LAKE SHORE TOWN HOMES

TEGA CAY, YORK COUNTY, SOUTH CAROLINA

CIVIL

C1.0 PRELIMINARY PLAT
C2.0 SITE PLAN
C3.0 DEMOLITION PLAN
C4.0 UTILITY PLAN
C5.0 SEWER PROFILE
C5.1 SEWER PROFILE
C6.0 GRADING PLAN
C6.1 GRADING PLAN
C7.0 STORM PROFILES
C7.1 STORM PROFILES
C8.0 DRAINAGE AREA MAP
C9.0 EROSION DRAINAGE MAP
C9.1 EROSION CONTROL PH 1
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C10.0 DETAILS & SPECIFICATIONS
C10.1 DETAILS & SPECIFICATIONS
C10.2 DETAILS & SPECIFICATIONS
C11.0 UTILITY DETAILS SHEET
C11.1 UTILITY DETAILS SHEET
C11.2 UTILITY DETAILS SHEET

THE ISAACS GROUP
Civil Engineering, Inc.
870 Red Oak Boulevard, Suite 420
CHARLOTTE, NORTH CAROLINA 28217
704.527.3440

ARCHITECTURAL (TOWNHOME UNITS)

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CS2 APPENDIX B, NOTES
G1.0 GENERAL NOTES
G1.1 GENERAL NOTES
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G1.3 GENERAL NOTES

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AF1.2 FOUNDATION DETAILS
AF1.3 4-UNIT COMBINED FOUNDATION PLANS
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A1.2 -B- FLOOR PLANS
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A4.2 -B- WALL SECTIONS
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A4.3B -C- WALL SECTIONS, DETAILS

URBAN ARCHITECTURAL GROUP
P.A. 1242 Mann Drive, Suite
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CAROLINA, 28105 704.841.1899
www.urbanarchitecturalgrp.com

ARCHITECTURAL

A4.4 WALL SECTION DETAILS
A4.5 SEPARATION WALL DETAILS
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A0.2 UL LISTINGS

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A1b 3rd & 4th FLOOR PLANS
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A1d SPRINKLER SCHEMATIC
A1e SPRINKLER SCHEMATIC

A2.1 ELEVATIONS

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A4.8 WATERPROOFING DETAILS

A5.2 EXTERIOR WALL DETAILS
A5.3 STAIR DETAILS
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A6.1 ELEVATOR DETAILS

NOTE:
FLOOR TRUSSES & ROOF TRUSSES SHALL BE DESIGNED, SIGNED & SEALED BY A STATE LICENSED ENGINEER.
THE CONTRACTOR SHALL INSTALL ACCORDING TO THE APPROVED SHOP DRAWINGS.

PLUMBING, MECHANICAL,& ELECTRICAL

P1 TYPICAL 2 STORY UNIT SANITARY PLANS
P2 TYPICAL 2 STORY UNIT WATER & GAS PLANS
P3 TYPICAL 3 STORY UNIT SANITARY PLANS
P4 TYPICAL 3 STORY UNIT WATER & GAS PLANS
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P6 TYPICAL 4 STORY UNIT SANITARY PLANS
P7 TYPICAL 4 STORY UNIT WATER & GAS PLANS
P8 TYPICAL 4 STORY UNIT WATER & GAS PLANS
P9 PLUMBING SCHEDULE, DETAILS, & NOTES
P10 SANITARY WASTE RISERS 2 & 3 STORY UNITS
P11 SANITARY WASTE RISERS 4 STORY UNITS

M1 TWO STORY UNIT MECH PLANS & NOTES
M2 THREE STORY UNIT MECH PLANS & NOTES
M3 FOUR STORY UNIT MECH PLANS & NOTES
M4 FOUR STORY UNIT MECH PLANS & NOTES
M5 MECHANICAL SCHEDULES, DETAILS, & NOTES

E1 ELECTRICAL LEGEND, NOTES, & SCHEDULES
E2 ELECTRICAL TYPICAL UNIT PLANS
E3 ELECTRICAL TYPICAL UNIT PLANS
E4 ELECTRICAL TYPICAL UNIT PLANS
E5 ELECTRICAL TYPICAL UNIT PLANS
E6 ELECTRICAL PNL SCHEDULES, RISERS, & DETAILS

VRETTOS PAPPAS
Consulting Engineers, Inc.
101 N. McDOWELL STREET SUITE 120
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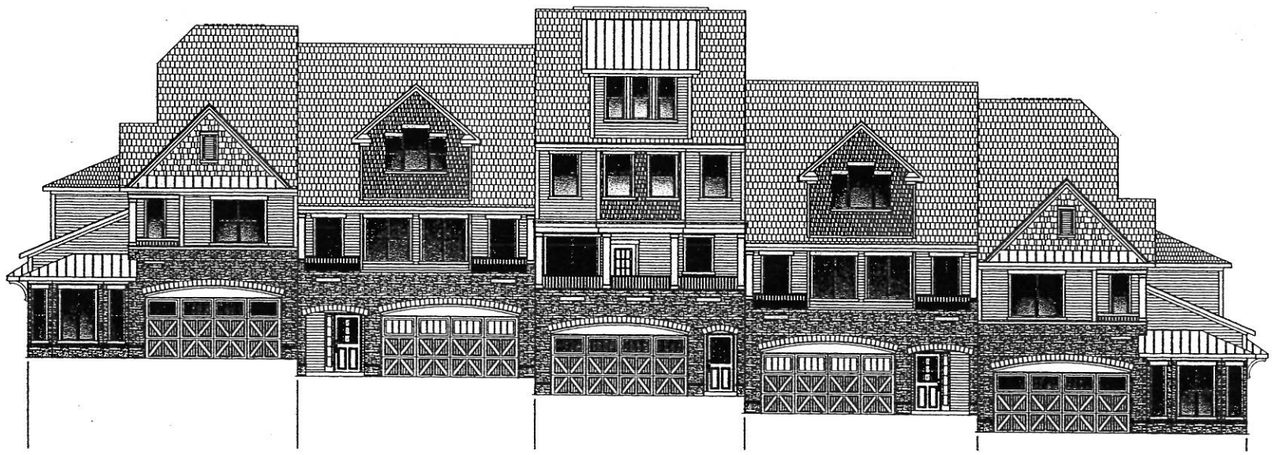
704.372.7755
www.vpce.com



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D·R·HORTON America's Builder

LAKE SHORE TOWN HOMES
TEGA CAY, SC

STATE OF SOUTH CAROLINA
Urban Architectural Group PA
Charlotte, NC
01054
REGISTERED ARCHITECTS

STATE OF SOUTH CAROLINA
JOHN R. URBAN II
Matthews, NC
5409
REGISTERED ARCHITECT

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006
⚠1 Permit Revisions: 07/06/06

CS.1

CONSTRUCTION DATA
2000 INTERNATIONAL RESIDENTIAL CODE

APPENDIX B

GENERAL INFORMATION:

NAME OF PROJECT: LAKE SHORE TOWN HOMES
ADDRESS: TEGA CAY, ROCK HILL, SOUTH CAROLINA
PROPOSED USE: RESIDENTIAL
OWNER / CONTACT PERSON: RICHARD SCHWARTZ, DRHORTON COMPANY 704.377.2008

DESIGNER OF RECORD:	NAME	/ LICENSE #	TELEPHONE NO.
ARCHITECTURAL	JOHN R. URBAN, AIA	/ 01054	(704) 841-1899
ELECTRICAL	NICHOLAS C. VRETTOS	/ 25183	(704) 527-0676
PLUMBING	DINO PAPPAS	/ 22725	(704) 527-0676
MECHANICAL	DINO PAPPAS	/ 22725	(704) 527-0676
STRUCTURAL		/	( )
FIRE ALARM		/	( )
CIVIL	ISAACS GROUP	/ C01037	(704) 527-3440

BUILDING DATA:

OCCUPANCY: ASSEMBLY BUSINESS EDUCATIONAL MERCANTILE HAZARDOUS FACTORY-INDUSTRIAL [RESIDENTIAL] STORAGE

MIXED OCCUPANCY? YES / [NO] SEPARATION: – HR.

