51MM).
 TYPE II: HANDRAILS W/ A PERIMETER GREATER THAN 6/4 INCHES (160MM) SHALL HAVE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE.
- PER R012.1.3.2012 IRC GUARD OPENING LIMITATIONS, REQUIRED GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT WHICH ALLOW PASSAGE OF A SPHERE 4 INCHES (102 MM) IN DIAMETER.



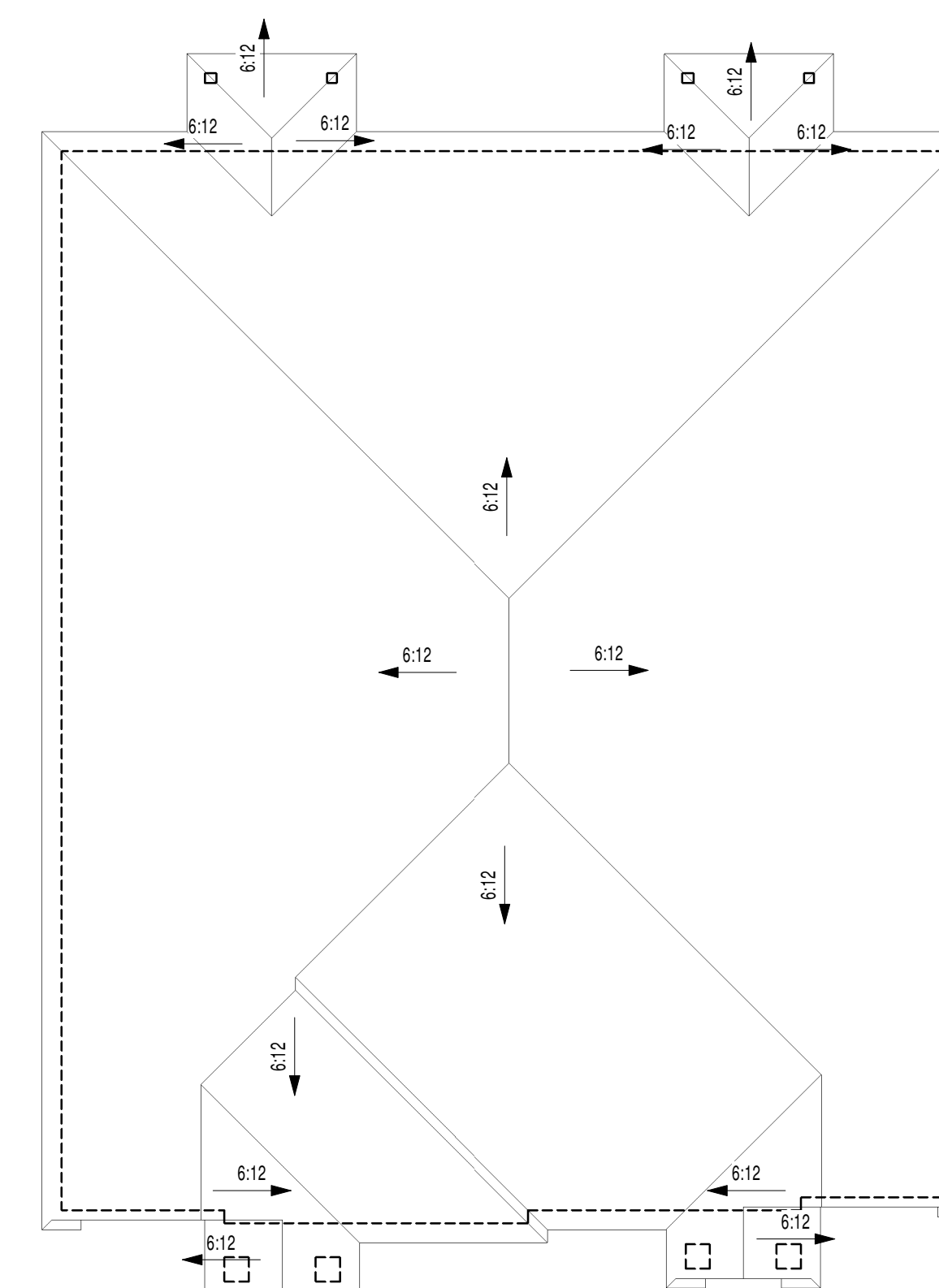
HANDRAIL ELEVATION



TREAD & RISER DETAIL

4 STAIR DETAIL
 1/4" = 1'-0"

5 HANDRAIL DETAIL
 3" = 1'-0"



3 ROOF PLAN
 1/8" = 1'-0"

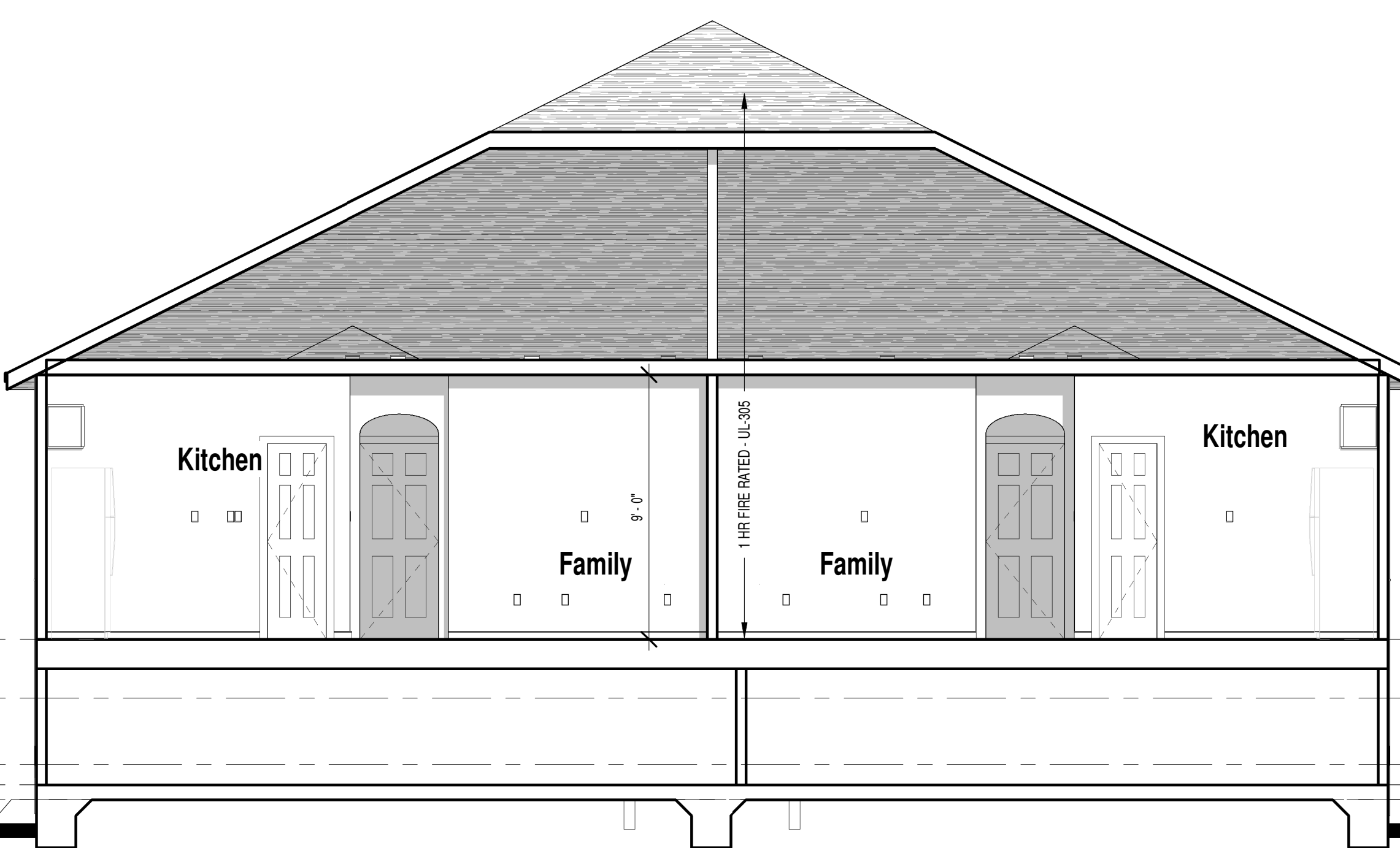
ATTIC VENTILATION

TOTAL ATTIC SPACE SQ. FT. = 3047 SQ. FT.
 3047 SQ. FT. / 150 SQ. FT. = 20 SQ. FT. OF TOTAL NET FREE VENTILATING AREA
 20 SQ. FT. X 144 = 2895 SQ. IN.

2925 SQ. IN. X 0.60 = 1755 SQ. IN. (SOFFIT & EAVES VENTILATION)
 2925 SQ. IN. X 0.40 = 1170 SQ. IN. (EXHAUST VENTS)



2 LONGITUDINAL SECTION
 1/4" = 1'-0"



1 CROSS SECTION
 1/4" = 1'-0"

SECTION NOTES

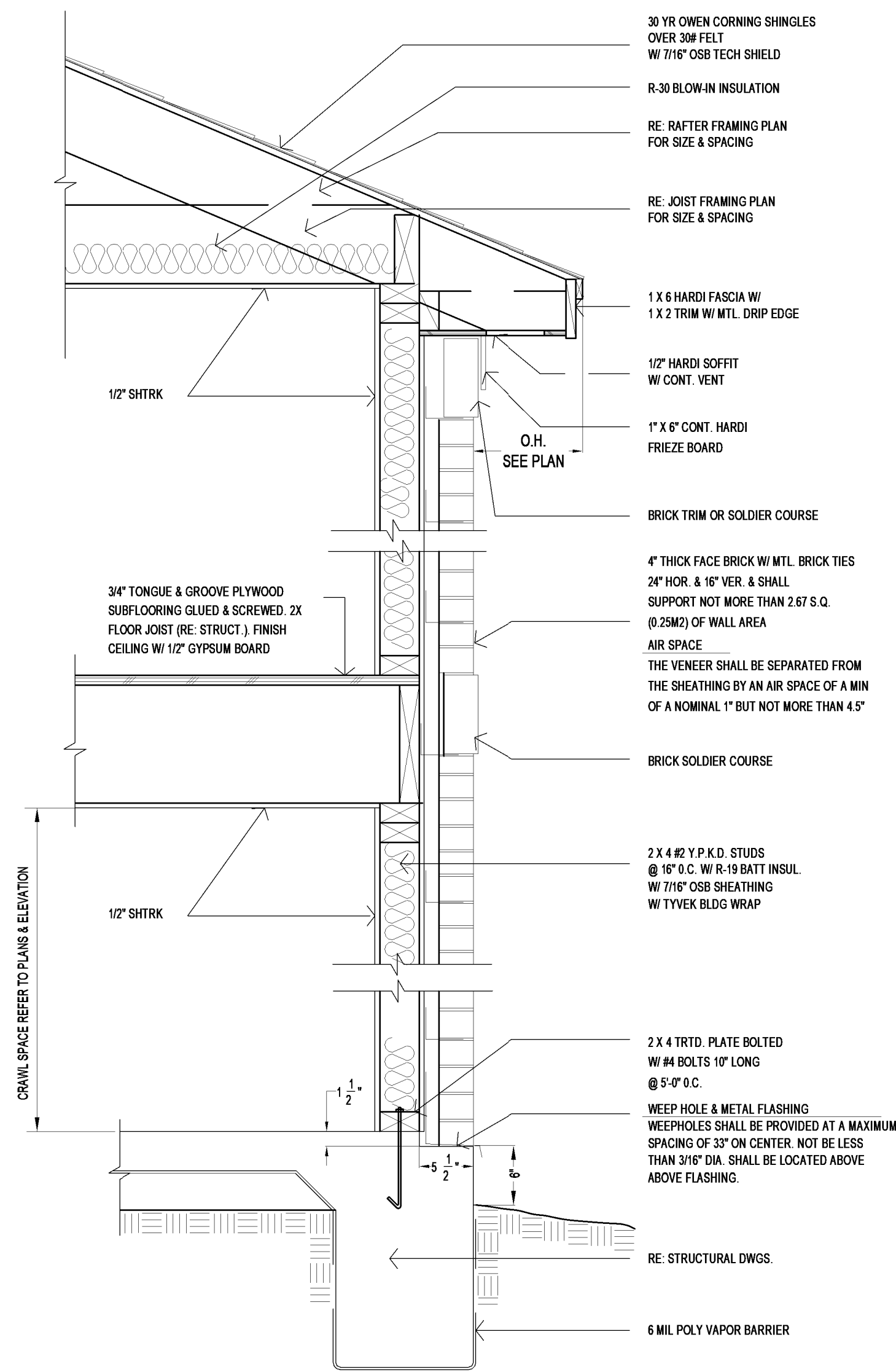
- ALL LOAD BEARING STUDS TO BE 16" O.C.
- JOISTS SHALL BE SUPPORTED Laterally AND AT EACH END AND AT SUPPORTS, PER IRC 2012
- SOLID BLOCKING SHALL NOT BE LESS THAN 2" IN THICKNESS AND MUST BE THE FULL DEPTH OF JOIST PER IRC SECTION R602 (IRC 2012)
- ALL EXTERIOR WALLS AND MAIN CROSS-STUD PARTITIONS SHALL BE EFFECTIVELY BRACED AT EACH END OR AS NEAR THERETO AS POSSIBLE AND AT LEAST EVERY 25' PER IRC SECTION R602.10 (IRC 2012)
- PURLIN BRACES SHALL BE 45 DEGREES OR GREATER AND SHALL NOT EXCEED 8' IN LENGTH WITHOUT LATERAL SUPPORT OR STIFFENERS, PER ENGINEERING PLAN.
- ATTIC ACCESSES ARE PROVIDED ON PLAN TO SERVICE MECHANICAL EQUIPMENT AND LIMITED LIGHT STORAGE BUT IN NO CASE SHALL THE COMBINED DECKED AREAS EXCEED 500 S.F.
- REFER TO STRUCTURAL DRAWINGS FOR ALL FRAMING COMPONENTS, DIRECTIONS & SIZES, AND FOR ALL FOUNDATION INFORMATION.

FFL= 49.25'
 5' - 5 1/2"
 SOG=44.25'
 6"
 HAG=43.80'
 0"

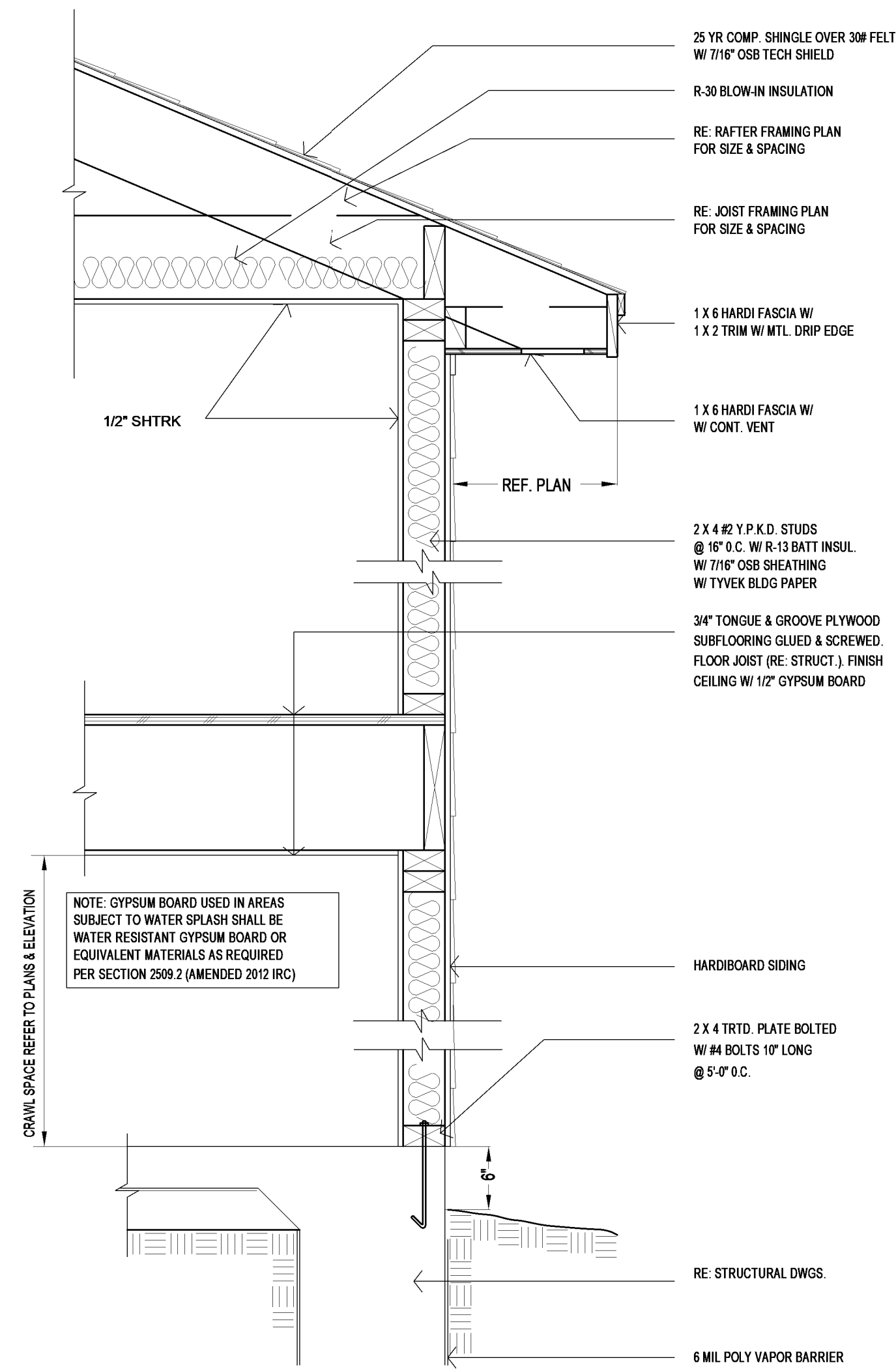
FFL= 49.25'
 5' - 5 1/2"
 DFE=47.00'
 3' - 5 1/2"
 BFE=45.00'
 1' - 2 1/2"
 LAG=43.8'
 0"