CONSTRUCTION TYPE: I-A I-B II-A II-B III-A III-B IV V-A [V-B]
MIXED CONSTRUCTION YES / [NO] TYPE –

SPRINKLERED? YES / [NO] (13 13R 13D –):

FIRE DISTRICT? YES / [NO]

BUILDING HEIGHTS: VARY NUMBER OF STORIES: SEE ELEVATIONS A2.1, A2.2, A2.3.

MEZZANINE? YES / [NO]

HIGH RISE? YES / [NO]

GROSS BUILDING AREA:

TOWN HOME UNITS:

MID UNIT B:

Square Footage	-B-
FIRST FLOOR =	1,064 sq.ft.
SECOND FLOOR =	1,367 sq.ft.
THIRD FLOOR =	847 sq.ft.
TOTAL HEATED =	3,278 sq.ft.
GARAGE =	455 sq.ft.
TOTAL =	3,633 sq.ft.

END UNIT C:

Square Footage	-C-
FIRST FLOOR =	1,308 sq.ft.
SECOND FLOOR =	854 sq.ft.
TOTAL HEATED =	2,162 sq.ft.
GARAGE =	394 sq.ft.
TOTAL =	2,556 sq.ft.

AREA INCREASE? YES / [NO] YES, CODE REFERENCE:
IF YES, CALCULATIONS:

FIRE RESISTANCE RATINGS:

	REQUIRED HOURLY RATING	DETAIL # & SHEET # OF RATED	% WALL OPENING	UL/FM # FOR RATED ASSEMBLIES
PARTY / FIREWALLS	2 HR. Rated Wall	This Sheet	–	UL-U336
EXTERIOR BEARING WALLS:				
NORTH	NC	–	–	N/A
EAST	NC	–	–	N/A
WEST	NC	–	–	N/A
SOUTH	NC	–	–	N/A
EXTERIOR NON-BEARING WALLS:				
NORTH	0	–	–	N/A
EAST	0	–	–	N/A
WEST	0	–	–	N/A
SOUTH	0	–	–	N/A

INTERIOR WALLS:

	REQUIRED HOURLY RATING	DETAIL # & SHEET # OF RATED	UL PENETRATIONS TEST	UL/FM # FOR RATED ASSEMBLIES
BEARING	NC	–	–	N/A
NON-BEARING	NC	–	–	N/A
TENANT SEPARATION	N/A	–	–	N/A
CEILING-FLOORS ASSEMBLY:	NC	–	–	N/A
BEAMS:	0	–	–	N/A
COLUMNS:	0	–	–	N/A
CEILING-ROOF ASSEMBLY:	NC	–	–	N/A
VERTICAL SHAFTS:	0	–	–	N/A
CHASES -P., M., E.:	N/A	–	–	N/A
MIXED OCCUPANCY SEPARATION	N/A	–	–	N/A
TENANT SEPARATION	N/A	–	–	N/A

LIFE SAFETY SYSTEM:

EMERGENCY LIGHTING AND EXIT SIGNS YES / [NO] (N/A)
FIRE ALARM AND SMOKE DETECTION SYSTEMS [YES] / NO (SMOKE DETECTORS)
PANIC HARDWARE YES / [NO] (N/A)

EXIT REQUIREMENTS:

DEAD END LIMIT-MAXIMUM CONDITION – N/A
TRAVEL DISTANCE TO EXIT-MAXIMUM CONDITION – N/A
NUMBER OF EXITS:
TOTAL NUMBER OF DOORS PROVIDED 2 .
TOTAL NUMBER OF DOORS REQUIRED 1 .

GENERAL NOTES

1. Do not scale drawings. If dimensions are in question, obtain clarification from architect.
2. Contractor is to verify all existing conditions before beginning construction.
3. Use moisture resistant G.W.B. in toilets and at all wet areas.
4. Provide blocking as required for millwork, toilet accessories, and misc. hardware.
5. Provide fire treated wood blocking when required by code.
6. General Contractor shall install all work according to local, state, and federal codes.
7. General Contractor shall verify all utility locations before beginning construction.

STRUCTURAL DESIGN:

Design Loads:

Importance Factors:
Wind (Iw) 1.0
Snow (Is) 1.0
Seismic (Ie) 1.0

Live Loads:
Roof 20 psf
Mezzanine N/A psf
Floor 40 psf

Snow Load: 10 psf

Wind Load:
Basic Wind Speed 90 mph (ASCE-7-98)
Exposure Category B

		UNIT A	UNIT B	UNIT C
Wind Base Shears (for MWFRS)	Vx=	7.2	8.5	6.0
	Vy=	7.2	8.5	6.0

Seismic Design Category A:
Compliance with Section 1616.4 only? [X] No [ ] Yes

Seismic Design Category B,C&D:
Provide the following Seismic Design Parameters:
Seismic Use Group I
Spectral Response Acceleration Sms .582 %g Sm1 .330 %g
Site Classification D
Basic Structural System (check one)
X Bearing Wall
Building Frame
Moment Frame
Dual w/Special Moment Frame
Dual w/Intermediate R/C or Special Steel
Inverted Pendulum
Seismic Base Shear Vx= Vy= UNIT A 4.6
Analysis Procedure Simplified X Equivalent Lateral Force
Architectural, Mechanical, Components anchored?
Lateral Design Control: Earthquake Wind X
Soil Bearing Capacities:
Field Test (provide copy of test report)
Presumptive Bearing Capacity 2000
Pile size, type and capacity

THERMAL ENVELOPE: – B –

METHOD OF COMPLIANCE: CHPT. 39

[Prescriptive] Performance Energy Cost Budget

ROOF/CEILING ASSEMBLY (each assembly)
Description of assembly wood truss w/ 1/2" O.S.B. and shingle roof w/ r-30 batt
U- value of total assembly .0318
R- value of insulation 30
Skylights in each assembly n/a
U- value of skylight n/a
total square footage of skylights in each assembly n/a

EXTERIOR WALLS (each assembly)
Description of assembly Siding over wood framing
U- value of total assembly .084
R- value of insulation 13
Openings (windows or doors w/ glazing) vinyl windows R-1.89
U- value of assembly .54
shading coefficient –
projection factor –
low e required, if applicable n/a
Door R- values min. 1.88 unglazed 1.78 glazed
Ceiling/Floor assemblies common to separate dwelling units R-13

WALLS ADJACENT TO UNCONDITIONED SPACE (each assembly)
Description of assembly n/a
U- value of total assembly n/a
R- value of insulation n/a
Openings (windows or doors w/ glazing) –
U- value of assembly –
low e required, if applicable –
Door R- values –

WALLS BELOW GRADE (each assembly)
Description of assembly n/a
U- value of total assembly –
R- value of insulation –

FLOORS OVER UNCONDITIONED SPACE (each assembly)
Description of assembly n/a
U- value of total assembly n/a
R- value of insulation n/a

FLOORS SLAB ON GRADE
Description of assembly 4" slab on grade
U- value of total assembly .172
R- value of insulation R-0 per zone 7 Table 502-2000 IEC
Horizontal/vertical requirement n/a
Slab heated n/a

THERMAL ENVELOPE: – C –

METHOD OF COMPLIANCE: CHPT. 39

[Prescriptive] Performance Energy Cost Budget

ROOF/CEILING ASSEMBLY (each assembly)
Description of assembly wood truss w/ 1/2" O.S.B. and shingle roof w/ r-30 batt
U- value of total assembly .0318
R- value of insulation 30
Skylights in each assembly n/a
U- value of skylight n/a
total square footage of skylights in each assembly n/a

EXTERIOR WALLS (each assembly)
Description of assembly Siding over wood framing
U- value of total assembly .084
R- value of insulation 13
Openings (windows or doors w/ glazing) vinyl windows R-1.89
U- value of assembly .54
shading coefficient –
projection factor –
low e required, if applicable n/a
Door R- values min. 1.88 unglazed 1.78 glazed
Ceiling/Floor assemblies common to separate dwelling units R-13

WALLS ADJACENT TO UNCONDITIONED SPACE (each assembly)
Description of assembly n/a
U- value of total assembly n/a
R- value of insulation n/a
Openings (windows or doors w/ glazing) –
U- value of assembly –
low e required, if applicable –
Door R- values –

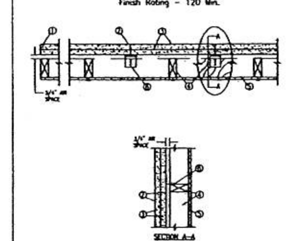
WALLS BELOW GRADE (each assembly)
Description of assembly n/a
U- value of total assembly –
R- value of insulation –

FLOORS OVER UNCONDITIONED SPACE (each assembly)
Description of assembly n/a
U- value of total assembly n/a
R- value of insulation n/a

FLOORS SLAB ON GRADE
Description of assembly 4" slab on grade
U- value of total assembly .172
R- value of insulation R-0 per zone 7 Table 502-2000 IEC
Horizontal/vertical requirement n/a
Slab heated n/a

DESIGN No. U336

Exposed to fire from separation Wall side only
Non-Bearing Wall Rating – 2 HR.
Finish Rating – 120 Min.



SEPARATION WALL: (Max. Height – 44 ft)

1. Floor, Intermediate or Top Wall– 2 in. wide channel shaped with 1 in. long legs formed from No. 25 MSG galv steel, secured with suitable fasteners spaced 24 in. O.C.
2. Metal Studs– Steel members formed from No. 25 MSG galv steel having "H"-shaped flanged spaced 24 in. OC; overall depth 2 in. and flange width 1-3/8 in.
3. Wallboard, Gypsum*– Two layers of 1 in. thick gypsum wallboard liner panels, supplied in nom. 24 in. widths. Vertical edges of panels friction fitted into "H"-shaped studs.

UNITED STATES GYPSUM CO. – Type SLX

PROTECTION WALL: (Bearing or Non-Bearing Wall)

4. Wood Studs– Nom 2 by 4 in. max spacing 24 in OC. Studs cross braced at mid-height where necessary for clip attachment. Min 3/4 in. separation between wood framing and fire separation wall.
5. Wallboard, Gypsum– Classified or Unclassified – Min 1/2 in. thick, 4 ft wide, applied either horizontally or vertically. Wallboard attached to studs with 1-1/4 in. long steel drywall nails spaced 8 in. OC. Vertical joints located over studs. (Optional) Joints covered with paper tape and joint compound. Nail heads covered with joint compound.
6. Attachment Clips– Aluminum angle, 0.063 in. thick, 2 in. wide with 2 in. and 2-1/4 in. legs. Clips secured with Type S screws 3/8 in. long to "H" studs and with Type W screws 1-1/4 in. long to wood framing through holes provided in clip.

6A. Clip placement (Item 6) for separation walls up to 23 ft high. Space clips a max of 10 ft OC vertically between wood framing and "H" studs.

6B. Clip placement (Item 6) for separation walls up to 44 ft high. Space clips as described in Item 6A for upper 24 ft. Remaining wall area below required clips spaced a max of 5 ft OC vertically between wood framing and "H" studs.

*Bearing the UL Classification Marking

UL LISTINGS - U336

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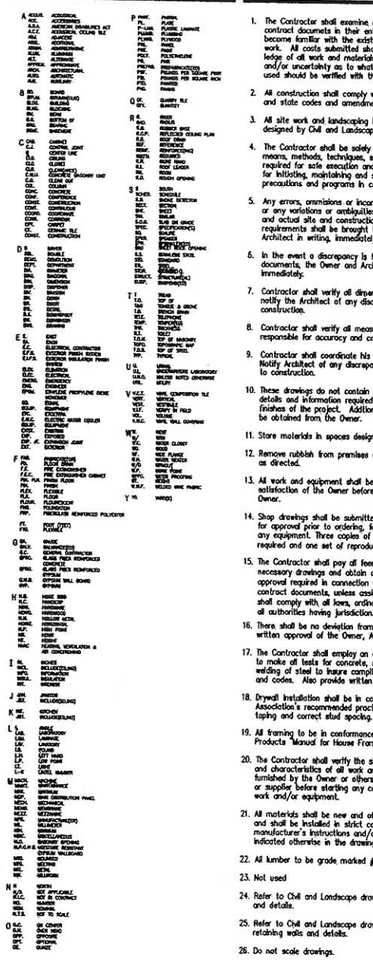
LAKE SHORE TOWN HOMES
TEGA CAY, SC