FFL= 49.25'
 5' - 5 1/2"
 SOG=44.25'
 6"
 HAG=43.80'
 0"

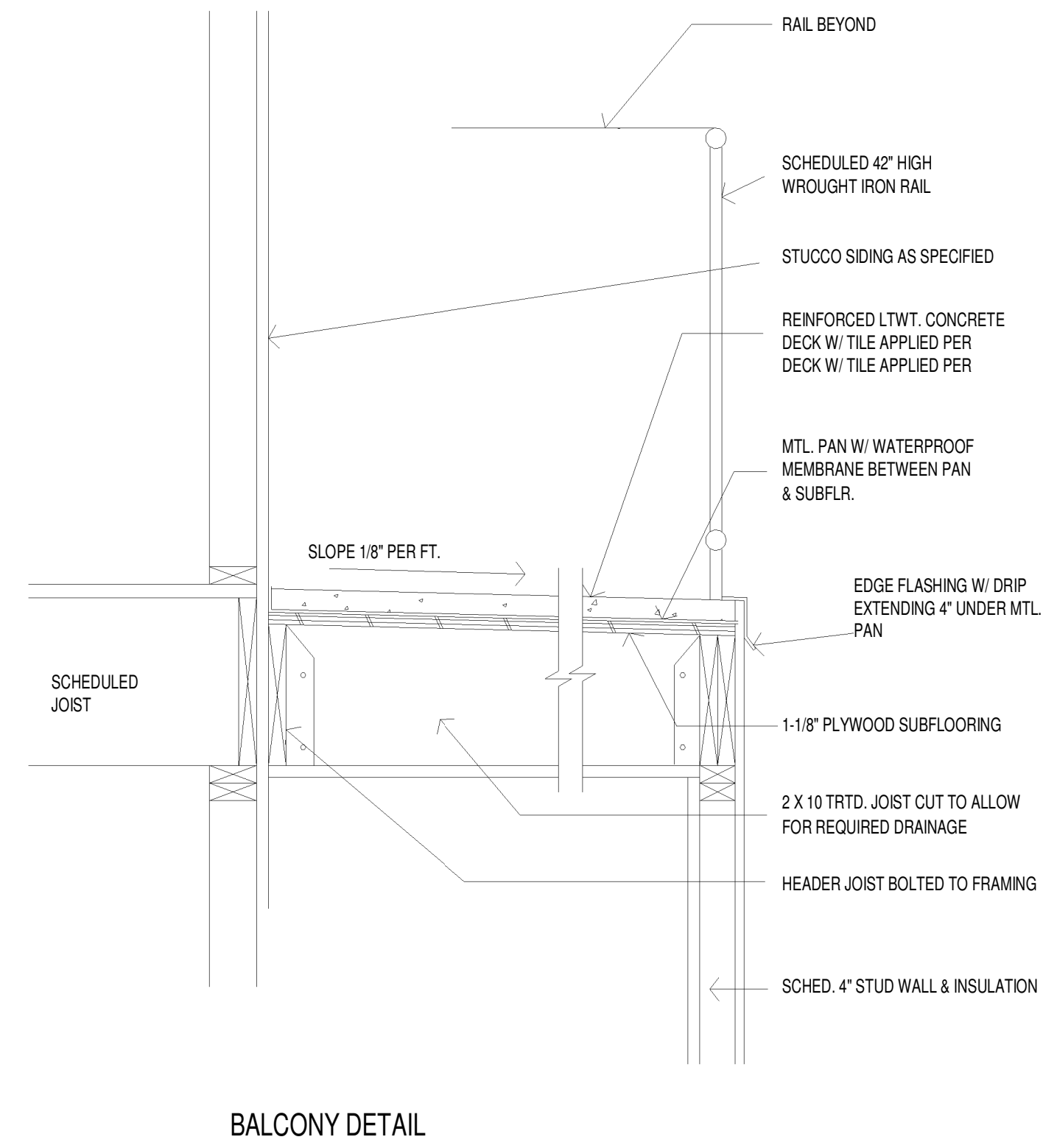
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 LAG=43.8'
 0"



TYPICAL BRICK WALL SECTION WITH CRAWL SPACE



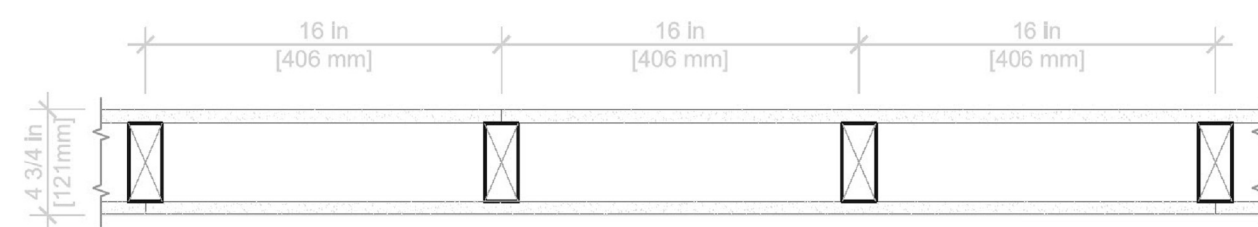
TYPICAL FRAMED WALL SECTION WITH CRAWL SPACE



BALCONY DETAIL

INTERIOR PARTITIONS: WOOD STUD (LOAD-BEARING)

FIRE RATING: 1 HOUR
 STC: 32
 SOUND TEST: RAL-TL11-129 / RAL-TL15-048
 SYSTEM THICKNESS: 4-3/4"



ASSEMBLY OPTIONS:

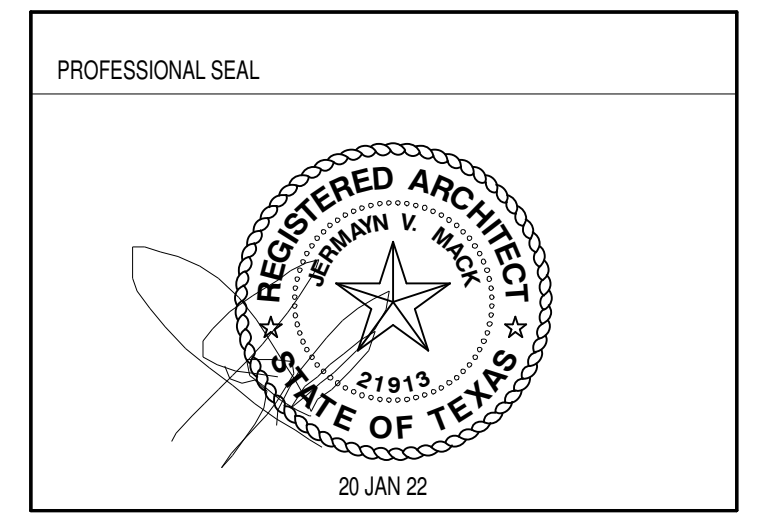
GYPSUM BOARD: 5/8 IN. THICK GYPSUM BOARD APPLIED VERTICALLY.
 WOOD STUDS: 2 IN. X 4 IN. WOOD STUDS SPACED MAX. 16 IN. O.C.
 GYPSUM BOARD: 5/8 IN. THICK GYPSUM BOARD APPLIED VERTICALLY.

ONE HOUR FIRE RATED WALL ASSEMBLY UL U305



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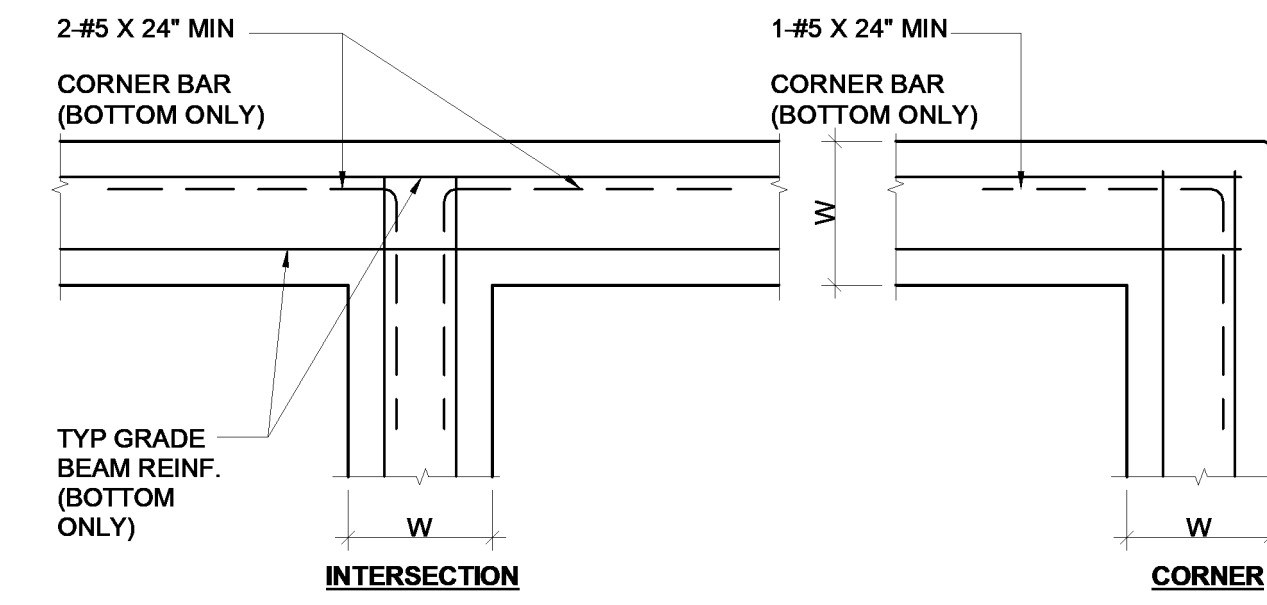
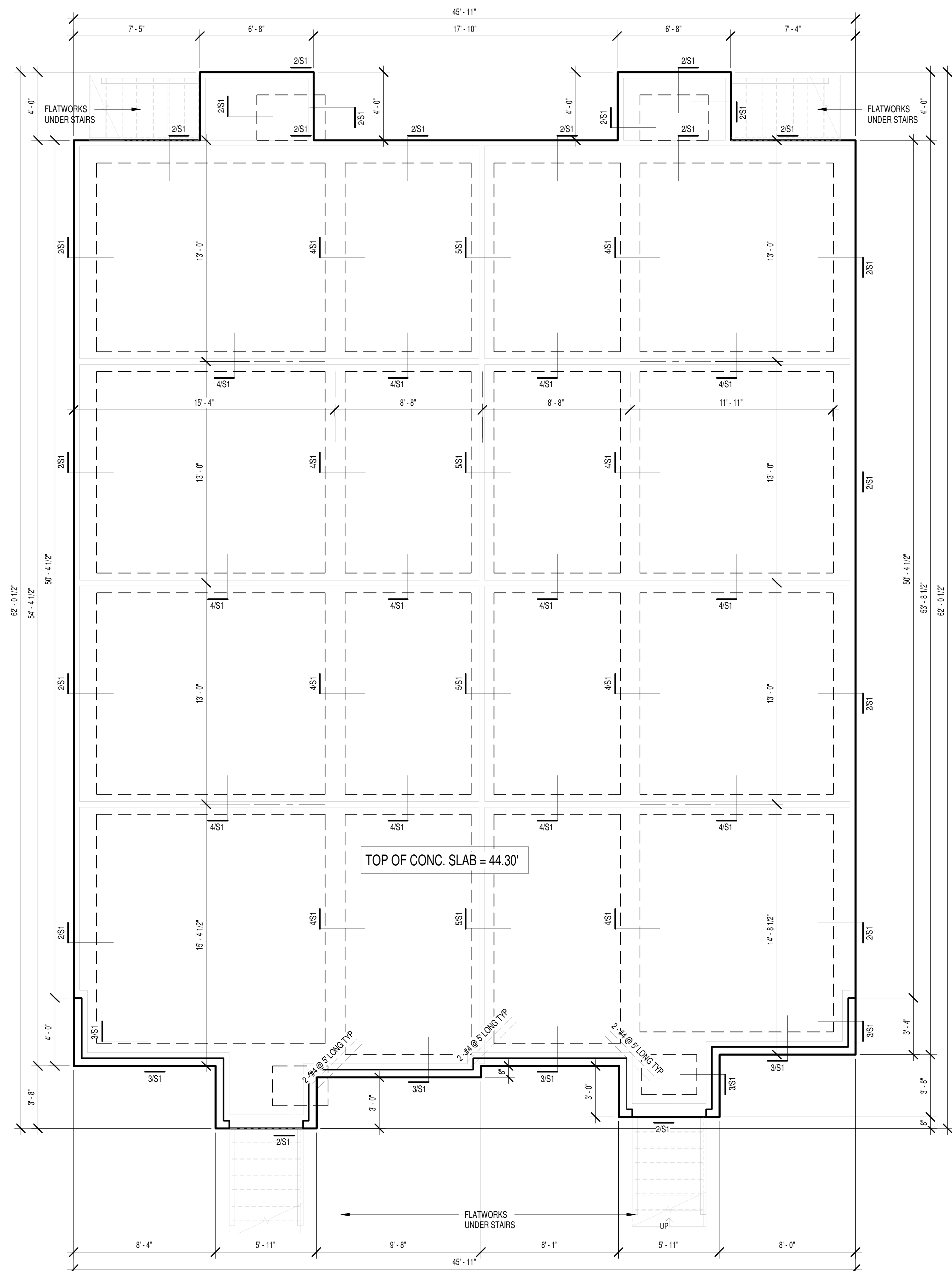


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SCALE	As indicated
SHEET TITLE	TYPICAL WALL SECTIONS

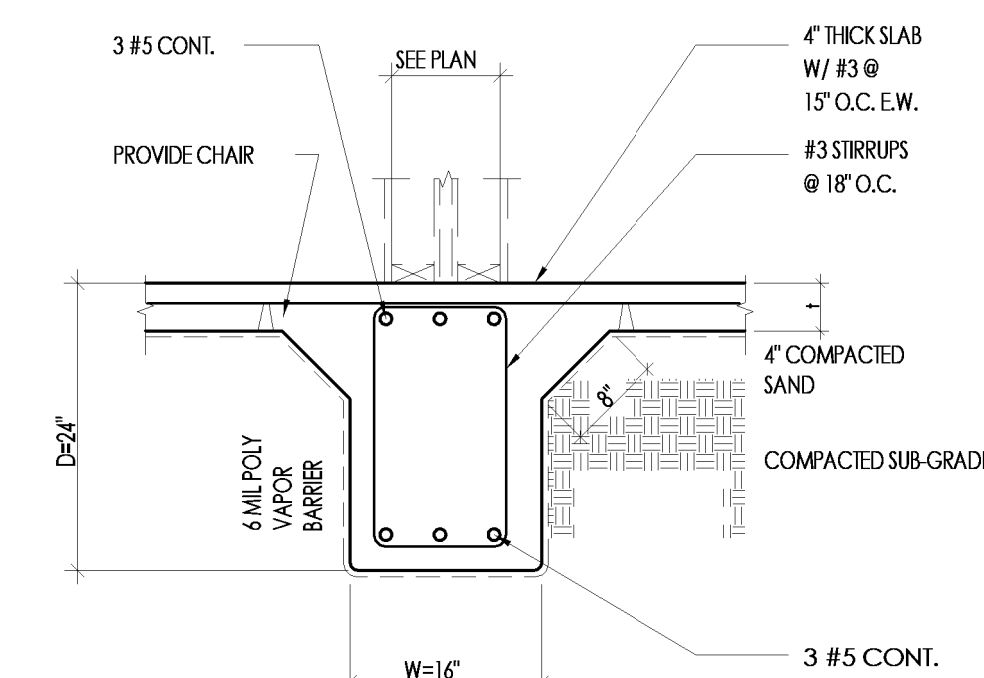
PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
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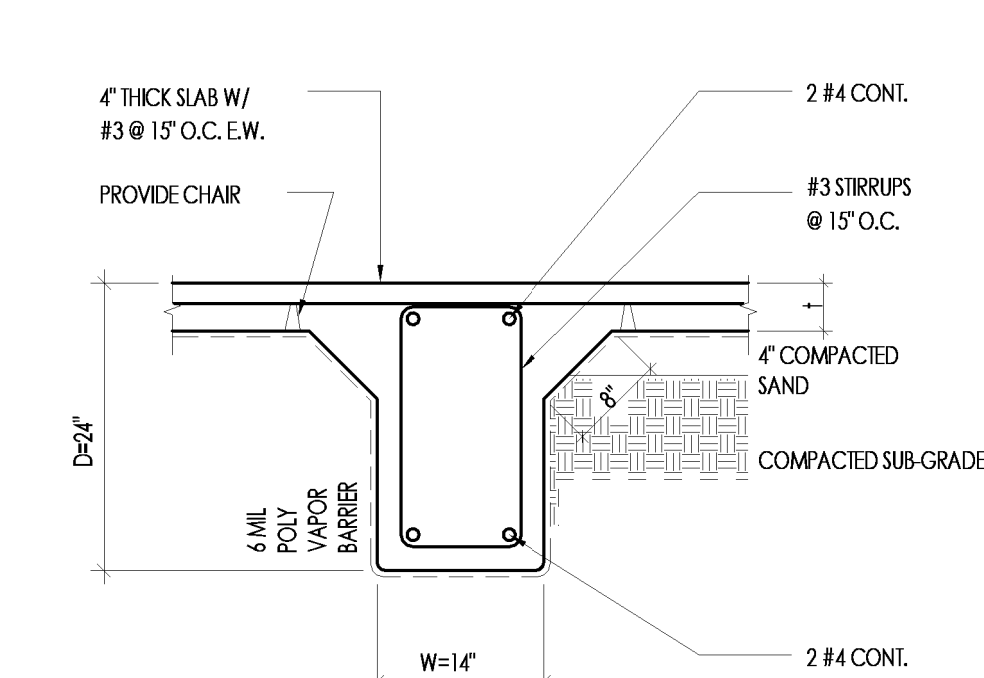
⑥ TYP CORNER BAR PLACING DETAILS @ CORNER & INTERSECTION
3/4" = 1'-0"