STATE OF SOUTH CAROLINA
JOHN R. URBAN
Matthews, NC
5409
REGISTERED ARCHITECT

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

CS.2

ABBREVIATIONS



GENERAL NOTES

1. The Contractor shall examine and become familiar with all contract documents in their entirety. Survey the project and become familiar with the existing conditions and scope of work. All costs submitted shall be based on thorough knowledge of all work and materials required. Any discrepancy and/or uncertainty as to what material or product is to be used should be verified with the Owner.
2. All construction shall comply with all applicable federal, local, and state codes and amendments
3. All site work and landscaping is to be established and designed by Civil and Landscape Architect. (N.I.C.)
4. The Contractor shall be solely responsible for construction means, methods, techniques, sequences, and procedures required for safe execution and completion of work, and for initiating, maintaining and supervising all safety precautions and programs in connection with the work.
5. Any errors, ommisions or inconsistencies on these drawings or any variations or ambiquities between these drawings and actual site and construction conditions and/or requirements shall be brought to the attention of the Architect in writing, immediately.
6. In the event a discrepancy is found in the contract documents, the Owner and Architect shall be notified immediately.
7. Contractor shall verify all dimensions in the field and notify the Architect of any discrepancies prior to construction.
8. Contractor shall verify all measurements at site and be responsible for accuracy and correctness of same.
9. Contractor shall coordinate his work with all other trades. Notify Architect of any discrepancies prior to construction.
10. These drawings do not contain complete specifications, details and information required for the interior finishes of the project. Additional information shall be obtained from the Owner.
11. Store materials in spaces designated by Owner.
12. Remove rubbish from premises as often as necessary or as directed.
13. All work and equipment shall be cleaned to the satisfaction of the Owner before turning same over to Owner.
14. Shop drawings shall be submitted to the Architect and Owner for approval prior to ordering, fabrication and installation for any equipment. Three copies of each submittal are required and one set of reproducibles.
15. The Contractor shall pay all fees, give all notices, file all necessary drawings and obtain all permits and certificates or approval required in connection with all work under these contract documents, unless assigned to others. He or she shall comply with all laws, ordinances, rules and regulations of all authorities having jurisdiction.
16. There shall be no deviation from specifications without the written approval of the Owner, Architect and/or Engineer.
17. The Contractor shall employ an approved testing laboratory to make all tests for concrete, soil compaction, and welding of steel to insure compliance with plans, standards and codes. Also provide written results to Architect for their review.
18. Drywall installation shall be in conformance with the Gypsum Association's recommended practices for thickness, nailing, taping and correct stud spacing.
19. All framing to be in conformance with the National Forest Products "Manual for House Framing."
20. The Contractor shall verify the size, location, openings and characteristics of all work and equipment to be furnished by the Owner or others with the manufacturer or supplier before starting any construction related to said work and/or equipment.
21. All materials shall be new and of domestic manufacture and shall be installed in strict conformance with manufacturer's instructions and/or recommendations unless indicated otherwise in the drawings and specifications.
22. All lumber to be grade marked #2 or better.
23. Not used
24. Refer to Civil and Landscape drawings for location of sidewalks and details.
25. Refer to Civil and Landscape drawings for location of fences, retaining walls and details.
26. Do not scale drawings.
27. Control joint minimum spacing of 20'-0" O.C. each way or as recommended by A.C.I.
28. Refer to Civil drawings for dimensional control plan and
29. Refer to Civil drawings for fire hydrant locations.
30. Refer to Civil and MEP and Landscape drawings for transformer locations. (To be verified with local utility service.)
31. Refer to Civil drawings for curb cuts.
32. Mechanical Contractor to verify with Architect for any chase area note shown on drawings. All shop drawings to be submitted for approval prior to ordering any equipment.
33. O.S.B. is an acceptable substitute for plywood.
34. All existing work or landscaping not shown to be altered or removed shall be protected from damage during construction. The contractor shall bear the total expense for and shall repair, to existing condition, any damage to existing construction, equipment or improvements not indicated in the drawings or specifications to receive alterations, additions or removal.
35. The Contractor shall bear the total expense for and shall repair to existing condition, any damage to existing underground utilities, piping, conduit or equipment.
36. Specified products have been used in preparing the contract documents to establish minimum qualities which substitutions of equality rests with the contractor. Adequate supporting information must accompany all substitution submittals and must be submitted to the Architect within 30 days after contract award to receive consideration.
37. The Contractor to provide Dry Chemical ABC Fire Extinguisher, 5 lb. min. capacity, in each dwelling unit. Location to be determined by Fire Department and/or Owner.
38. The Contractor must provide all required ratings for fire-resistive tenant separation walls, floor/ceiling assemblies, in accordance with the latest edition of the governing code and local codes.
39. Static Coefficient of Friction (SCOF) shall be a minimum of 0.8 for all ramps and all accessible routes (sidewalks) 0.6 to avoid slippery footing.
40. The Contractor shall verify all rough openings.
41. Contractor to provide mock-up panels with all exterior materials, windows, roofing and paint colors shown. There shall be two different color panels for each unit facade.

CONSTRUCTION NOTES

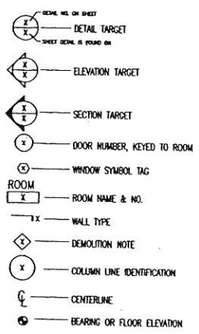
1. All stud walls are dimensioned 3 1/2" (actual) U.N.O.
2. The unit separation is dimensioned 8" (3 1/2" + 1" air space + 3 1/2") frame to frame unless otherwise noted.
3. Unit/Unit wall assemblies are rated at STC 54 (est.). Floor/Ceiling assemblies are rated at STC 55-58 (est.) Walls within units are rated at STC 34 (est). or as required by local code.
4. Interior stud walls shall be framed with 2x4 studs unless noted otherwise on unit plans.
5. Stud spacing shall be as follows: Refer to Structural Framing plans for all stud sizing and spacing or as code requires.
6. Attic access panels to be not less than 22" x 30" as located on the unit plans and roof plans and rated per code.
7. All gypsum board assemblies to achieve fire resistance ratings indicated on drawings. ASTM C 36l
8. Roofing shall be Class-A (minimum).
9. Draft stops at floor ceiling assemblies to be in line with walls separating units. Attic draftstops to be in line with walls separating units or as shown on roof plans.
10. All sills in contact with concrete to be be pressure treated and have a continuous sill sealer on entire perimeter of building.
11. All handicapped ramps shall be broom finished perpendicular to slope. Contractor must provide 0.8 SCOF on all ramps. Slope ramps at 1:12 (max.) Refer to Landscape and Civil drawings for details.
12. Cabinet supplier to field measure area of work after rough framing, to assure an exact fit. Notify Architect of any discrepancies.
13. Water-resistant 1/2" or 5/8" moisture resistant gypsum board or cementious backer board shall be used in both tub and shower compartments, unless noted otherwise. All wet walls shall have water resistant gyp. bd. per code.
14. If floor finish is not specified, all flooring in finished areas shall be ceramic tile, carpet or resilient tile. Verify finish with Owner.
15. Maximum flame spread rating on all interior finish materials shall not exceed 200.
16. All exposed materials for balconies, soffits, overhangs, etc. to be approved exterior grade and per code.
17. Provide splashblocks at downspouts, if not connected to storm system.
18. Not Used
19. Framing @ windows and doors shall be adequate to minimize movement and lessen cracking of exterior materials including stucco. (Double studs required at all locations).
20. Any and all precautions over and above any shown on plans shall be taken by Contractor to minimize exterior materials cracking.
21. Insulate all exterior walls w/kraft faced fiberglass insulations staple in place. R value as shown on details. Friction fit not acceptable.
22. Corrosion resistant flashing is required at the head, sill, and jambs of all windows, roof openings, and the intersection of roof and frame walls. Sealant to be used at top and sides to guarantee leak-proof construction.
23. Add sealant to all exterior joints around windows and door frames, between wall panels, and to all penetrations or utilities through walls and roofs. Rat. to local codes for requirements.
24. Provide 6 mil vapor barrier at head, jamb and sill of all doors and windows.
25. Wind brace walls per structural drawings or as required by code.
26. Wrap all exterior building corners with black poly behind sheathing. Extend black poly back 18" each direction and lap upper sheets over lower sheets 4" minimum.
27. Smoke detectors are required and shall conform to local governmental or national requirements including number, location, etc.
28. In all buildings with attached garages, each dwelling unit shall have at least one carbon monoxide detector.
29. All patios and porches to be sloped min. 1/8" per 1'-0" in direction indicated on foundation plans.
30. NOT USED.
31. Refer to unit plans for location of 2 x 6 walls. Refer to structural drawings for unusual or special framing conditions.
32. Minimum gutter size to be 5" with 3" x 4" downspout leaders off gutters.
33. Install blocking in bath and kitchen wall cavities where needed to support cabinets. Provide adequate wood blocking between studs for attachment of stair handrails, balcony guardrails, etc. Minimum size blocking to be 2x10.
34. Roof conductors must go into ground.
35. General Contractor to verify pound force on p.t. lumber railing to determine an adequate # of support post. No middle support preferred.
36. Flashing shall be installed around all window and roof openings and at the intersection of chimneys, wood construction, and frame walls. Caulk and make weather-tight.
37. All toilet accessories are to have proper blocking required for installation.
38. 3 stud minimum at all exterior corners.
39. Grade transition should be shown to resolve sidewalk compliance with ANSI requirement for 6" to finish grade from bottom of siding.
40. Not used
41. Insulate all tub, water heater, and washer walls on exterior and common walls.
42. All dryer vent hookup to be at standard height. All exhaust hoods shall be mounted on ext. walls at constant heights.
43. No construction traffic allowed in areas where apartments are occupied.
44. Provide solid blocking and/or double joists under all perpendicular and parallel partitions and at fireplace hearth and stair openings.
45. All work and equipment to be fully guaranteed for one (1) year from date of final payment and acceptance.
46. It shall be the Contractor;s responsibility to personally inspect the work in progress, and as a whole, assuring himself that the work on any or all or part of the project is ready for periodic and/or final review, before calling upon the Architect and Owner to make their site/project observation visit of the work.
47. All units with direct access from ground floor shall have door bells installed.