ELEVATION CERTIFICATE

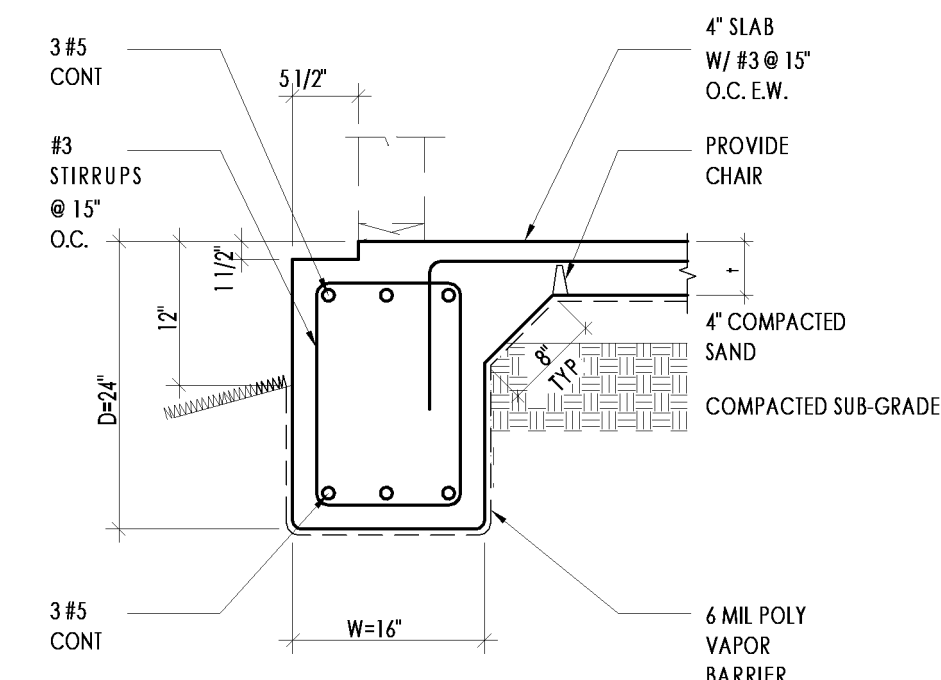
HOUSE FF = 49.25'
TOP OF SLAB ON GRADE CONCRETE = 44.25'
100 YR BFE = 45.00'
500 YR WATER SURFACE ELEV = 47.00'
HAG = 43.80'
LAG = 43.80'



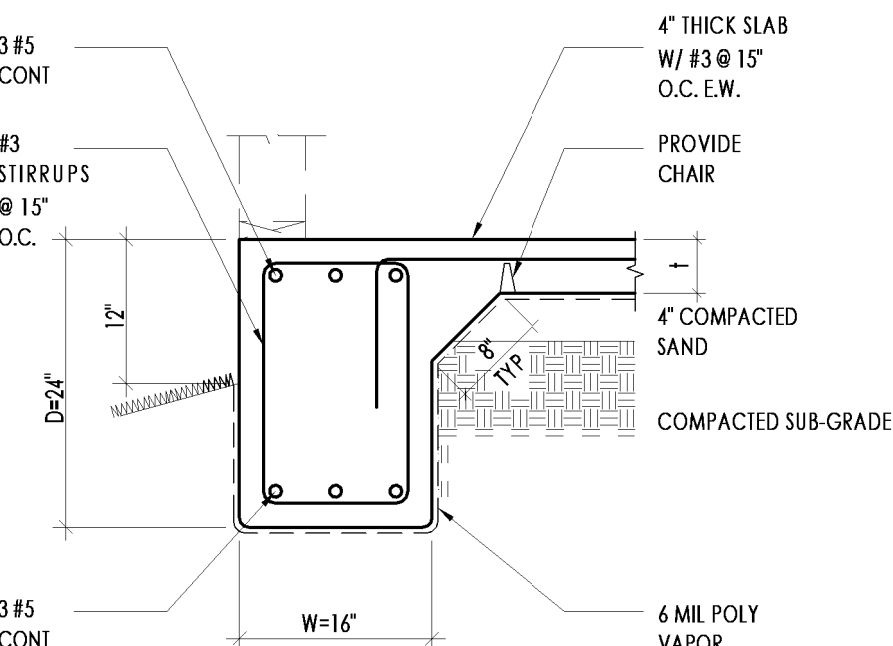
⑤ 16X24 TYP BEAM DETAIL @ SEPARATION WALL
3/4" = 1'-0"



④ 14" X 24" TYP. DETAIL @ INTERIOR BEAM
3/4" = 1'-0"



③ 16" X 24" TYP. BRICK LEDGE
3/4" = 1'-0"



② 16" X 24" TYP. BEAM DETAIL @ EXTERIOR WALL
3/4" = 1'-0"

① SLAB ON GRADE FOUNDATION
1/4" = 1'-0"

TABLE R401.4.1 PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS¹

CLASS OF MATERIAL	LOAD BEARING PRESSURE (pound per square foot)
CRYSTALLINE BEDROCK	12,000
SEDIMENTARY AND FOLIATED ROCK	4,000
SANDY GRAVEL AND/OR GRAVEL (GW AND GP)	3,000
SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL AND CLAYEY GRAVEL (SW, SP, SM, SC, GM AND GC)	2,000
CLAY, SANDY CLAY, SILTY CLAY, CLAYEY SILT, SILT AND SANDY SILT (CL, ML, MH, and CH)	1,500 ^b

NOTE: SHADED AREA DENOTES BEARING PRESSURE USED FOR THIS PROJECT.

For Sl: 1 pound per square foot = 0.0479 Kpa

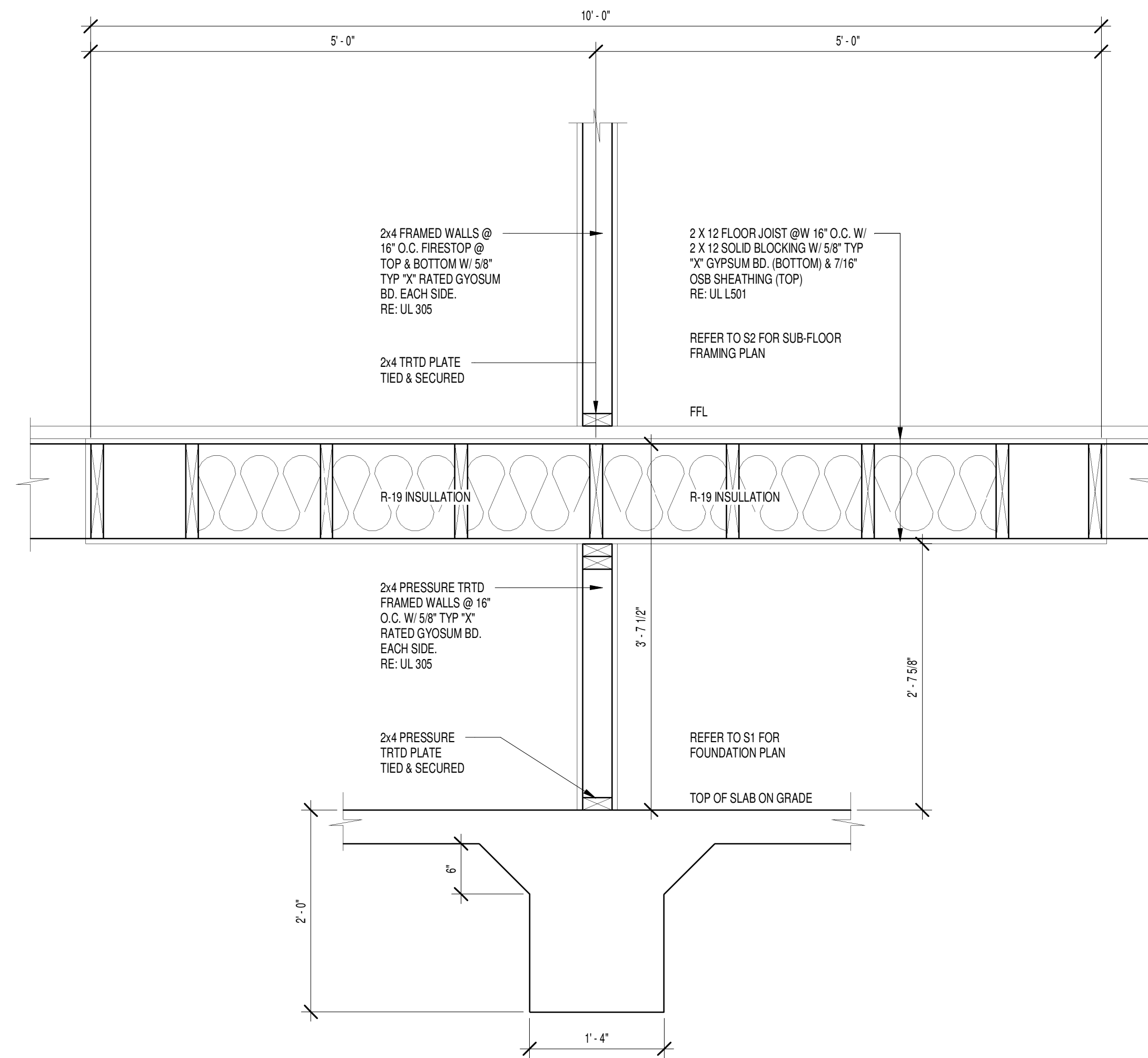
- a. When soil tests are required by section R401.4, the allowable bearing capacities of the soil shall be per pt the recommendations.
- b. Where the building official determines that in-place soils with an allowable bearing capacity of less than 1,500 psf are likely to be present at the site, the allowable bearing capacity shall be determined by a soil investigation.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. STRIP SOIL AND VEGETATION WITHIN BUILDING AREA TO A MINIMUM DEPTH OF 6" OR TO UNDISTURBED SOIL. REPLACE WITH STRUCTURAL FILL WITH A MINIMUM PLASTICITY INDEX OF BETWEEN 8 AND 20. COMPACT IN 8" LIFTS TO 95% OF DRY UNIT DENSITY WEIGHT AS DETERMINED BY ASTM D1557 METHOD C.
3. ALL STRUCTURAL FILL WITHIN BUILDING AREA SHALL HAVE A PLASTICITY INDEX OF LESS THAN 20.
4. COMPACT SUBGRADE AND STRUCTURAL FILL WITHIN BUILDING AREA TO 95% OF DRY UNIT WEIGHT AS DETERMINED BY ASTM D1557 METHOD C.
5. ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. FLY ASH NOT PERMITTED.
6. CONCRETE MIX SHALL BE DESIGNED FOR PROPER STRENGTH AND PLACED IN ACCORDANCE WITH ACI 318.
7. REINFORCING BARS SHALL CONFORM TO ASTM A615. ALL REINFORCING BARS SHALL BE GRADE 60. STIRRUPS AND TIES SHALL BE GRADE 40.
8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
9. REINFORCEMENT SHALL BE FABRICATED IN ACCORDANCE WITH ACI 318.
10. REINFORCING BARS SHALL NOT BE WELDED.
11. PROVIDE CORNER BARS AT TOP & BOTTOM OF MATCHING SIZE AND NUMBER AT ALL GRADE BEAM INTERSECTIONS.
12. SPLICE TOP BARS OF GRADE BEAM @ MID-SPAN & BOTTOM BARS @ SUPPORT.

PROPOSED DUPLEX
 4615 COLLINGSWORTH STREET # A&B
 HOUSTON, TEXAS 77026

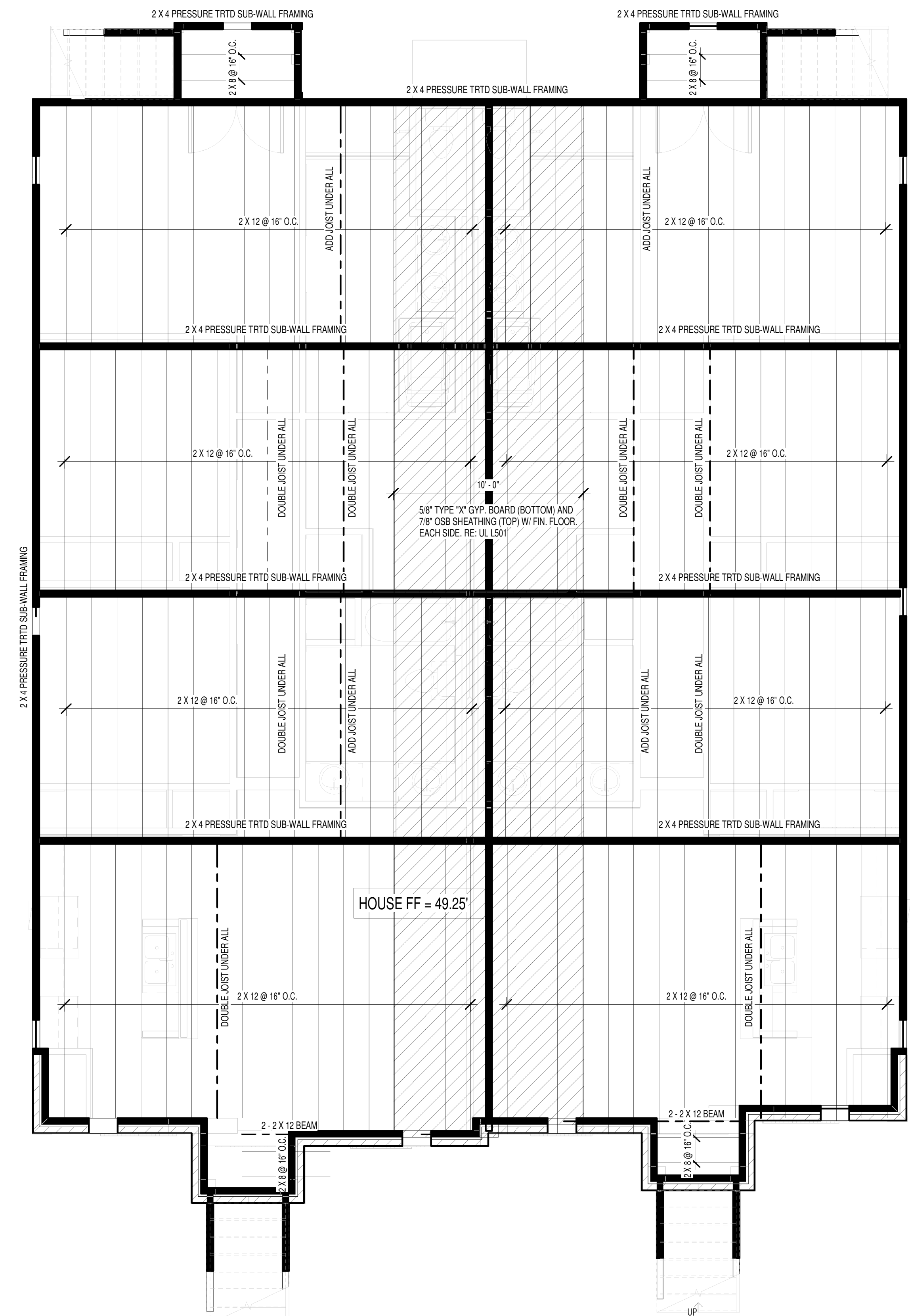
NOTE: ALWAYS DOUBLE JOIST UNDER WALL ABOVE



② TYPICAL WALL SECTION
 1" = 1'-0"

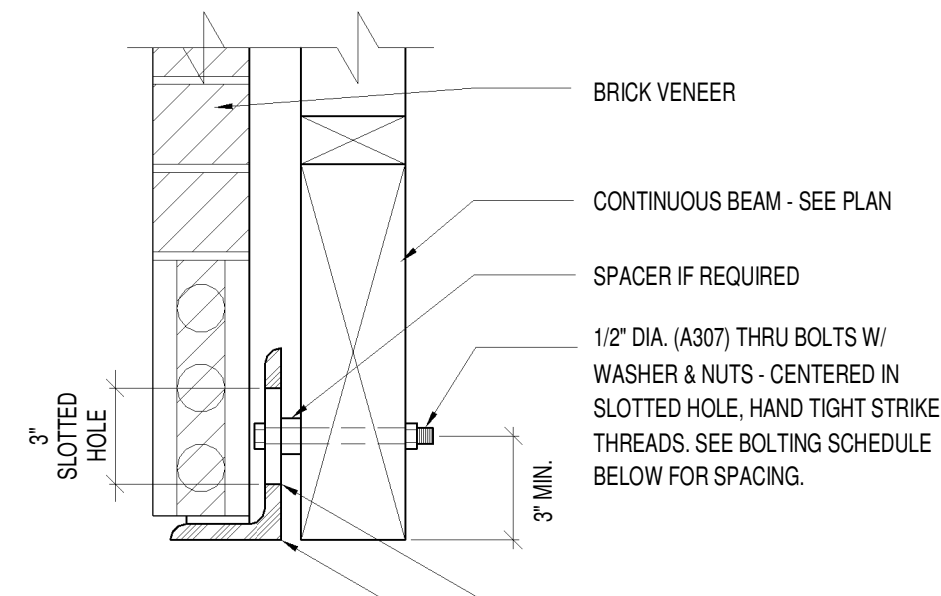
ELEVATION CERTIFICATE

HOUSE FF = 49.25'
 TOP OF SLAB ON GRADE CONCRETE = 44.25'
 100 YR BFE = 45.00'
 500 YR WATER SURFACE ELEV = 47.00'
 HAG = 43.80'
 LAG = 43.80'