FRAMING SCHEDULE	
FIRST FLOOR:	2x6 STUDS @ 12" O.C.
ALL OTHER FLRs:	2x4 STUDS @ 16" O.C.

HEADERS @ OPENINGS
@ TRUSS-LOADED BEARING WALLS

ROUGH OPENING SIZE	HEADER SIZE	JACK STUD INFO
0'-0"- 6'-0"	(2) 2X10s W/ 1/2" O.S.B. SPACER	1- 2x4 JACK 1- 2x4 KING 1- 2x4 KING U.N.O
6'-0" +	(2) 1-3/4" X 9 1/4"	2- 2x4 JACK 2- 2x4 KING U.N.O

SYMBOL LEGEND



ABBREVIATION SYMBOLS

&	AND	'	FEET OR MINUTES
∠	ANGLE	"	INCH OR SECONDS
@	AT	℄	PLATE
°	DEGREE	±	PLUS OR MINUS
	DRAWING CUT LINE	#	POUND OR NUMBER
=	EQUAL	:	RATIO
		~	ROUND
		□	SQUARE OR SQ. FOOT

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5 JUNE 2006
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PERMIT & CONSTRUCTION
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GENERAL NOTES

- The latest edition, document A-201 of the A.I.A. "General Conditions of the Contract for the Condition of Buildings" is a part of these specifications. All work, labor and materials shall comply to all local, county and state building, electrical, health and sanitary codes.
- Contractor shall visit site to familiarize himself with scope of work.
- Any damage to adjacent properties shall be paid for at contractor's expense.
- All equipment and workmanship must be skilled and performed by the workmen in a thorough, faithful, and workmanlike manner to the best of their ability, in conformity to the drawings and specifications.
- The owner shall render inspection of the project. The architect shall not have supervision, control or change of the work.
- Verify all utility locations in area before doing any digging.
- All dimensions should be read and calculated. Do not scale drawings. If dimensions are in question, obtain clarifications from architect.

Every attempt has been made in the preparation of these drawings to avoid mistakes. The designer cannot be held liable for any errors or omissions in these drawings.

DESIGN LOADS

- Design loads are all dead loads plus:
  - Main floor live loads (kitchen level)..... 40 PSF
  - All other floors..... 40 PSF
  - Balconies..... 60 PSF
  - Decks..... 50 PSF
  - Suspended Garages..... 50 PSF
    or 2000 Pound Point Load at any Location
  - Attic floor live loading with the following:
    - Areas accessible by permanent stairs..... 30 PSF
    - With Storage..... 20 PSF
    - Without Storage..... 10 PSF
  - Roof live load..... 20 PSF
  - Wind load..... 90 MPH
  - Conforms with Seismic Design Criteria for Zone D-2
  - Snow load..... 20 PSF
- All designs are in accordance with the 2000 International Building Code.

1. MASONRY

1.1 All masonry blocks shall conform to ASTM C-90.
1.2 All brick shall conform to ASTM C-216 FM = 1500 PSI.
1.3 Mortar shall be type "M" conforming to ASTM C-270.
1.4 Top courses of C.M.U. foundation walls shall be filled or solid including the courses under any steel beam or corbelled C.M.U.
1.5 Corrugated brick ties shall not be less than No. 22 gauge by ⅞" and be installed not more than 24" o/c. horizontally and shall support not more than 3.25 square feet of wall area.
Weep holes shall be located @ 48" o/c (N.C.) and 32" o/c (I.B.C.) and not less than 3/16" in diameter. Weepholes shall be located immediately above the flashing.
1.6 Flashing:
6 mil poly or other corrosion-resistive material shall be located beneath the first course of masonry above finished ground level above foundation wall or slab and at other points of support, including structural floors, shelf angles and lintels. Top of base flashing shall be installed with a minimum 2" lap behind building paper or water repellent sheathing.
1.7 Anchorage:
Masonry veneer shall be anchored to the supporting wall with corrosion-resistant metal ties. Where veneer is anchored to wood backings through the use of corrugated sheet metal ties, the distance separating the veneer from the sheathing material shall be a maximum of 1 inch.