NOTE: ALWAYS DOUBLE JOIST UNDER WALL ABOVE

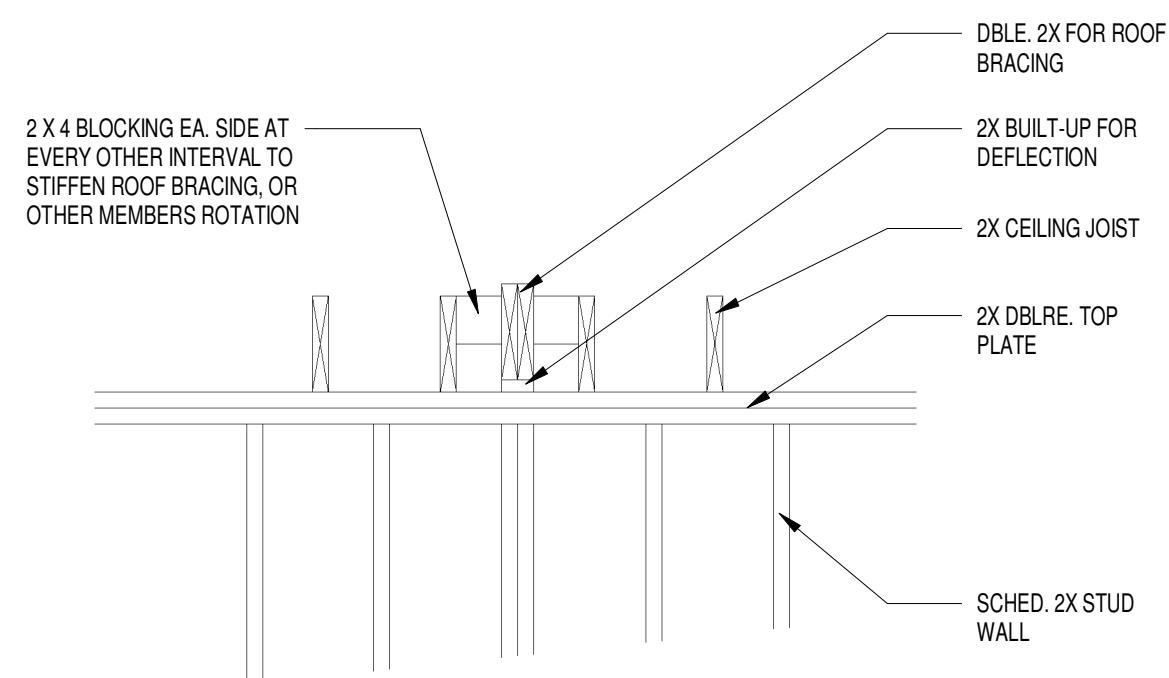
① SUB FLOOR FRAMING PLAN
 1/4" = 1'-0"



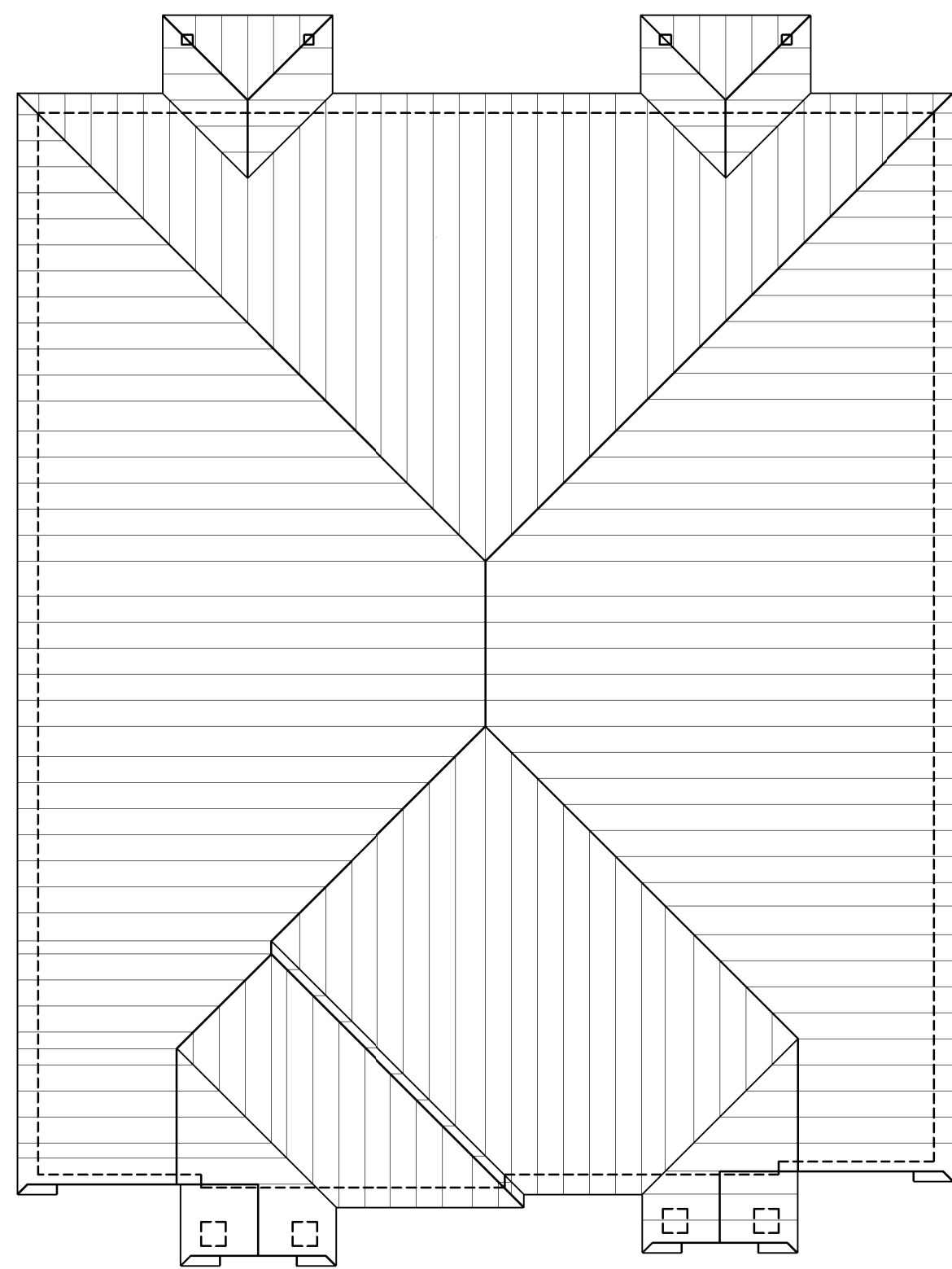
BOLTING SCHEDULE

SPAN	BOLT SPACING
6 to 9'	AT MIDPOINT
9 to 12'	AT 3rd POINT
12 to 16'	AT 4 CENTERS

6 BEAM DETAIL



5 BRACING SUPPORT DETAIL



2 RAFTER FRAMING PLAN
1/8" = 1'-0"

FRAMING NOTE:

1. JOISTS SPANS ARE BASED ON SOUTHERN PINE SPAN TABLES. CONTRACTOR/OWNER WILL VERIFY ALL SPANS WITH TABLE.
2. STUDS ARE TO BE 2 X 4S @ 16" O.C. UNLESS NOTED OTHERWISE.

FRAMING NOTES

1. ALL BEAM AND HEADER SHALL BE #2 SYP. ALL JOIST AND RAFTER MATERIAL SHALL BE #2 SYP. UNLESS NOTED OTHERWISE.
2. ALL WALL STUDS ARE #2 STUD GRADE SYP @ 16" O.C. BLOCKING AT MID SPANS GREATER THAN 9'. ALL FIRST FLOOR BASE PLATES SHALL BE TREATED LUMBER.
3. ALL STEEL SHALL CONFORM TO ASTM A-36. STEEL COLUMNS SHALL HAVE MIN. 1/2" GAP AND BASE PLATES WITH MIN. 2.5" ANCHOR BOLTS EMBEDDED MIN. 4-1/2" INTO SOLID CONCRETE. THE STEEL ANGLE LINTEL SCHEDULE (TO SUPPORT BRICK) IS AS FOLLOWS (FORM SHAPE TO MATCH ARCHES WHERE NECESSARY):

MAXIMUM SPAN	MINIMUM SIZE	MINIMUM BEARING
5'-0"	L3-1/2 X 3-1/2 X 5/16	8"
7'-0"	L4 X 3-1/2 X 5/16	8"
9'-0"	L5 X 3-1/2 X 3/8	9"
9'-0"	L5 X 3-1/2 X 3/8	9"
10'-0"	L6 X 3-1/2 X 3/8	10"
4. ROOF FRAMING:

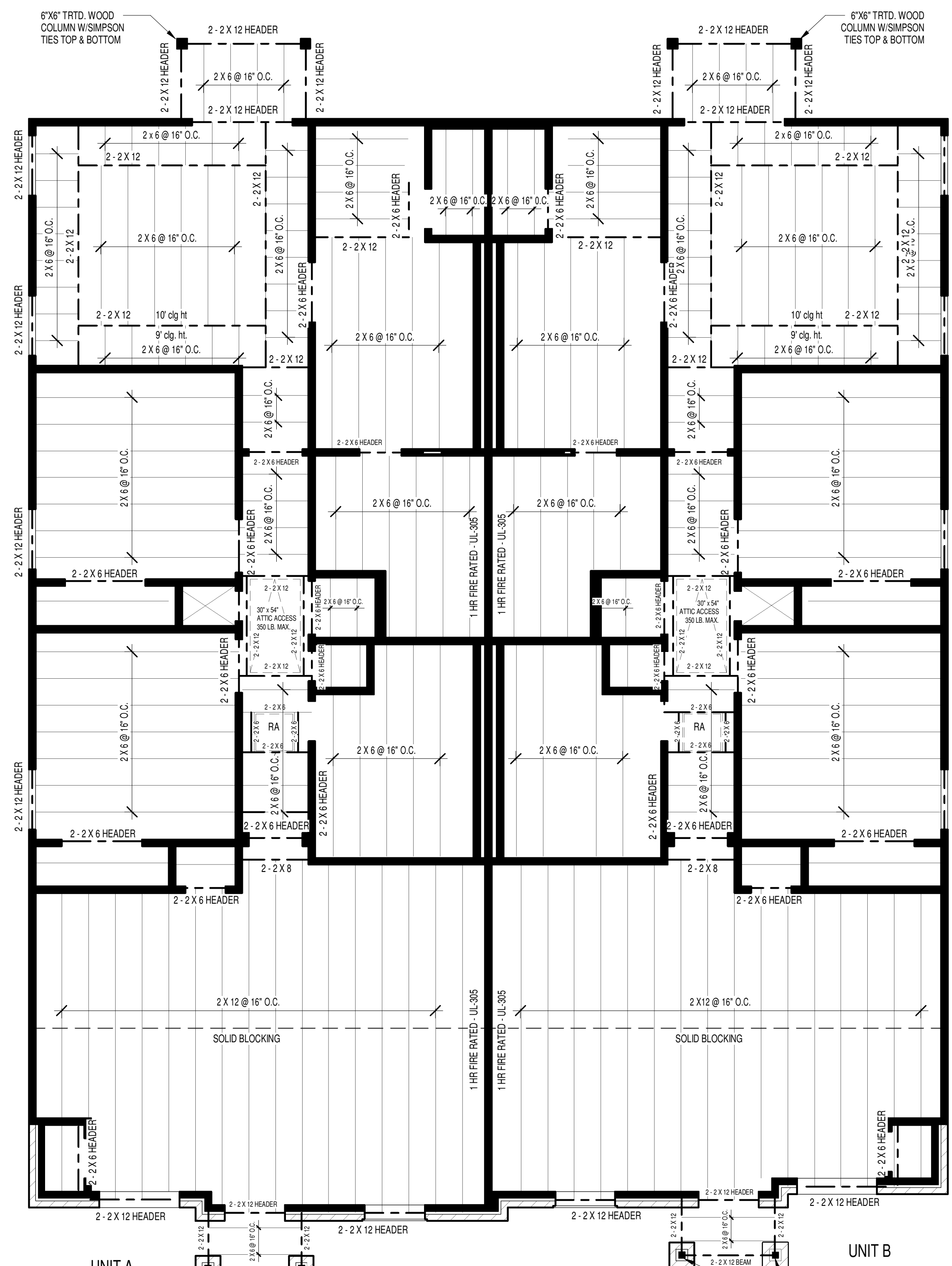
THE MAXIMUM UNSUPPORTED SPAN FOR 2 X 6 RAFTERS SHALL BE 10'-7". RAFTERS ARE TO BE SUPPORTED BY CONTINUOUS 2 X 6 BRACES @ 48" O.C. MAXIMUM ANGLE FOR 2 X 6 BRACES = 45° FROM VERTICAL. MAXIMUM UNSUPPORTED LENGTH FOR 2 X 6 BRACES = 8'. ALL ROOF BRACING TO BE SUPPORTED BY A WALL, 2 X 6 STRONGBACK SUPPORTED BY JOISTS OR (2) 2 X 12 DEPENDING ON CEILING JOIST DIRECTION. (PROVIDE BLOCKING AT BRACE LOCATIONS). (U.N.O.). PROVIDE 2 X 6 COLLAR TIES 48" O.C. IN THE UPPER THIRD OF THE RAFTERS. (U.N.O.).

 - A. ALL RAFTERS TO BE 2 X 6 UNLESS NOTED OTHERWISE.
 - B. PROVIDE 7/8" OSB TECH SHEILD W/ LD. #240
 - C. ALL HIPS, VALLEYS, AND RIDGES TO BE ONE DIMENSIONAL SIZE LARGER THAN INTERSECTING RAFTERS (2 X 6 @ 2 X 6 RAFTERS)

5. ROOF LIVE LOAD = 16 P.S.F. DEAD LOAD = 10 P.S.F.

6. STEEL FLITCH BEAMS TO BE CONSTRUCTED WITH TWO ROWS OF 1/2" SPACED AT 24" O.C. AND STAGGERED TOP AND BOTTOM (PROVIDE (2) BOLTS AT EACH END OF BEAM). HOLES SHALL BE 9/16" AND DRILLED. EDGE CLEARANCE SHALL BE 1-1/2" FOR ALL BOLTS. WHEN ONE FLITCH BEAM IS "TIED" INTO ANOTHER THE BEAM SHALL BE SUPPORTED BY A SIMPSON'S HANGER. EDGE CLEARANCE SHALL BE 1-1/2" FOR ALL BOLTS. WOOD SHALL BE #2 SYP. AND BOTH STEEL AND WOOD SHALL BE CONTINUOUS.
7. ALL JOISTS FRAMING INTO BEAMS SHALL BE SUPPORTED BY SIMPSON "U" JOIST METAL HANGERS (U.N.O.).
8. ALL BEAMS FRAMING TO WALL ARE TO BE SUPPORTED BY A MINIMUM OF (2) 2 X 4 OR (2) 2 X 6 STUDS (U.N.O.).
9. HEADER SCHEDULE AS FOLLOWS (USE (2) 2 X 12S WITH 1/2" PLYWOOD (U.N.O.) FOR FIRST FLOOR HEADER):

SIZE	MAXIMUM SPAN	SIZE	MAXIMUM SPAN
2-2 X 6	4'-6"	2-2 X 10	7'-6"
2-2 X 8	6'-0"	2-2 X 12	9'-0"
10. THE NUMBER AND SIZE OF NAILS USED TO CONNECT WOOD MEMBERS SHALL BE ACCORDING TO TABLE 250 OF THE UBC BUILDING CODE IS APPLICABLE (U.N.O.) MULTIPLE STUDS SHALL BE GLUED AND NAILED WITH 10D NAILS 24" O.C. MULTIPLE JOISTS SHALL BE GLUED AND NAILED WITH 3-16D NAILS 12" O.C. THERE SHALL BE NO SPLICES.
11. STUD WALLS 12" OR HIGHER SHALL HAVE 2 X 6, (2) 2 X 4 OR 4 X 4 STUDS AT 16" O.C. WALL SUPPORTING TWO FLOORS ABOVE SHALL BE 2 X 6, (2) 2 X 4 OR 4 X 4 STUDS AT 16" O.C.
12. GLUED LAM. BEAMS TO BE DOUGLAS-FIR AND INSTALLED PER THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION FV = 2400 PSI, FV = 165 PSI, E = 1800 PSI
13. SOLID BLOCK ALL FLOOR & CEILING JOIST SPANS GREATER THAN 10'-0".
14. ALL FRAMING SHALL WITHSTAND A WIND LOAD OF 110 MPH WITH A 3 SEC. WIND GUST PER CITY BUILDING REQUIREMENTS.
15. ALL WINDOW HEADERS ARE TO BE (2)2X12 UNLESS NOTED OTHERWISE.



1 CEILING JOIST FRAMING PLAN
1/4" = 1'-0"

NOTE:

1. (2) 2X12 HEADER BEAMS ABOVE ALL EXTERIOR OPENINGS UNLESS NOTED OTHERWISE.
2. (2) 2X6 HEADER BEAMS ABOVE ALL INTERIOR OPENINGS UNLESS NOTED OTHERWISE.

MINIMUM UNIFORMLY DISTRIBUTED LIVE LOAD TABLE 2012 ICC

USE	LIVE LOAD
UNINHABITABLE ATTICS WITHOUT STORAGE (b)	10
UNINHABITABLE ATTICS WITH LIMITED STORAGE (d, g)	20
HABITABLE ATTICS AND ATTICS SERVED WITH FIXED STAIRS	30
BALCONIES (EXTERIOR) AND DECKS (e)	40
FIRESCAPES	40
GUARDRAILS AND HANDRAILS (f)	200 (h)
GUARDRAILS IN-FILL COMPONENTS (f)	50 (h)
PASSENGER VEHICLE GARAGES (a)	50 (a)
ROOMS OTHER THAN SLEEPING ROOM	40
SLEEPING ROOMS	30
STAIRS	40 (c)

For SI: 1 pound per square foot = 0.0479 kPa, 1 square inch = 645 mm², 1 pound = 4.45 N.

- Elevated garage floors shall be capable of supporting a 2,000-pound load applied over a 20-square-inch area. Uninhabitable attics without storage are those where the maximum clear height between joists and rafters is less than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches high by 24 inches in width, or greater, within the plane of the trusses. This live load need not be assumed to act concurrently with any other live load requirements.
- Individual stair treads shall be designed for the uniformly distributed live load or a 300-pound concentrated load acting over an area of 4 square inches, whichever produces the greater stresses.
- A single concentrated load applied in any direction at any point along the top.
- See Section R502.2.2 for decks attached to exterior walls.
- Guard-in-fill components (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement.
- Uninhabitable attics with limited storage are those where the maximum clear height between joists and rafters is 42 inches or greater, or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses.