2. FOOTINGS AND FOUNDATIONS

2.1 Soil bearing capacity assumed as 2000 PSF unless noted otherwise or as determined by standard penetrometer test.
2.2 All continuous wall footings for one or two-story houses are 8"x16" and for three-story houses are 8"x20". Reinforcing in footings should be two (2) #4 bars if not noted on the plans. Reinforcement not required by Code, unless footings are on disturbed soil or compacted fill.
All continuous wall footings for one or two-story 4" brick veneer over wood framing are 8"x20" and for three-story 4" brick veneer over wood framing are 8"x24".
2.3 All interior piers are 8"x16" CMU up to a maximum height of 32". All piers over 32" high must be filled with Type S mortar. Maximum height for 8"x16" filled pier is 6'-4". Piers larger than 8"x16" are noted on the plans. Pier cap blocks should be 8" of solid masonry.
2.4 Footings for 8"x16" piers are 20"x30"x10" unless noted otherwise. Reinforcing to be as noted on plans.
2.5 Concrete shall have a compressive strength of 3000 PSI in 28 days unless noted otherwise. No concrete shall be poured in temperatures below 40° Fahrenheit unless heat to be provided during curing for two days. The bottom of all footings must be 12" below grade.
2.6 All rebar splices shall be a minimum of 2'-0" unless otherwise noted.
2.7 Any special foundations for structures shall be designed by a Licensed Professional Engineer upon receiving soil capacity specifications for all soil considered to affect the structure.
2.8 Chimney footing sizes are shown on the structural design drawings. Masonry chimney footings must be a minimum of 12" thick with 12" projection on all sides.
2.9 Foundation walls back-filled with soil and supporting structural framing shall be constructed up to 4' max. height. Use bituminous damproofing or membrane waterproofing on exterior.
2.10 Special retaining wall designs to be designed by a state licensed engineer.

NOTE: ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, AND BEAM SUPPORTS – WHETHER WOOD OR STEEL – CANNOT BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO OR BETTER THAN THE SPECIFIED STUDS OR COLUMN PROVIDED FOR POINT LOAD SUPPORT MUST BE CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION.

3. FRAMING CONSTRUCTION - OTHER THAN ROOF

3.1 Crawl space girders and band boards as noted on plans. Maximum clear span to be 4'-8" (6'-0" o/c spacing of piers) unless noted otherwise.
Framed floors: Crawl space girders are to be (3)-2x10s and crawl band shall be (2)-2x10s.
Trussed floors: To be (1)-1"x_" truss height. Rim board when joists are perpendicular and _" truss height. LVL rim board when joists are parallel unless noted otherwise.
- On all open web floor trusses over a 10' span, a minimum single line of 2x4s shall be nailed to diagonal members or vertical members in the approximate mid-span as a load distribution member.

3.2 To avoid most cracking in finished hardwood floors over any girders, use the following procedure:
A. Nailing Patterns
i. All floor joists must be toe-nailed to their support girders with a minimum of 3-8d nails at each end from each side. Larger nails will split and render the toe-nail ineffective. No end-nailing through the girder or band is permitted except for temporary construction purposes.
ii. If dropped girders are used, end-lap all joists 12" minimum and side-nail each with a minimum of 3-16d nails at each end of joist. Ledger strips should be nailed with 3-16d nails at each joist end, with nails spaced 3" apart.
iii. Nail multiple-member built-up girders with three rows of 16d nails staggered at 32" o/c, 2" down from the top, 2" up from the bottom, and at mid-depth. Use 3-16d nails at each end of each piece in the joints through the members making up the multiple-girder. If the girder nailing pattern is omitted, then the shrinkage will accumulate over the girders and an objectionable crack will develop in the finished hardwood floor over the girder line.
B. At all girders where the joists change direction, install bridging at 6" o/c for a minimum of six joist spacings beyond any joist direction change. This will insure shrinkage distribution over the floor and not let it accumulate at the girder.
C. There must be wood blocking through-bolted to the steel beam with joist toe-nailed and attached to the beam with metal hangers under any hardwood floors that pass over a steel beam supporting floor joists.

3.3 All crawl space framing lumber must be Southern Yellow Pine. All remaining floors may be Spruce Pine fir #2 unless noted otherwise.
3.4 Steel beams must have (5)-2x4 jack studs under each end support unless noted otherwise on the structural plans. All studs must be nailed together with two (2) vertical rows of 16d nails at 8" o/c, unless noted otherwise.
3.5 LVL beams must have (3)-2x4 jack studs under each end support unless noted otherwise on the structural plans. All studs must be nailed together with two (2) vertical rows of 16d nails at 8" o/c, unless noted otherwise.
3.6 Masonry lintels:
A. For spans up to 6 ft: Use 3½"x3½"x¼" steel angles.
B. For spans from 6 ft to 10 ft: Use 5"x3½"x5/16" steel angles.
C. For spans from 10 ft to 18 ft: Use a pair of 9 gauge wires in each of the first 3 courses of brick on a 5"x3½"x¼" steel angle. Lap all 9 gauge wire splices 12" minimum and extend wires 12" minimum into jambs. Temporarily support steel angle before laying masonry. Shoring may be removed five days following the installation of masonry.
D. When structural steel beams with bottom plates are used to support masonry, the bottom plate must extend the full length of the steel beam. This provides support to the ends of the plate by bearing on the adjacent masonry jambs. The beam should be temporarily shored prior to laying the masonry. The shoring may be removed five days after laying the masonry.

3.7 All masonry or stone veneer over lower roofs must have a structural steel angle, minimum 4"x3½"x¼", lag bolted to the adjacent wall studs to prevent sliding of the veneer. A minimum of a double rafter must be installed below masonry climbs. Thin-set veneer attachments provided by the contractor may supercede this specification, see IBC 703.7 for detail.
3.8 All rafter braces must have 2 studs from the wall top plate through all floors solid to the foundation or supporting beam below. No braces shall be attached to the top wall plate without studs directly under them.
3.9 Where non-bearing parallel partitions fall between floor joists, 2x4 ladders @ 16" o/c must be placed perpendicular to the joists to support the plywood decking or double joist installed directly below wall.
3.10 All wood I-joists must be braced in accordance with the manufacturer's directions plus any details shown on the plans. Load bearing partitions, jacks, beams and column supports must be solidly blocked through the floor as the joists and plywood may not be able to carry the concentrated point loads. All point loads must be carried to the foundations with blocking and/or beams.

(NOTE: All beams and double joists, ect., have been shown for a load bearing purpose. Placement of the load carrying members shown in the plans in locations other than under the structural element they are intended to carry is the responsibility of the contractor. Exact beam locations are not to be scaled from the framing plans.)

3.11 All two-story open rooms with full height openings must be braced to resist pressure resulting from 90 MPH design fastest-mile wind speed or as prescribed for specified wind zones per ASCE 7-98. Any special wall reinforcing shall be shown on the plans provided. Two-story open rooms must be balloon-framed with 2x6s @ 16" o/c as a minimum (no exceptions.)
3.12 Stud walls to be listed below unless otherwise noted on the structural plans:
A. Interior One & Two Story walls (with intermediate floors)
i. Load bearing..... 2x4 @ 16" o/c
ii. Non-load bearing..... 2x4 @ 24" o/c allowable, 16" o/c preferred
B. Interior Three Story Walls
i. Load bearing (2nd & 3rd Floor)..... 2x4 @ 16" o/c
ii. Load bearing (1st Floor)..... 2x4 @ 12" o/c
or 2x6 @ 16" o/c
iii. Non-load bearing..... 2x4 @ 16" o/c
C. Basement Walls
i. Load bearing..... 2x4 @ 12" o/c
ii. Non-load bearing..... 2x4 @ 16" o/c
D. Exterior Walls
Exterior walls for three stories shall be 2x6 @ 16" o/c with ½"x4'x8' OSB sheathing or C-DX plywood over entire exterior.
3.13 Headers shall be as shown unless otherwise noted on the plans:
A. Interior
i. Spans up to 2'-6"..... 2-2x6s
ii. Spans 2'-6" to 3'-6"..... 2-2x8s
iii. Spans 3'-6" to 6'-6"..... 2-2x10s
iv. Spans 6'-6" or more..... See Plan
B. Exterior
i. Spans up to 2'-0"..... 2-2x6s
ii. Spans 2'-0" to 3'-0"..... 2-2x8s
ii. Spans 3'-0" to 5'-0"..... 2-2x10s
iv. Spans 5'-0" to 6'-8"..... 2-1¾"x9¼" LVLs or 2-2x12s
v. Spans 6'-8" or more..... See plan
C. Garage Doors (at truss loaded bearing walls)
i. 8' Garage Door.....(2)-1¾"x11¼" LVLs.....3 Jacks
2 Kings Each side, Full height
ii. 16' Garage Door.....(2)-1¾"x18" LVLs.....5 Jacks
2 Kings Each side, Full height