DEAVERS E

LLC

3103 PEACHTREE LANE
MISSOURI CITY, TEXAS 77459
PH: 713.828.8901
FIRM # 16777

PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
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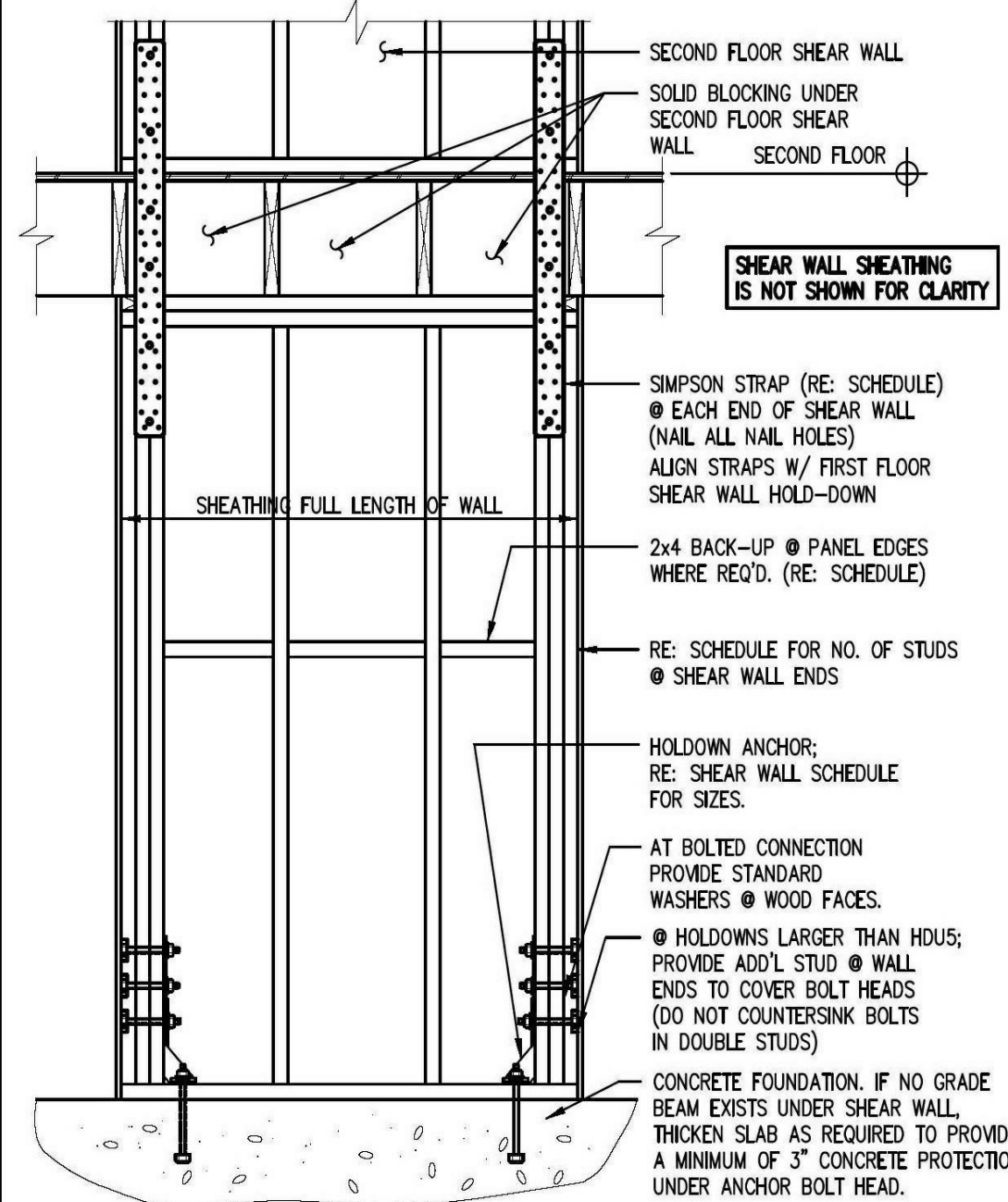
STRUCTURAL FRAMING PLANS

CITY OF HOUSTON
Department of Public Works and Engineering

APPENDIX L ILLUSTRATION

DATE: 8/15/11 DWG No: 11-3-R

TYPICAL SHEAR WALL DETAILS



DETAIL: TYPICAL SHEAR WALL ELEVATION
NOT TO SCALE

SHEAR WALL SCHEDULE						
MARK	SHEATHING MATERIAL	BLOCKING PATTERN	NAILING	STUD POST EACH END	HOLD-DOWN ANCHOR	AVG. SPACING
1	1/2" GYPBOARD	NO	50 COOLER @ 7"	2-2x4	HU2-SDS2.5	
2	1/2" GYPBOARD	YES	50 COOLER @ 4"	2-2x4	HU2-SDS2.5	
3	1/2" GYPBOARD	YES	50 COOLER @ 4"	2-2x4	HU2-SDS2.5	
4	5/8" GYPBOARD (TWO PLY)	YES	60 COOLER @ 9" (BASE PLY) 80 COOLER @ 7" (FACE PLY)	2-2x4	HU2-SDS2.5	
5	7/16" PLYWOOD C-C	YES	80 COMMON @ 6"	2-2x4	HU4-SDS2.5	3/4" @ 24"
6	7/16" PLYWOOD C-C	YES	80 COMMON @ 4"	2-2x4	HU8-SDS2.5	3/4" @ 16"
7	7/16" PLYWOOD C-C	YES	100 COMMON @ 2x4	WOOD POST	HU8-SDS2.5	3/4" @ 16"
8	15/32" PLYWOOD C-C	YES	100 COMMON @ 2x4	WOOD POST	HU1-SDS2.5	1" @ 12"
9	19/32" PLYWOOD C-C	YES	100 COMMON @ 2"	WOOD POST	HU1-SDS2.5	1" @ 8"

SHEAR WALL NOTES:

- PLYWOOD SHALL BE "STRUCTURAL I SHEATHING" GRADE, ORIENTED STRAND BOARD (OSB) OF EQUAL THICKNESS MAY BE USED IN LIEU OF PLYWOOD.
- SHEATHING MATERIAL AND NAILING PATTERN APPLY TO ONE SIDE OF SHEAR WALL ONLY.
- WHERE A SHEAR WALL IS CALLED OUT ON PLAN, PROVIDE SCHEDULED SHEATHING MATERIAL AND NAILING FOR THE FULL LENGTH OF THAT WALL.
- WHERE "BLOCKING" IS INDICATED, PROVIDE 2x4 BACK-UP AT ALL GYPBOARD OR PLYWOOD PANEL EDGES.
- NAILING PATTERN APPLIES AT ALL PANEL EDGES. AT INTERMEDIATE SUPPORTS, PROVIDE NAILING @ 12" O.C. USING CORRESPONDING NAIL SIZE.
- PROVIDE SCHEDULED STUDS AT EACH END OF SHEAR WALL OR SEGMENT THEREOF. A SEGMENT OF A WALL IS DEFINED AS ANY PORTION OF DESIGNATED SHEAR WALL THAT ENDS AT AN OPENING, EDGE OR CORNER. SOLID SAWN MEMBERS OF EQUIVALENT SIZE MAY BE USED (I.E. 2-2x4 = 4x4; 3-2x4 = 4x6).
- HOLD-DOWN CONNECTORS:
 - CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., SAN LEANDRO, CA. OR APPROVED EQUAL.
 - WEATHER-EXPOSED CONNECTORS SHALL BE GALVANIZED.
 - SHEAR WALL HOLD-DOWNS SHALL BE PROVIDED AT EACH END OF EACH SHEAR WALL, UNO. REFER TO SHEAR WALL SCHEDULE AND PLANS.
 - THE FOLLOWING SUBSTITUTIONS MAY BE MADE:

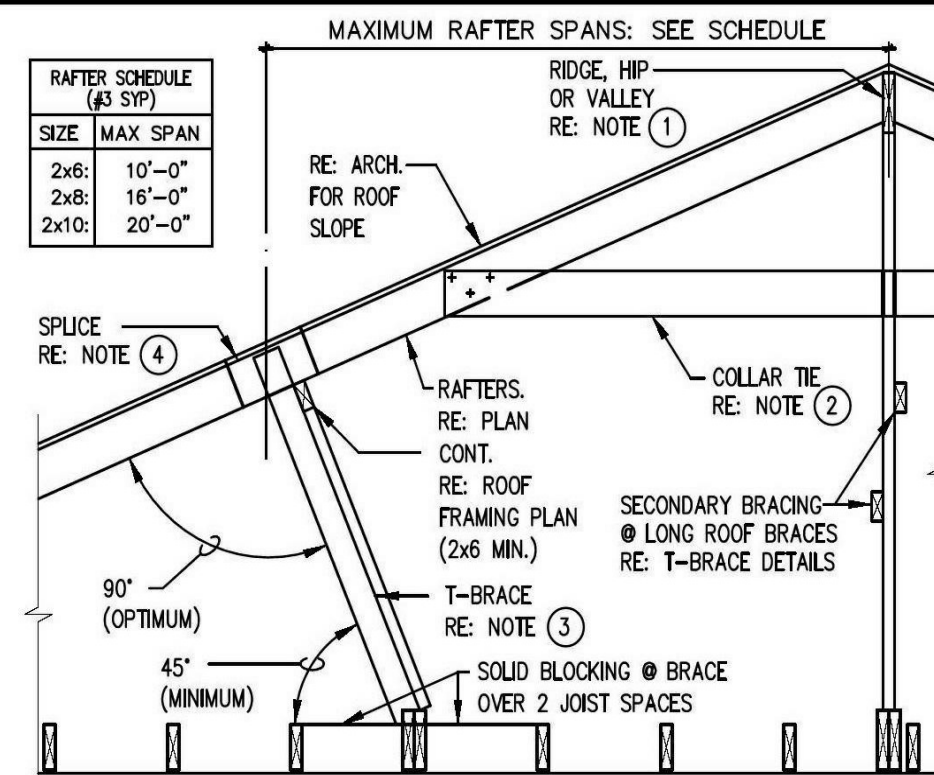
HOLD-DOWN MARK	SUBSTITUTION	
	SLAB / FOUNDATION	FLOOR FRAMING
HU2-SDS2.5	PHD2-SDS 3 OR STDH10 OR HTT16	HST2 OR MSTC40
HU4-SDS2.5	PHD5-SDS 3 OR STDH14 OR HTT22	HST3 OR MSTC52
HU5-SDS2.5	PHD8-SDS 3 OR HTT22	HST3 OR MSTC86

ALL HOLD-DOWNS MUST BE INSTALLED IN STRICT ADHERENCE TO MANUFACTURER'S INSTRUCTIONS, USING BOLT & NAIL NUMBERS, SIZES & LENGTHS AS SPECIFIED BY MANUFACTURER.

IMPORTANT NOTES ON HOLD-DOWNS
BUILDER IS STRONGLY ADVISED TO INSTALL HOLD-DOWNS PRIOR TO INSTALLING SHEAR WALL SHEATHING, FOR GREATER ACCESSIBILITY.

- WHERE PLYWOOD IS SHOWN ON BOTH FACES OF A SHEAR WALL:
 - DOUBLE STUDS OR 3" WIDE STUDS MUST BE USED.
 - STAGGER PLYWOOD JOINTS AT WALL FACES.
 - USE 4x4 WOOD POSTS @ EA. END TO BOLT HOLD-DOWNS (6x6 @ SHEARWALL TYPE P5).
 - PROVIDE DOUBLE 2x SILL & W/ 1/2" ANCHOR BOLTS @ 24" c. IN ADDITION TO HOLD-DOWN ANCHOR BOLTS.
- SIMPSON "WEDGE-ALL" WEDGE ANCHORS MAY BE USED IN LIEU OF SCHEDULED ANCHOR BOLTS TO MATCH (DIAMETERS). MINIMUM EMBEDMENT LENGTHS ARE:
 - 1/2" WEDGE ANCHOR—4x4
 - 3/4" WEDGE ANCHOR—5x6
 - 1" WEDGE ANCHOR—6x6
 - 1 1/4" WEDGE ANCHOR—7x8
 WEDGE ANCHORS MUST BE INSTALLED IN STRICT ADHERENCE TO MANUFACTURER'S INSTRUCTIONS.

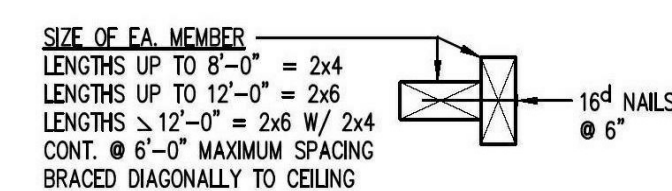
TYPICAL WOOD FRAMING DETAILS



CEILING JOISTS PERPENDICULAR TO RAFTERS

DETAIL KEYED NOTES

1. RIDGE BEAM, HIP RAFTER, OR VALLEY RAFTER DEPTH SHALL BE THE LARGER OF THE FOLLOWING:
 - ONE SIZE DEEPER THAN THE LARGEST RAFTER FRAMING INTO IT.
 - DEPTH OF CUT END OF RAFTER.
2. COLLAR TIES: 2x6; LOCATED @ UPPER ONE THIRD (1/3) OF ROOF @ EVERY THIRD RAFTER OR 5'-0" (WHICHEVER SMALLER).
3. T-BRACE:
 - RE: TYPICAL DETAILS BELOW.
 - MAXIMUM SPACING AS FOLLOWS:
 - 4'-0" @ 2x4 CONT. PURLIN.
 - 6'-0" @ RIDGE BEAM, HIP OR VALLEY RAFTER.
 - BRACE SHALL BEAR ON AN INTERIOR WALL, BEAM OR STRONG-BACK (DOUBLE). 2 SIZES LARGER THAN JOIST; RE: FRAMING PLAN.
4. RAFTER, RIDGE, HIP & VALLEY RAFTER SPICES:
 - LOCATE SPICE OVER A PURLIN, OR PROVIDE ADDITIONAL BRACE @ SPICE.
 - MINIMUM LAP = 12" NAIL W/ 4-16d NAILS.

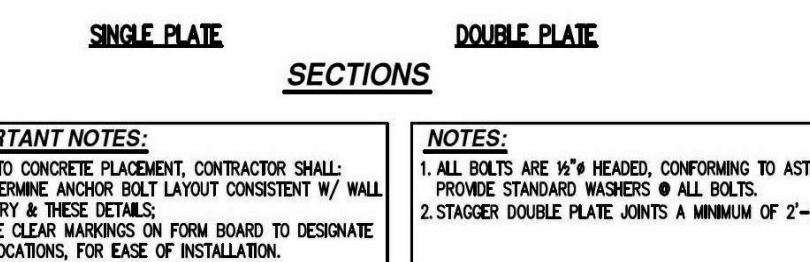
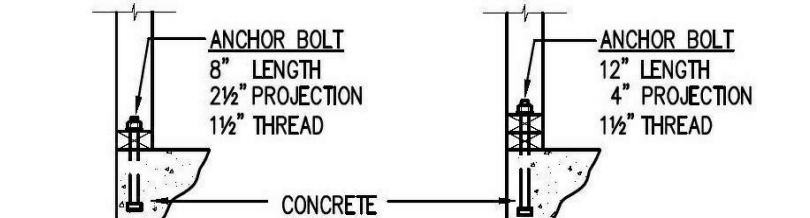
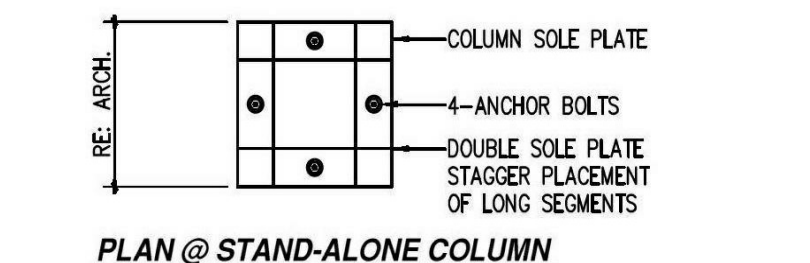
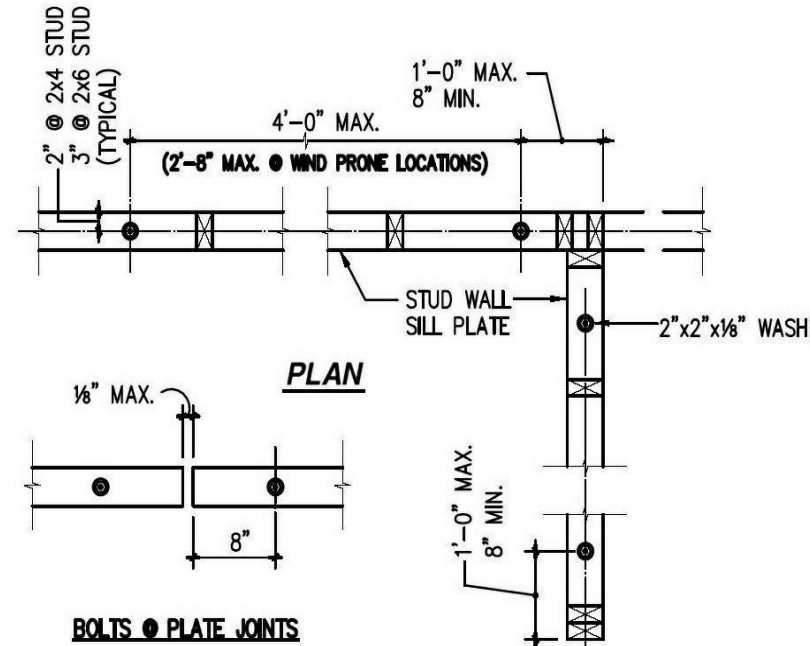


TYPICAL ROOF T-BRACE DETAILS

TYPICAL ROOF BRACING DETAILS

RIDGE BEAM, HIP & VALLEY RAFTER, & PURLIN

NOT TO SCALE



TYPICAL SOLE PLATE ANCHOR BOLT DETAILS

NOT TO SCALE

- IMPORTANT NOTES:**
PRIOR TO CONCRETE PLACEMENT, CONTRACTOR SHALL:
1. PRE-DETERMINE ANCHOR BOLT LAYOUT CONSISTENT W/ WALL GEOMETRY & THESE DETAILS.
2. PROVIDE CLEAR WARNINGS ON FORM BOARD TO DESIGNATE BOLT LOCATIONS, FOR EASE OF INSTALLATION.
- NOTES:**
1. ALL BOLTS ARE 1/2" HEADED, CONFORMING TO ASTM A-307 PROVIDE STANDARD WASHERS @ ALL BOLTS.
2. STAGGER DOUBLE PLATE JOINTS A MINIMUM OF 2'-0"

FASTENERS

- BOLTS:
 - ALL BOLTS SHALL CONFORM TO ASTM-A307, INSTALLED WITH STANDARD NUTS AND WASHERS.
 - MAINTAIN A MINIMUM DISTANCE OF 1 1/2 TIMES BOLT DIAMETER TO EDGE OF CONNECTED STEEL MEMBER.
 - BOLT HOLE DIAMETER SHALL NOT EXCEED BOLT DIAMETER BY MORE THAN 1/16".
 - PROVIDE 1/4" x 0'-10" LONG ANCHOR BOLTS @ 4'-0" O.C. AT ALL EXTERIOR WALL SILL PLATES, WITH 2" PROJECTION AND 1" THREAD.
- ADHESIVE ANCHORS: SHALL BE HILTI-HIT RES500 SERIES.
- POWDER-ACTIVATED PINS SHALL BE:
 - HILTI X-EDNI SERIES (0.145" x KNURLED-SHANK W/ DOME HEAD).
 - TW RAMSET SP SERIES (150" x SMOOTH-SHANK)
- WELDED HEADED STUDS: SHALL BE NELSON STUD WELDING, INC., TYPE HAL HEADED CONCRETE ANCHOR (HCA) W/ DIAMETER & LENGTH AS NOTED ON PLANS.

STUD WALLS

- STUDS SHALL BE AS FOLLOWS:
 - 2x4 OR 2x6 @ 16" AT ALL FLOORS IN ONE- OR TWO- STORY STRUCTURES. DEL 2x4 OR 2x6 @ 16" AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY BELOW A THIRD FLOOR.
 - PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SIDE OF OPENINGS LARGER THAN 4'-0". FULL HEIGHT OF WALL (ING STUDS).
 - MAXIMUM STUD WALL HEIGHT SHALL BE AS FOLLOWS:
 - 2x4 STUDS @ 16" o.c. 10'-0"
 - 2x6 STUDS @ 16" o.c. 13'-0"
 - 2x8 STUDS @ 16" o.c. 16'-0"
 - BLOCKING & LATERAL BRACING:
 - PROVIDE BLOCKING AND/OR TEMPORARY CROSS BRACING AS REQUIRED TO ENSURE STUD STRAIGHTNESS ACCORDING TO SPECIFIED TOLERANCES.
 - MAXIMUM TOLERANCE FOR STUD STRAIGHTNESS IN EITHER DIRECTION IS 1/4 INCH PER TEN (10) FEET OF STUD HEIGHT.
 - MINIMUM BLOCKING:
 - 1 ROW FOR STUD HEIGHT UP TO 8'-0";
 - 2 ROWS FOR STUD HEIGHT UP TO 15'-0";
 - 3 ROWS FOR STUD HEIGHT OVER 15'-0".

HURRICANE CLIPS:

PROVIDE HURRICANE CLIPS @ FIRST FIVE RAFTERS FROM EACH ROOF CORNER, THEN AT EVERY OTHER RAFTER (SIMPSON H2.5T).

MISCELLANEOUS:

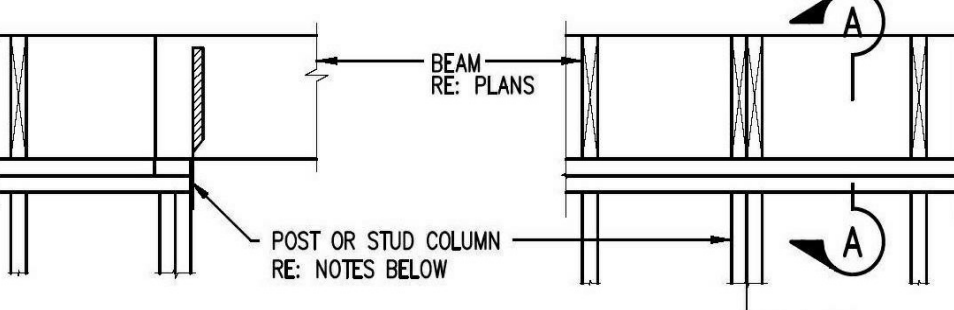
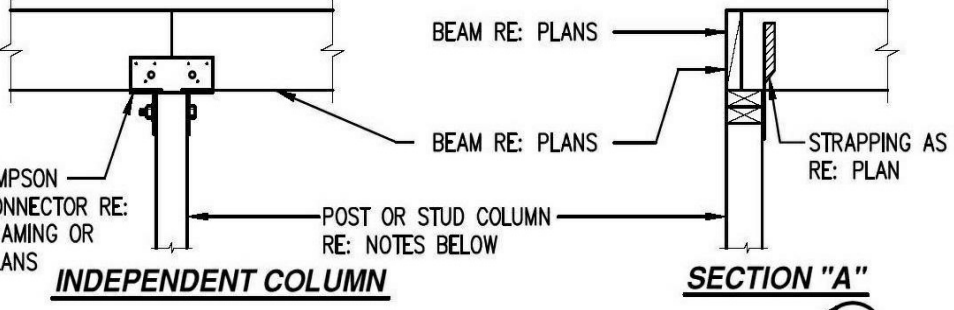
ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED LUMBER.

PLYWOOD FLOOR DECK:

- PLYWOOD SHALL BE 1 1/8" THICKNESS AND SHALL BE RATED STURD-I-FLOOR (2-4-1) EXPOSURE 1.
- LAY PANELS IN A STAGGERED PATTERN.
- PANEL EDGES SHALL BE TONGUE-AND-GROOVE, OTHERWISE, BLOCK ALL EDGES W/ 2-2x4 BLOCKING.
- GLUE & NAIL TO FRAMING MEMBERS AS FOLLOWS:
 - GLUE SHALL CONFORM TO APA SPECIFICATION AF6-01, APPLIED IN A CONTINUOUS BEAD & IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - ALL NAILS SHALL BE 60 RING OR SCREW SHANK. NAIL SPACING SHALL BE 4" O.C. @ PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS.

ROOF DECK:

- MINIMUM THICKNESS SHALL BE 1/2". MATERIAL SHALL BE CDX PLYWOOD.
- ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD.
- MINIMUM NAILING SHALL BE AS REQUIRED BY THE BUILDING CODE.
- PLYWOOD CLIPS SHALL BE INSTALLED @ ROOF DECKING TO RESULT IN A 1/8" GAP BETWEEN ALL PANEL EDGES. PROVIDE 1 CLIP PER SPAN (JOIST SPACING). CLIPS SHALL BE SIMPSON PSL2 TO MATCH CORRESPONDING PLYWOOD THICKNESS.

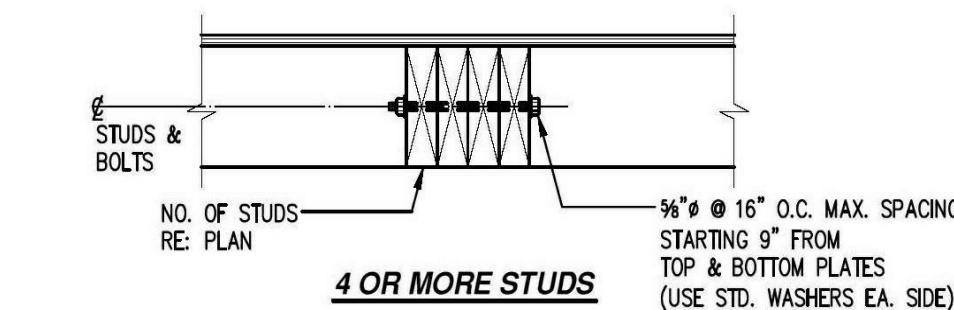
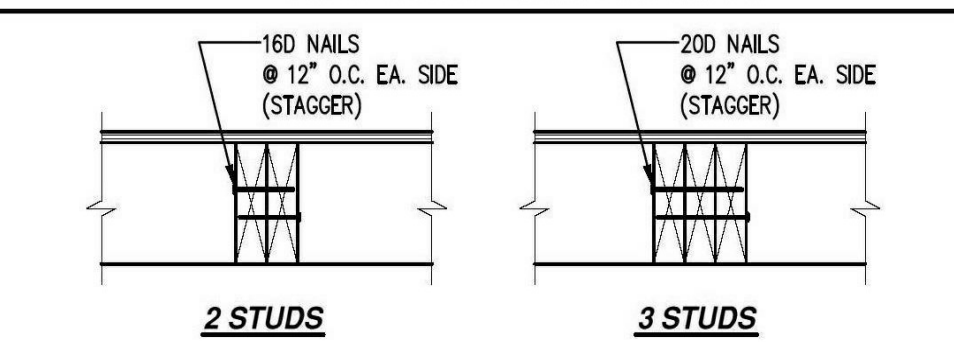


TYPICAL WOOD COLUMN DETAILS

(FLUSH BEAM SHOWN, DROP BEAM SIMILAR)

- NOTES:**
- ALL BEAMS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE SUPPORTED @ EA. END BY A POST EQUAL IN THICKNESS TO THE BEAM (MIN.) I.E. 2-2x12 BEAM SHALL REQUIRE 2-2x STUD POST (MIN.) SOLID SAWN LUMBER MAY BE SUBSTITUTED FOR BUILT-UP POSTS.
 - COLUMNS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE CLUED & FASTENED TO ACT AS A UNIT AS DETAILED BELOW.
 - UNLESS NOTED OTHERWISE, PARALLEL STRAND LUMBER (PSL) AND LAMINATED LUMBER (LSL & LVL) BEAMS & HEADERS SHALL BE SUPPORTED AT EACH END AS FOLLOWS:
 - 3/4" WIDE MEMBERS.....3-2x STUDS OR 4x6 POST
 - 5/4" WIDE MEMBERS UP TO 14" DEPTH.....4-2x STUDS OR 4x6 POST
 - 5/4" WIDE MEMBERS OVER 14" DEPTH.....5-2x STUDS OR 4x6 POST
 - 7" WIDE MEMBERS.....5-2x STUDS OR 4x6 POST
 - MAX. COLUMN OR POST HEIGHT: 10'-0". RE: PLANS OR CONSULT ENGINEER FOR LARGER HEIGHTS.

TYPICAL WOOD COLUMN DETAILS



SUBSTITUTION:
IF STUDS ARE FASTENED AS SHOWN HEREIN, THE FOLLOWING SUBSTITUTIONS MAY BE MADE:
3 STUDS IN LIEU OF 4x4 OR 4x6 POST
4 STUDS IN LIEU OF 6x6 POST

DETAIL: MULTIPLE-STUD COLUMNS

NOT TO SCALE

GENERAL NOTES: WOOD FRAMING SYSTEM

(THESE NOTES SHALL CONTROL UNLESS OTHERWISE NOTED ON PLANS AND DETAILS.)

GRADES

- ROOF RAFTERS:.....NO. 3 SOUTHERN YELLOW PINE (SYP), KD, S4S.
CEILING JOISTS:.....NO. 3 SOUTHERN YELLOW PINE (SYP), KD, S4S.
FLOOR JOISTS:.....NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S.
BEAMS & HEADERS:.....NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S.
STUDS:.....STUD GRADE, SYP, KD, S4S.
WOOD POSTS:.....NO. 2 SYP, SURFACE GREEN.

BEAMS AND HEADERS

- AT BEAMS MADE UP OF A NUMBER OF 2x JOISTS, EACH JOIST WILL BEAR ON A WALL STUD (I.E. NUMBER OF WALL STUDS SHALL MATCH NUMBER OF JOISTS BEARING ON THESE STUDS). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.
- ALL BEAMS MADE UP OF A NUMBER OF 2x JOISTS SHALL BE FASTENED AS FOLLOWS:
 - 2-2x 16d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
 - 3-2x 20d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
 - 4-2x (OR MORE) 16" @ BOLTS @ 12" TOP & BOTTOM.
 BOLTS SHALL BE LOCATED 2" MINIMUM FROM BEAM EDGES AND SHALL BE STAGGERED IN TOP AND BOTTOM ROWS; PROVIDE STANDARD WASHERS @ EACH FACE.
- ALL DOOR AND WINDOW HEADERS (OR HEADERS AT ANY OTHER OPENING) THAT ARE NOT SPECIFIED ON PLANS SHALL BE AS FOLLOWS:
 - FLOOR FRAMING: 2-2X12
 - CEILING FRAMING: 2-2X8
- MINIMUM BEARING OF ANY BEAM OR HEADER AT A STUD WALL IS 3/4"

JOISTS

- JOIST BLOCKING:
 - JOISTS SHALL BE LATERALLY SUPPORTED AT EACH END AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED INTO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD. SOLID BLOCKING SHALL NOT BE LESS THAN TWO INCHES IN THICKNESS AND SHALL MATCH THE DEPTH OF THE JOIST.
 - PROVIDE SOLID BLOCKING UNDER ALL BEARING WALLS PERPENDICULAR TO THE DIRECTION OF THE JOISTS.
 - PROVIDE DOUBLE JOISTS UNDER ALL BEARING WALLS PARALLEL TO THE DIRECTION OF THE JOISTS.
- JOIST BRIDGING: PROVIDE BRIDGING AT ALL FLOOR JOISTS AT SPACING NOT TO EXCEED 8'-0".
- JOIST HOLES AND NOTCHES:
 - NOTCHES IN TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH (1/6) THE JOIST DEPTH AND SHALL NOT BE LOCATED WITHIN MIDDLE THIRD OF THE SPAN.
 - HOLES SHALL NOT BE CLOSER THAN 2" TO TOP OR BOTTOM OF JOIST. THE DIAMETER OF ANY HOLE SHALL NOT EXCEED ONE FOURTH (1/4) THE JOIST DEPTH UNLESS APPROVED BY THE ENGINEER.

PARALLEL STRAND LUMBER (PSL), LAMINATED STRUCTURAL LUMBER (LSL), & LAMINATED VENEER LUMBER (LVL)

WHERE SHOWN ON DRAWINGS, THESE PRODUCTS SPECIFICATIONS SHALL CONFORM TO THE FOLLOWING SCHEDULE:

PRODUCT NAME	PARALLEL STRAND LUMBER (PSL)	LAMINATED STRUCTURAL LUMBER (LSL)	LAMINATED VENEER LUMBER (LVL)
TRADE NAME	"DARALLAM"	"ANTHONY POWER BEAM"	"VERSA-LAM"
MANUFACTURER	ANTHONY POWER BEAM (WWW.ANTHONYPOWERBEAM.COM)	ANTHONY FOREST PRODUCTS (WWW.ANTHONYFOREST.COM)	VERSA LAM (WWW.VERSALAM.COM)
FLEXURAL STRESS: (F _b)	2,900 PSI	3,000 PSI	2,640 PSI
HORIZ. SHEAR STRESS: (F _v)	290 PSI	290 PSI	285 PSI
MODULUS OF ELASTICITY: (E)	2,000,000 PSI	2,100,000 PSI (BY ORDER TO REFER DEFLECTION)	2,000,000 PSI

IMPORTANT NOTE ABOUT PSL, LSL & LVL BEAMS:

ENGINEERED WOOD BEAMS ARE DESIGNED FOR SERVICE IN DRY CONDITIONS ONLY. THESE BEAMS MAY NOT BE USED WHEN EXPOSED TO MOISTURE, OR TO WETTING & DRYING CYCLES.

CONNECTORS

- CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., DUBLIN, CA.
- CONNECTORS SHALL BE THE MANUFACTURER-DESIGNATED SIZE FOR FRAMED MEMBERS, AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ALL NAIL & BOLT HOLES SHALL BE ENGAGED, WITH MANUFACTURER-DESIGNATED FASTENERS.
- CONNECTORS SHALL BE INSTALLED AT THE ENDS OF ALL JOISTS & BEAMS FRAMING INTO OTHER (SUPPORTING) MEMBERS (UNLESS OTHERWISE NOTED).
- THE FOLLOWING CONNECTORS SHALL BE PROVIDED AND SHALL BE CONSIDERED THE MINIMUM:

MEMBER DESCRIPTION	CONNECTOR SERIES
SAWN-LUMBER JOISTS	U
I-JOISTS	IJS
MULTIPLE-JOIST/BEAMS	HUS
PSL & LVL BEAMS	LEV
LSL (GLU-LAM) BEAMS	HGUS
WOOD TRUSSES	(BY TRUSS MANUFACTURER)

NOTE: ENGINEER SHALL APPROVE ANY CHANGES MADE TO CONNECTIONS.