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REGISTERED ARCHITECT

DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

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3. FRAMING CONSTRUCTION - OTHER THAN ROOF (Continued):

3.14 Jack Studs:
1st Story:
Install a minimum of (3–2x) jack studs under all beams, LVL, etc. (unless noted otherwise)
2nd Story:
Install a minimum of (2–2x) jack studs under all beams, LVL, etc. (unless noted otherwise)

NOTE:
Jack studs on upper level need to have the same number of jack studs on the lower level directly beneath to carry load to foundation.

Jack Stud Requirements-502.5

		Header Width		
		3" (2–2x)	4.5" (3–2x)	6" (4–2x)
Headers Supporting	Header Span (ft.)	Number of Jack Studs Required at Each End of the Header		
Roof and Ceiling	2	1	1	1
	4	1	1	1
	6	2	1	1
	9	2	2	1
	10	3	2	2
Roof, Ceiling and One Floor (Center Bearing)	2	1	1	1
	4	2	1	1
	6	2	2	1
	8	3	2	2
	10	4	3	2
Roof, Ceiling and One Floor (Clear Span)	2	1	1	1
	4	2	2	1
	6	3	2	2
	8	4	3	2
	10	5	3	3
Roof, Ceiling and Two Floors (Center Bearing)	2	1	1	1
	4	2	2	1
	6	3	2	2
	8	4	3	2
	10	5	3	3
Roof, Ceiling and Two Floors (Clear Span)	2	2	1	1
	4	3	2	2
	6	5	3	3
	8	6	4	3
	10	7	5	4

3.15 When ceiling joists are parallel to an exterior wall and rafters bear on the exterior stud wall's top plate, tie the rafters near the top plate to the ceiling joists with 6' long 2x6 runners at 4' o/c across the top of the ceiling joists.
3.16 At all stairs, every stud at each stringer must be nailed to each stringer with a minimum of 2–16d nails.
3.17 Steel pipe columns must be in contact with the supported member and continue solid to the supporting masonry or concrete foundation. No intermediate wood blocking should be used.
3.18 Install extra joists under all parallel partition walls, unless noted otherwise (extra joists may be substituted with 2x4 ladder blocks with Simpson Z4 clips at each end.)
3.19 Provide 1x4 cross bridging at mid point of span or 8'–0" o/c maximum in all floors.
3.20 All exterior corners (inside and outside corners) shall be braced with ½" CDX plywood, nailing schedule shall be 8d commons at 6" o.c at all intermediate studs. (option – approved diagonal corner braces both directions at all corners).
3.21 All columns or solid framing shall extend down thru all levels and terminate at the basement floor and be supported by a thickened slab, grade beam, or footing designed to carry load.
3.22 Provide double 2x6 strongback at mid span, or per truss manufacturer, for ceiling joists with span greater than 10'–0"
3.23 Provide collar ties at upper ⅓ of vertical distance between ridge board and ceiling joists at 4'–0" o/c maximum or per truss manufacturer.
3.24 Hip, valley rafters, and ridge boards shall be one "2x" size larger than rafters, or per truss manufacturer.
3.25 Roof decking shall be ½" OSB minimum and shall be used with clips.
3.26 Where pre–engineered floor and roof trusses are used, truss manufacturer must provide shop drawings which bear the seal of a registered engineer in state in which work is to be performed.
3.27 All framed wall dimensions are based on 2x4 studs unless otherwise noted.

4. FOUNDATION WALLS:

4.1 All full height foundation walls are shown on a detail sheet.
4.2 All masonry or concrete basement wall construction must be inspected by the County Building Official, Architect, or Engineer for compliance with structural specifications.
4.3 Where full–height foundation or basement walls run parallel to floor framing, blocking must be provided between joists at 3'–0" o/c for not less than six joist spacings out from the wall.
4.4 Details of any earth retaining structures not attached to the house structure will be shown on separate details. (These walls may be designed only after grade conditions are known.)

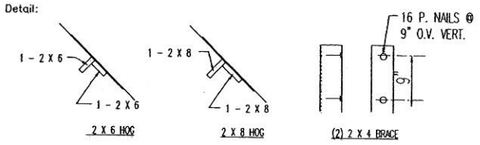
5. ROOF CONSTRUCTION:

5.1 All roof trusses must be built in accordance with truss manufacturers direction.
5.2 Rafters shall be 2x6 SPF @ 16" o/c for standard weight shingles except as noted. They are to be cut into hips, ridges, etc., unless noted as over–built.
5.3 Collar ties shall be 2x6 @ 48" o/c at all ridges unless noted otherwise and located a minimum 3' below the ridge. Collar ties may be closer to ridge if alternate bracing provided. Vaulted ceilings require special collar tie details or structural ridge beam. See plans as required.
5.4 A minimum of three collar ties shall be used at all ridges even if two ties must be put on one set of rafters.
5.5 All hips and ridges are a size larger than the rafters froming into them unless noted otherwise.
5.6 All hogs on ceiling joists or rafters are 8' long (2)–2x6 hog troughs unless noted otherwise. Rafters may be spliced over hogs.
5.7 Gable end framing must be braced parallel to ridges with a minimum of 2x6 diagonal braces @ 6' o/c along the gable wall to the interior ceiling joists. Braces are to bear on (2)–2x6 hogs and to gable wall at approximately mid–height of gable wall. Braces shall be at approximately 45° angle. Other bracing may be used if it meets the Engineer's approval.
5.8 Carry braces to partitions or beams below. Never brace rafter hogs to (2)–2x6 hogs on ceiling joists, unless shown on plans.
5.9 Ceiling joists when erected parallel to rafters must be sistered to rafters and nailed with 3–16d nails at each rafter. If a kneewall is used and ceiling joists cannot touch rafters, then rafters must be braced to the ceiling joists with 2x4 diagonal rafter ties spaced @ 48" o/c. Reverse collar ties may be used behind kneewalls.
5.10 Roof Plan Legend:

A. ⊗ or ◯ Indicates location of roof brace at rafter level.
B. ⊗→ Arrow away from brace point indicates direction of roof brace to partition, beam or other brace point below.
C. ⊗← Arrow into brace point indicates a vertical or almost vertical roof brace to partition, beam or other brace point below.