NOTE: FOR ALL CONNECTIONS LABELLED AS "EQUAL" SHALL BE APPROVED BY THE ENGINEER ON RECORD IF CONNECTORS DIFFERS FROM THE SPECIFIED CONNECTORS

DEAVERS E

LLC

3103 PEACHTREE LANE
MISSOURI CITY, TEXAS 77459
PH: 713.828.8901
FIRM # 16777

PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026

TYPICAL FRAMING DETAILS & NOTES

TYPICAL NAILING AND FASTENING TABLES PER IRC 2012

TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a, b, c}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 1/2" x 0.113")	---
2	Ceiling joists to plate, toe nail	3-8d (2 1/2" x 0.113")	---
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	---
4	Collar tie to rafter, face nail or 1 1/4" x 20 gage ridge strap	3-10d (3" x 0.128")	---
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3 1/2" x 0.135") or 3-10d common nails (3" x 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss ^j
6	Roof rafters to ridge, valley or hip rafters; toe nail face nail	4-16d (3 1/2" x 0.135") 3-16d (3 1/2" x 0.135")	---
Wall			
7	Build-up studs-face nail	10d (3" x 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 1/2" x 0.135")	12" o.c.
9	Build-up header, two pieces with 1/2" spacer	16d (3 1/2" x 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 1/2" x 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 1/2" x 0.113")	---
12	Double studs, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" x 0.135")	---
15	Sole plate to joist or blocking, face nail	16d (3 1/2" x 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3 1/2" x 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2 1/2" x 0.113") or 2-16d (3 1/2" x 0.135")	---
18	Top or sole plate to stud, end nail	2-16d (3 1/2" x 0.135")	---
19	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	---
20	1" brace to each stud and plate, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4" x	---
21	1" x 6" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4" x	---
22	1" x 8" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 3 staples 1 3/4" x	---
23	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2 1/2" x 0.113") 4 staples 1 3/4" x	---
Floor			
24	Joist to sill or girder, toe nail	3-8d (2 1/2" x 0.113")	---
25	Rim joist to top plate, toe nail (roof applications also)	8d (2 1/2" x 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 1/2" x 0.113")	6" o.c.
27	1" x 6" subfloor or less to each joist, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4" x	---
28	2" subfloor to joist or girder, blind and face nail	2-16d (3 1/2" x 0.135")	---
29	2" planks (plank & beam - floor & roof)	2-16d (3 1/2" x 0.135")	at each bearing
30	Build-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3 1/2" x 0.135")	At each joist or rafter

TABLE R602.3(1) - continued FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{b, c, e}	SPACING OF FASTENERS	
			Edges (inches) ^f	Intermediate supports ^{b, c, e} (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
32	3/8" - 1/2"	6d common (2" x 0.113") nail (subfloor wall) 8d common (2 1/2" x 0.131") nail (roof) ^f	6	12 ^g
33	19/32" - 1"	8d common nail (2 1/2" x 0.131")	6	12 ^g
34	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d (2 1/2" x 0.131") deformed nail	6	12
Other wall sheathing^h				
35	1/2" structural cellulose fiberboard sheathing	1 1/2" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/4" long	3	6
36	2 1/2" structural cellulose fiberboard sheathing	1 3/4" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/2" long	3	6
37	1/2" gypsum sheathing ^d	1 1/2" galvanized roofing nail; staple galvanized, 1 1/2" long; 1 1/4" screws, Type W or S	7	7
38	5/8" gypsum sheathing ^d	1 3/4" galvanized roofing nail; staple galvanized, 1 3/8" long; 1 3/8" screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
39	3/4" and less	6d deformed (2" x 0.120") nail or 8d common (2 1/2" x 0.131") nail	6	12
40	7/8" - 1"	8d common (2 1/2" x 0.131") nail or 8d deformed (2 1/2" x 0.120") nail	6	12
41	1 1/8" - 1 1/4"	10d common (3" x 0.148") nail or 8d deformed (2 1/2" x 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 Ksi = 6.895 MPa.
a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2 1/2" x 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.
h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.
i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

TABLE R602.3(2) ALTERNATE ATTACHMENTS TO TABLE R602.3(1)

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION ^{a, b} OF FASTENER AND LENGTH (inches)	SPACING OF FASTENERS	
		Edges (inches)	Intermediate supports (inches)
Wood structural panels subfloor, roof^f and wall sheathing to framing and particleboard wall sheathing to framing^f			
Up to 1/2	Staple 15 ga. 1 1/4"	4	8
	0.097 - 0.099 Nail 2 1/4"	3	6
19/32 and 3/8	Staple 16 ga. 1 3/4"	3	6
	0.113 Nail 2"	3	6
	Staple 15 and 16 ga. 2"	4	8
23/32 and 3/4	0.097 - 0.099 Nail 2 1/4"	4	8
	Staple 14 ga. 2"	4	8
	Staple 15 ga. 1 3/4"	3	6
	0.097 - 0.099 Nail 2 1/4"	4	8

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION ^{a, b} OF FASTENER AND LENGTH (inches)	SPACING OF FASTENERS	
		Edges (inches)	Body of panel ^d (inches)
Floor underlayment; plywood-hardboard-particleboard^f			
Plywood			
1/4 and 5/16	1 1/4 ring or screw shank nail-minimum 12 1/2 ga. (0.099") shank diameter	3	6
	Staple 18 ga., 7/8, 7/16 crown width	2	5
11/32, 3/8, 15/32, and 1/2	1 1/4 ring or screw shank nail-minimum 12 1/2 ga. (0.099") shank diameter	6	8 ^g
19/32, 5/8, 23/32 and 3/4	1 1/2 ring or screw shank nail-minimum 12 1/2 ga. (0.099") shank diameter	6	8
	Staple 16 ga. 1 1/2"	6	8
Hardboard^f			
0.200	1 1/2 long ring-grooved underlayment nail	6	6
	4d cement-coated sinker nail	6	6
	Staple 18 ga., 7/8 long (plastic coated)	3	6
Particleboard			
1/4	4d ring-grooved underlayment nail	3	6
	Staple 18 ga., 7/8 long, 7/16 crown	3	6
3/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1 1/4 long, 3/4 crown	3	6
1/2, 5/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1 3/8 long, 3/8 crown	3	6

For SI: 1 inch = 25.4 mm.
a. Nail is a general description and may be T-head, modified round head or round head.
b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted.
c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more than 12 inches on center at intermediate supports for floors.
d. Fasteners shall be placed in a grid pattern throughout the body of the panel.
e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way.
f. Hardboard underlayment shall conform to CPA/ANSI A135.4.
g. Specified alternate attachments for roof sheathing shall be permitted for windspeeds less than 100 mph. Fasteners attaching wood structural panel roof sheathing to gable end wall framing shall be installed using the spacing listed for panel edges.

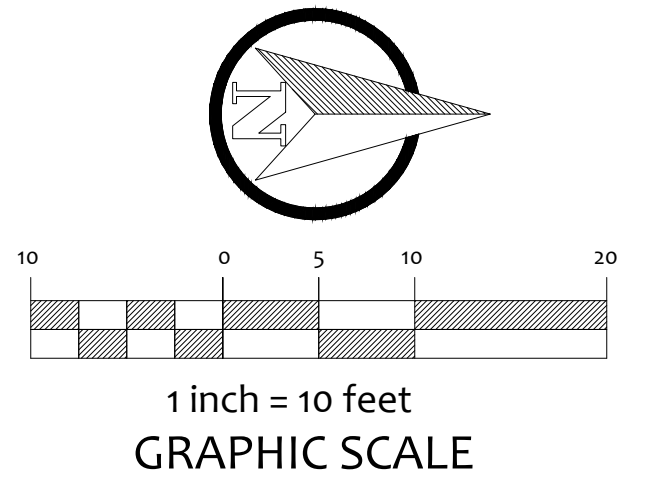
TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES^{a, b, c}

MINIMUM NAIL SIZE	MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inches)	MAXIMUM WALL STUD SPACING (inches)	PANEL NAIL SPACING		MAXIMUM WIND SPEED (mph)			
				Edges (inches o.c.)	Field (inches o.c.)	Wind exposure category			
						B	C	D	
6d Common (2.0" x 0.113")	1.5	24/0	3/8	16	6	12	110	90	85
8d Common (2.5" x 0.131")	1.75	24/16	7/16	16	6	12	130	110	105
				24	6	12	110	90	85

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.
a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.
b. Table is based on wind pressures acting toward and away from building surfaces per Section R301.2. Lateral bracing requirements shall be in accordance with Section R602.10.

PROPOSED DUPLEX
4615 COLLINGSWORTH STREET # A&B
HOUSTON, TEXAS 77026

NAILING SCHEDULE



BENCHMARK INFORMATION:
 TSARP MON
 RM NO. 080170
 ELEVATION = 40.66', NAVD 1988, 2001 ADJ.

- NOTES:
- FILL MATERIAL MUST BE COMPACTED IN 8" LIFTS TO 95% STANDARD PROCTOR
 - NET AMOUNT OF VOLUME TO BE HAUL FROM THE SITE = 42.45 CU. FT

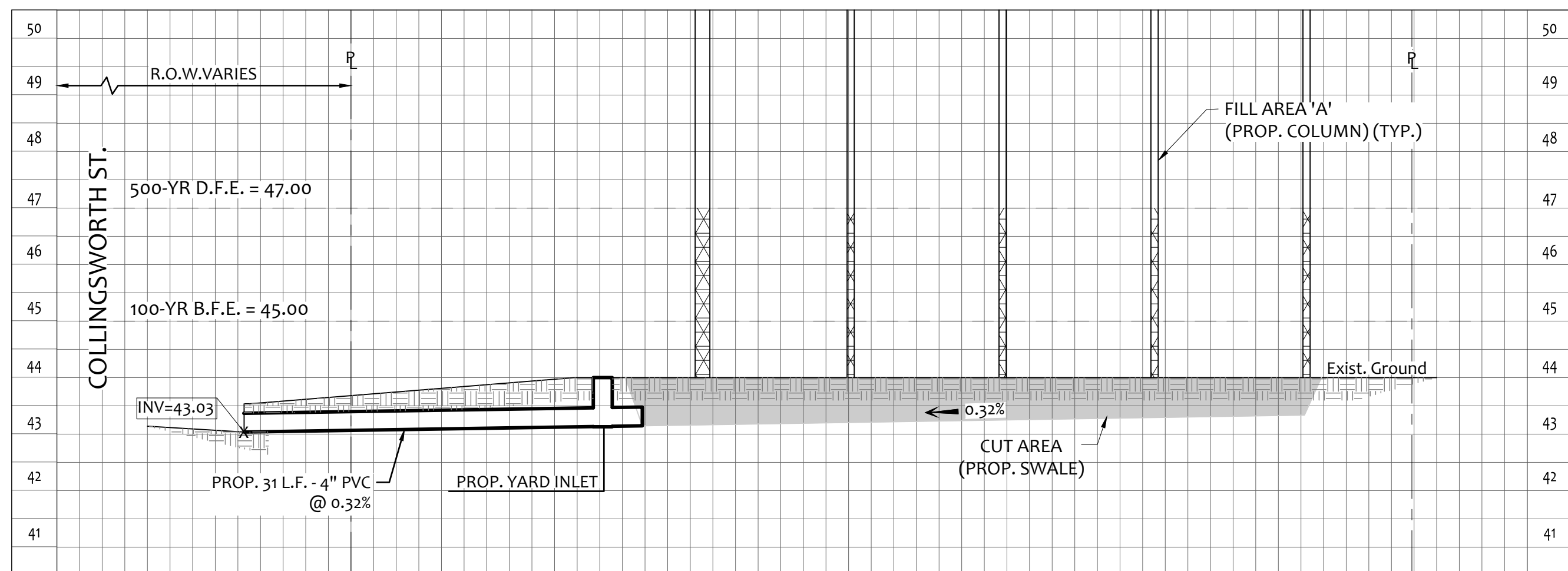
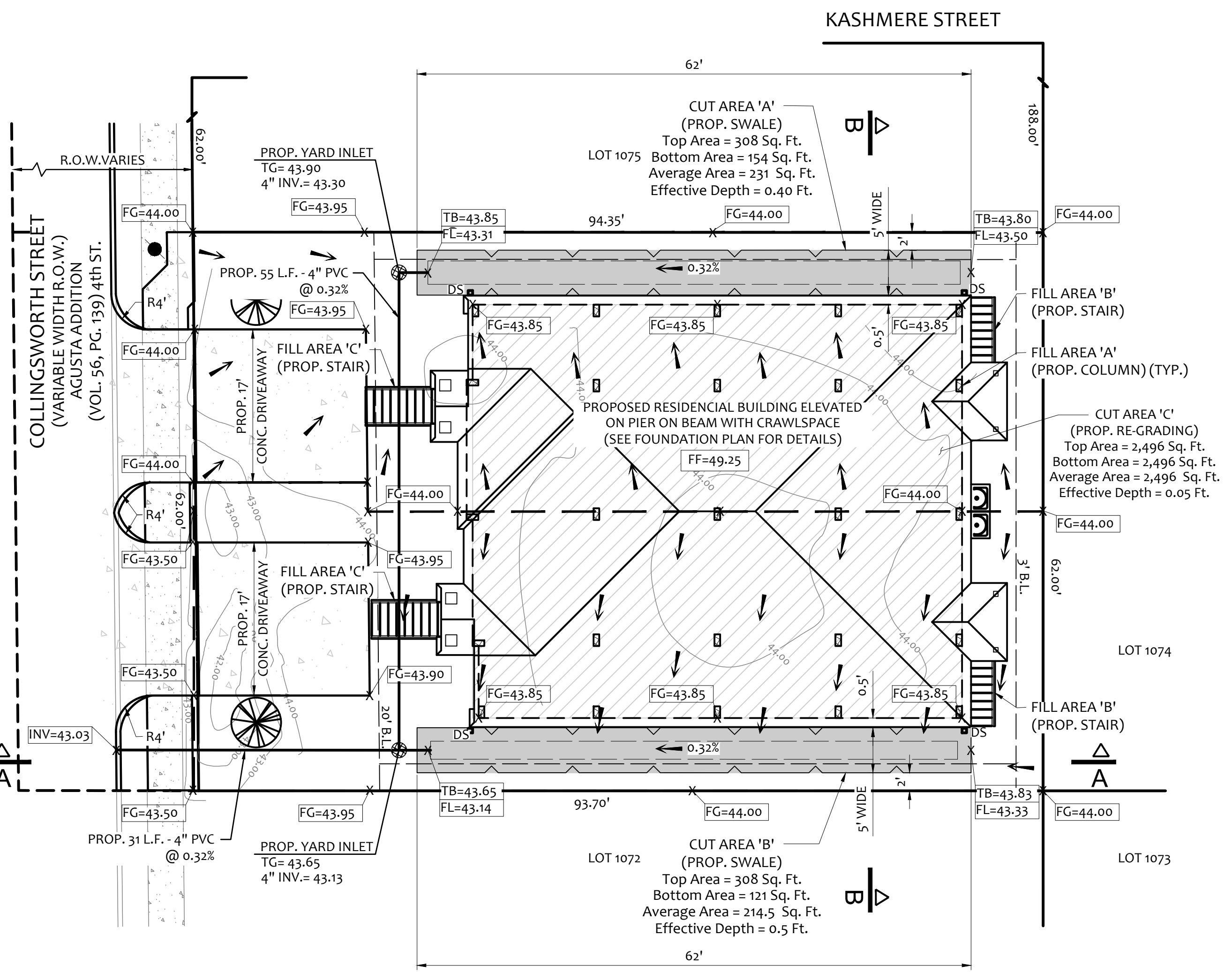
MITIGATION CALCULATIONS					
LOCATION	AREA SQ. FT.	UNITS	DEPTH (FT.) HEIGHT ABOVE EXIST. GRADE AND BELOW 500-YR DFE=47.00	** CUT Cu-ft	* FILL Cu-ft
** CUT AREA 'A' (PROP. SWALE)	231 s.f.	1	0.40 (AVG. DEPTH)	92.4	0
** CUT AREA 'B' (PROP. SWALE)	214.5 s.f.	1	0.5 (AVG. DEPTH)	107.25	0
** CUT AREA 'C' (RE-GRADE)	2,496 s.f.	1	0.05 (AVG. DEPTH)	124.8	0
* FILL AREA 'A' (PROP. COLUMN)	0.8 s.f.	25	3.0'	0	60
* FILL AREA 'B' (PROP. STAIR)	7 s.f.	2	3.0'	0	42
* FILL AREA 'C' (PROP. STAIR)	13 s.f.	2	3.0'	0	180
TOTAL				324.45	282

** CUT DEPTH BASED ON VOLUME REMOVAL BELOW 500-YR WATER SURFACE ELEVATION.
 * FILL DEPTH BASED ON FILL VOLUME DEPTH BELOW THE 500-YR DESIGNATED FLOOD ELEVATION= 47.00

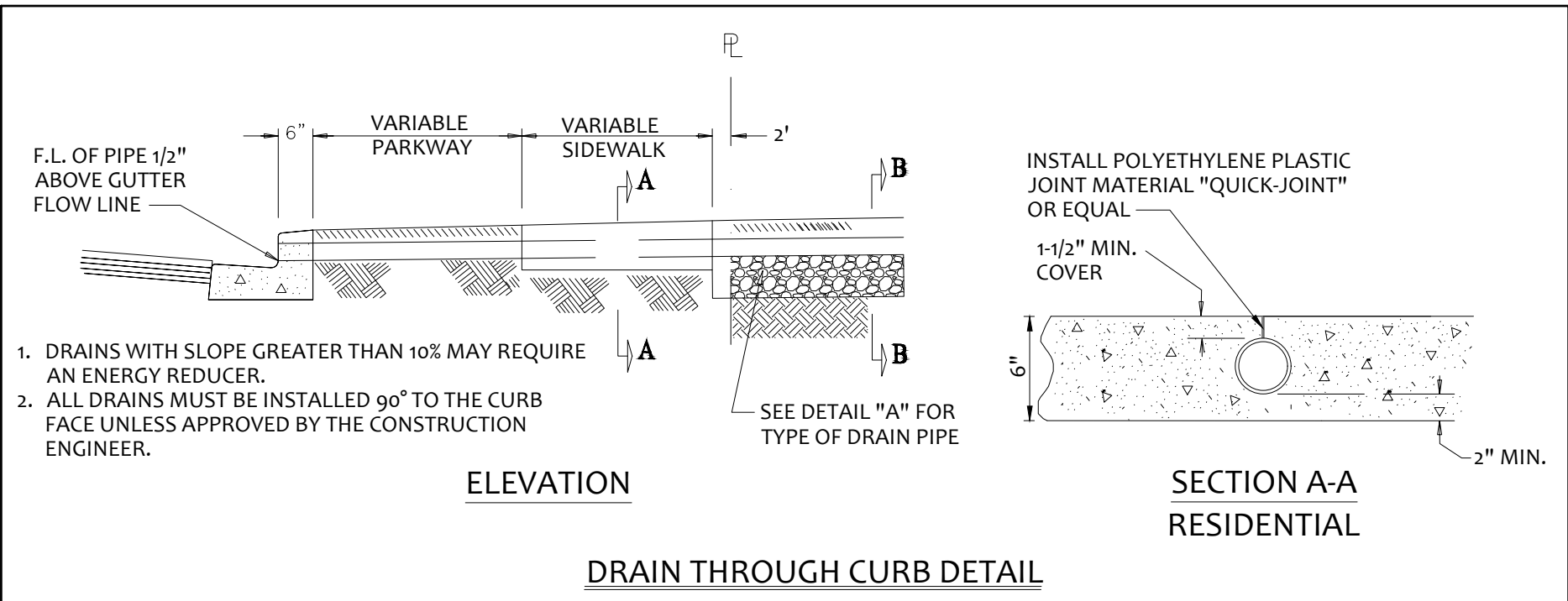
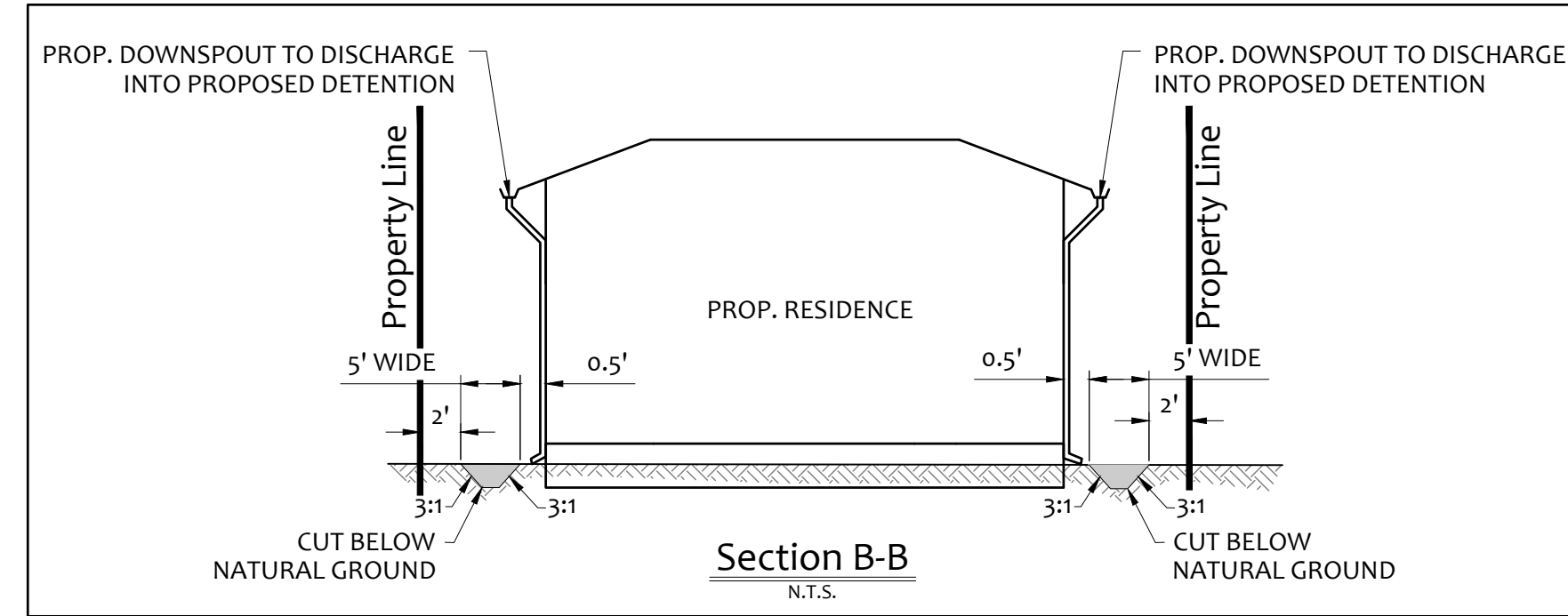
VOLUME NOTE:
 TOTAL FILL REQUIRED FOR THIS PROJECT = 282 CU-FT
 TOTAL NET CUT TO BE HAULED OFF SITE = 42.45 CU-FT

EXISTING/PROPOSED PEAK RUNOFF		
TIME OF CONCENTRATION AREA=0.13 (5,854 S.F.) $T_c = 10A^{0.195} + 15$ $T_c = (10 * 0.13^{0.195}) + 15 = 22.02$ MINUTES	EXISTING CONDITIONS $Q = CIA$ $C = 0.30$ (Residential Lot 1/4-1/2 Acre) $Q_2 = 0.30 * 4.01 * 0.13 = 0.16$ CFS $Q_{100} = 0.30 * 11.06 * 0.13 = 0.45$ CFS	PROPOSED CONDITIONS $Q = CIA$ $C = 0.45$ (Residential Lot Less 1/4 Acre) $Q_2 = 0.45 * 4.01 * 0.13 = 0.24$ CFS $Q_{100} = 0.45 * 11.06 * 0.13 = 0.67$ CFS
INTENSITY $I = \frac{b}{(d+T_c)^2}$ $I_1 = \frac{48.35}{(9.07+22.02)^2} = 4.01$ $I_{100} = \frac{60.66}{(4.44+22.02)^2} = 11.06$		
ANALYSIS OF IMPERVIOUS COVER		
IMPROVEMENT TYPE	AREA OF EXISTING IMPERVIOUS COVER (S.F.)	AREA OF PROPOSED IMPERVIOUS COVER (S.F.)
BUILDING	0	2,918
PARKING LOT/ DRIVEWAY	0	660
SIDEWALK/ PATIO	0	0
DETENTION POND	0	0
TOTAL IMPERVIOUS AREA	0	3,578
DETENTION CALCULATIONS		
TOTAL IMPERVIOUS COVER IN S.F.	3,578	
PERCENTAGE OF IMPERVIOUS COVER FOR PROPOSED CONDITIONS	57%	
65% ALLOWED IMPERVIOUS COVER IN S.F.	3,805.1	

NO DETENTION REQUIRED:
 LOT IS UNDER 15,000 S.F. AND IMPERVIOUS COVER IS UNDER 65% THEREFORE NO DETENTION REQUIRED.



Section A-A
 SCALE: 1"=10' (H) 1"=2' (V)



LEGEND	
— GB —	GRADE BREAK
▭	CUT BELOW NATURAL GRADE
▨	RE-GRADE NATURAL GRADE
FF 49.79	PROP. FINISH FLOOR ELEVATION
FG 49.72	PROP. FINISH GRADE ELEVATION
FL 49.72	PROP. FLOW LINE ELEVATION SLOPE
MEG	MATCH EXISTING GRADE ELEVATION
→	2-YR AND EXTREMELY FLOW DIRECTION
△ A	CROSS-SECTIONS (REF: THIS SHEET)
—	DRAINAGE AREA LIMITS
DS	PROP. DOWNSPOUT
A3 0.24	DRAINAGE SUB-AREA DRAINAGE SUB-AREA ACREAGE

FLOODPLAIN NOTE
 * THIS TRACT IS LOCATED WITHIN THE 500-YEAR YEAR FLOOD PLAIN IN SHADED ZONE X AS LOCATED BY FEDERAL INSURANCE ADMINISTRATION DESIGNATED FLOOD HAZARD AREA MAP No. 48201Co690N , PANEL 690 OF 1150, DATED 1/6/2017. 100-YR BASE FLOOD ELEVATION = 45.00 500-YR DESIGNATED FLOOD ELEVATION = 47.00

DRAINAGE NARRATIVE
 PROPOSED IMPROVEMENTS TO THE 0.13 ACRES SITE INCLUDE A PROPOSED SINGLE FAMILY RESIDENTIAL BUILDING AND DRIVEWAY. THE DRAINAGE AND GRADING IMPROVEMENTS ARE DESIGNED TO CAPTURE THE RUNOFF FROM A TWO-YEAR EVENT AND CONVEY IT THROUGH OVERLAND SHEET FLOW TOWARDS THE PUBLIC ROW AND WILL NOT CREATE ANY ADVERSE IMPACT TO ADJACENT PARCELS.

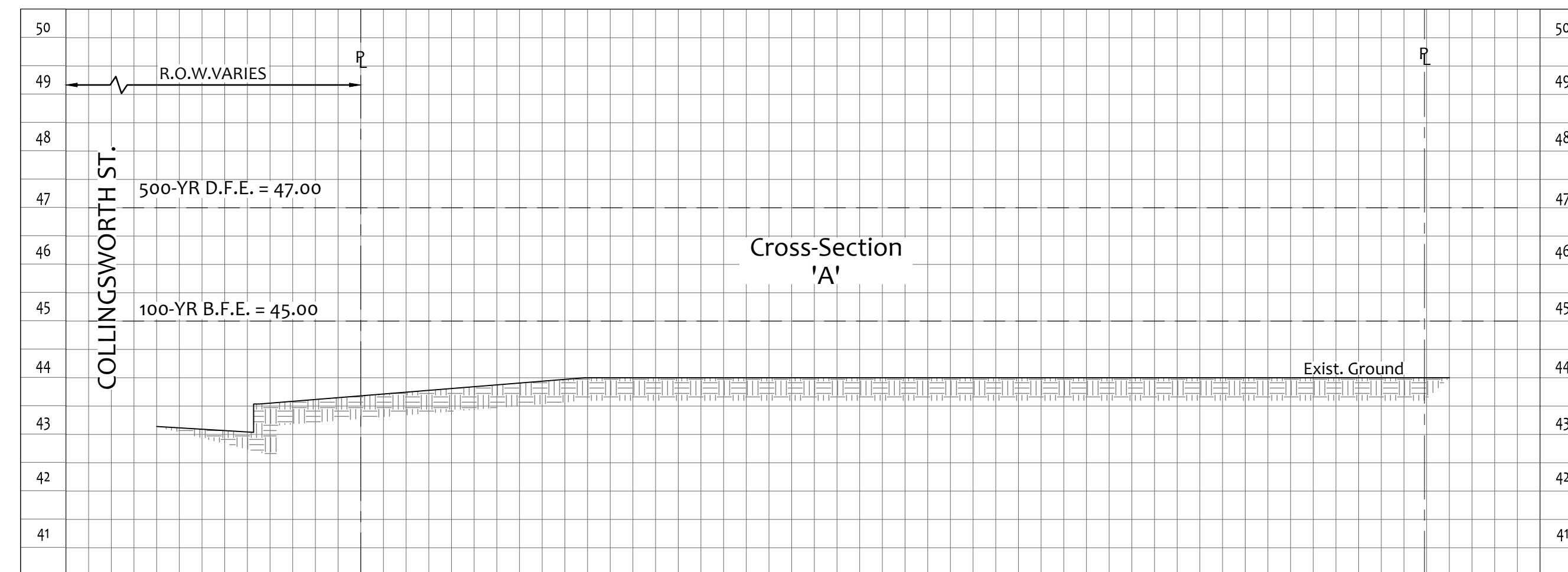
SURVEY NOTE: ALL SURVEY INFORMATION SHOWN HEREON WAS PROVIDED TO THE ENGINEER BY OVERLAND SURVEYORS. ENGINEER MAKES NO REPRESENTATION AS TO THE ACCURACY OF SURVEY INFORMATION. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES AND TOPOGRAPHIC INFORMATION PRIOR TO BEGINNING WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

CAS CONSULTANTS
 6201 BONHOMME RD. SUITE 315-N Houston, Texas 77036
 Tel: 281.300.6874 Email: JUAN@CASENGS.COM
 Texas Registered Engineering Firm F-15593

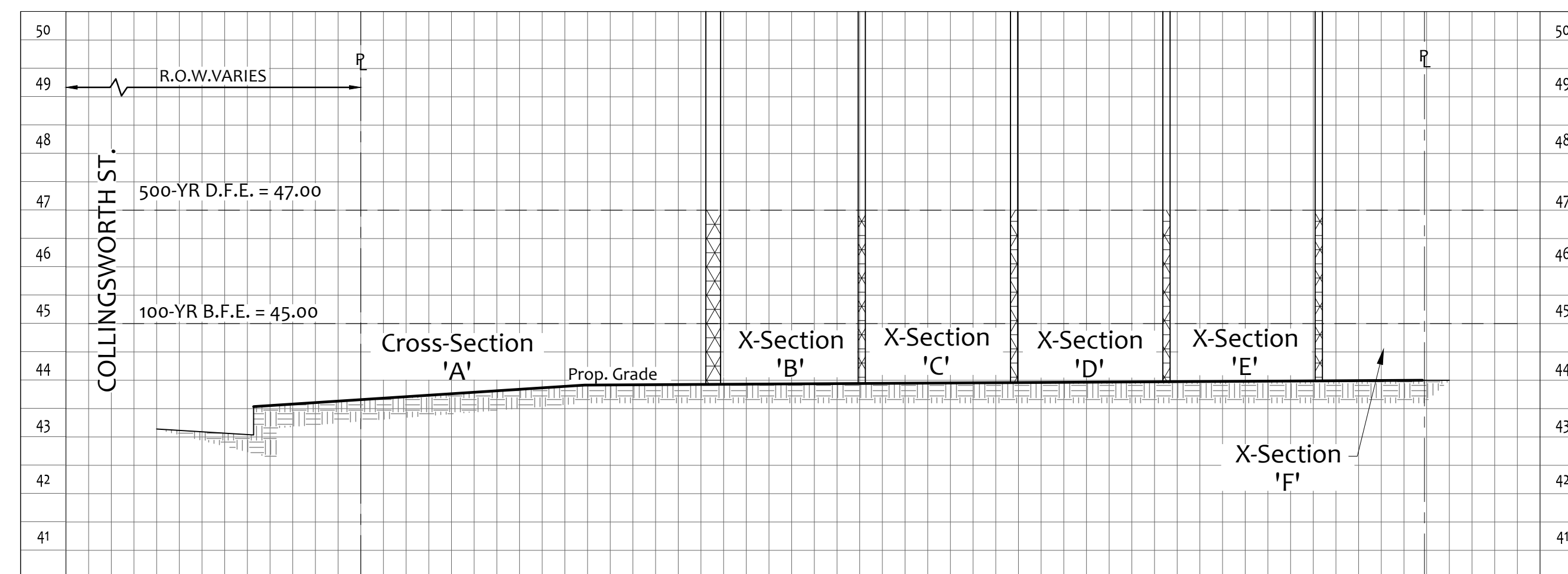
4615 COLLINGSWORTH ST. HOUSTON TEXAS, 77026

MITIGATION, GRADING AND DRAINAGE PLAN

DRAWING SCALE	
PROJECT NO.	222001
DATE:	1/19/22
SHEET:	C-100



Existing Conditions
Section A-A
SCALE: 1"=10' (H) 1"=2' (V)



Proposed Conditions
Section A-A
SCALE: 1"=10' (H) 1"=2' (V)

FLOODPLAIN NOTE
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 PROPOSED IMPROVEMENTS TO THE 0.13 ACRES SITE INCLUDE A PROPOSED SINGLE FAMILY RESIDENTIAL BUILDING AND DRIVEWAY. THE DRAINAGE AND GRADING IMPROVEMENTS ARE DESIGNED TO CAPTURE THE RUNOFF FROM A TWO-YEAR EVENT AND CONVEY IT THROUGH OVERLAND SHEET FLOW TOWARDS THE PUBLIC ROW AND WILL NOT CREATE ANY ADVERSE IMPACT TO ADJACENT PARCELS.

SURVEY NOTE: ALL SURVEY INFORMATION SHOWN HEREON WAS PROVIDED TO THE ENGINEER BY OVERLAND SURVEYORS. ENGINEER MAKES NO REPRESENTATION AS TO THE ACCURACY OF SURVEY INFORMATION. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES AND TOPOGRAPHIC INFORMATION PRIOR TO BEGINNING WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

CONVEYANCE CALCULATIONS FOR CROSS SECTION A-A

City of Houston

PROJECT NAME: 4615 Collingsworth Street, Houston Texas 77026

Existing Condition					
	A	WP	R	n	K
Cross-Section A	484	105	4.61	0.035	57,069.09
Total	484.00				57,069.09
Proposed Condition					
	A	WP	R	n	K
Cross-Section A	178	32.00	5.56	0.035	23,789.48
Cross-Section B	65	16.00	4.06	0.035	7,045.21
Cross-Section C	67	16.00	4.19	0.035	7,410.19
Cross-Section D	66	16.00	4.13	0.035	7,226.78
Cross-Section E	65	16.00	4.06	0.035	7,045.21
Cross-Section F	45	12.50	3.60	0.035	4,499.86
Total	486				57,016.73
Difference					52.36
Rate= +Proposed/ Existing			Conveyance Loss		0.09%

CONCLUSION:
 THE PROPOSED CONVEYANCE INCREASE = 52.36 (0.09%)
 THE PROPOSED DEVELOPMENT INCREASES THE EXISTING CONVEYANCE CAPACITY OF THE PROJECT SITE BY 0.09%

NOTES:
 CROSS-SECTION A : EXISTING CROSS SECTION AREA 484 SQ. FT. BETWEEN BFE AND EXISTING N/G
 TOTAL PROPOSED CROSS SECTION AREAS A THROUGH F: SECTION AREA= 486 SQ. FT. BETWEEN BFE AND PROPOSED GRADE
 WP: WET PERIMETER
 R: HYDRAULIC RADIUS R=A/WP
 n: MANNING COEFFICIENT
 K: CONVEYANCE K= 1.49 AR^(2/3)/ n

LEGEND

- GB GRADE BREAK
- CUT BELOW NATURAL GRADE
- FILL ABOVE NATURAL GRADE
- FF 49.79 PROP. FINISH FLOOR ELEVATION
- FG 49.72 PROP. FINISH GRADE ELEVATION
- FL 49.72 PROP. FLOW LINE ELEVATION SLOPE
- MEG MATCH EXISTING GRADE ELEVATION
- FLOW DIRECTION
- △ CROSS-SECTION (THIS SHEET)
- A CROSS-SECTION (THIS SHEET)

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**4615 COLLINGSWORTH ST.
 HOUSTON TEXAS, 77026**

CONVEYANCE ANALYSIS &
 SECTIONS

DRAWING SCALE

PROJECT NO.
222001

DATE: 1/19/22

SHEET: C-101

JUAN G. CASTILLO
 114217
 1/19/22
 TBPE FIRM 15593