D. All roof braces are (2)–2x4 "T" nailed with 16d nails @ 9" o/c vertically from top to bottom. All braces longer than 10' must be braced horizontally in two directions at mid–height or be increased to (2)–2x6s.
E. Maximum spacing of roof braces is to be as follows:
i. For (2)–2x6 hog.....6'–0" o/c
ii. For (2)–2x8 hog.....7'–6" o/c

Detail:



6. THERMAL & MOISTURE PROTECTION

6.1 The following specification shall govern with modifications as specified herein: American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Handbook of Fundamentals.
6.2 Install flashing and sheet metal in compliance with "Architectural Sheet Metal Manual" by Smacna.
6.3 Flashing:
Approved corrosion–resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity from penetration of water to the building structural framing components. Aluminum flashing may not be used in contact with cementitious material, except as counter flashing. The flashing shall extend to the surface of the exterior wall finish and shall be installed to prevent water from reentering the exterior wall envelope. Approved corrosion–resistant flashings shall be installed at all of the following locations:
A. At top of all exterior window and door openings in such a manner as to be leakproof, except that self–flashing windows having a continuous lap of not less than 1⅛" (28mm) over the sheathing material around the perimeter of the opening, including corners, do not require additional flashing.
B. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
C. Continuously above all projecting wood trim.
D. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood–fram construction.
E. At wall and roof intersections.
F. At built–in gutters.

6.4 Shingles shall be asphalt–fiberglass composition three–tab unless noted otherwise, conforming to U.L. Class "A" fire resistance, U.L. Wind resistance, ASTM D3462 and ASTM D3018 type 1 with a 20 year (min.) limited mfr. warranty. Shingles shall be installed as per manufacturer's instructions.
6.5 Slopes of 3⅛ inches in 12 inches or greater: asphalt shingle roofs shall have an underlayment of not less than three ply of No. 15 felt, applied as required in Section R–802 and Table No. R–803.4.
6.6 The net free ventilating area shall not be less than 1 to 150 of the area of the space ventilated except that the area may be 1 to 300, provided at least 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. The net free cross ventilation area may not be less than 1 to 300 of the area of the space ventilated when the vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling.

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DRAWN BY: JRU
DATE: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

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6. THERMAL & MOISTURE PROTECTION (Continued):

6.7 The following information describes the conservation package insulation contractors are hereby required to bid and install insulation by this schedule, unless otherwise instructed in writing:

LOCATION	R-VALUE	MATERIAL
CEILING	R-30	BLOWN CELLULOSE INSULATION
CATHEDRAL CEILING	R-30	BLOWN CELLULOSE W/ V.B.
EXTERIOR WALLS 2X4 2X6 DBL 2X4 (N/A)	 R-13 R-19 R-13	 BATT INSULATION OR BLOWN CELLULOSE W/ V.B. TO INSIDE (2) LAYERS
EXT. BSMT./ FDTN. EXPOSED WALL	R-13	FOIL FACED BATT INSULATION
FLOORS @ OVERHANG (N/A)	R-19	BATT INSULATION W/ V.B. TO INSIDE
WALLS ADJ. TO UNFINISHED BSMT.	R-11	BATT INSULATION W/ NO V.B.

6.8 Insulation:
Insulation materials, including facings, such as vapor barriers or breather papers installed within floor-ceiling assemblies, roof-ceiling assemblies, wall assemblies, crawl spaces and attics shall have a flame-spread index not to exceed 25 with an accompanying smoke-developed index not to exceed 450 when tested in accordance with ASTM E 84.

6.9 Exceptions:
When such materials are installed in concealed spaces, the flame-spread and smoke-developed limitation do not apply to the facings, provided that the facing is installed in substantial contact with the unexposed surface of the ceiling, floor or wall finish.

6.10 Moisture Control:
In all framed walls, floors and roof/ceilings comprising elements of the building thermal envelope, a vapor retarder shall be installed on the warm-in-winter side of the insulation.
Exceptions:
1. In construction where moisture of freezing will not damage the materials.
2. Where the framed cavity or space is ventilated to allow moisture to escape.

6.11 Provide and install batt insulation at window shim spaces.

6.12 Fit insulation tight within spaces and tight to and behind mechanical and electrical services within the plane of insulation. Leave no gaps or spaces being sure not to compress glass insulation.

6.13 Provide and install gutters and down spouts as per smacna architectural sheet manual.

6.14 Gutter – continuous 3¾" x 6" wide aluminum with bracket hangers @ 18" o/c. Gutter style to be "Ogee". Down spout – continuous 2¾" x 4¼" (aluminum). Connect down spouts to preformed splash blocks to run to grade.

7. FINISHES

7.1 Provide and install gypsum wall board in accordance with "American Standard Specifications" for the application and finishing of gypsum wallboard, as approved by the American Standards Association, latest edition; applicable parts thereof are hereby made part of the specification except where more stringent requirements are called for in this specification, in local codes, or by the manufacturer of the gypsum wallboard, whose requirements shall be followed.

7.2 Application of paint or other coating shall be in strict accordance with manufacturer's directions. Ready-mixed paint shall not be thinned, except as permitted by the application instructions.

7.3 Exterior trim to receive prime coat prior to being wrapped with aluminum.

7.4 Provide resilient flooring and wall base per owner's schedule and specifications. Install in accordance with manufacturer's printed instructions.

7.5 Provide ceramic tile, marble tile and accessories complying with Tile Council of America Specification A137.1; icolors and patterns to be selected by the owner from standard colors and patterns of the approved manufacturer. Manufacturer to be American Olean for ceramic tile or approved equal.

7.6 Install ceramic tile and marble tile in compliance with pertinent recommendations contained in the Tile Council of America "Handbook or Ceramic Tile Installation" and manufacturer's printed instructions.

7.7 Provide and install moisture-resistant gypsum wall board at shower/tub enclosures at walls per applicable TCA-B312-03, B413, B419. Provide "Firecode" gypsum when called for on drawings.

8. ELECTRICAL

8.1 Contractor shall provide labor and installation for materials, and equipment necessary to install wiring, related fixtures, electric heat elements and control. All work shall comply with the latest edition of national electrical code, state and local codes and ordinaces. Subcontractor shall coordinate work with all other trades. Terminal hookup is required of all fixtures and appliances, motors, fans, and controls.

8.2 Electrical system layouts are generally diagrammatic, location of outlets and equipment is approximate. Exact routing of wiring and locations of outlets shall be governed by structural conditions and obstructions. Wiring for equipment requiring maintenance and inspection shall be readily accessible.

8.3 All electrical equipment, breakers, and time clock controls shall be properly labeled.

8.4 The serving utility will provide and install all primary and secondary service raceways and conductors, including transformer pads and connections to the line side by the service utility, shall be provided by the electrical contractor from each building main disconnect to the exterior building line for continuation by serving utility.

8.5 Provide one electric meter.

8.6 Materials and equipment shall be new and listed by underwriter's laboratories inc. and bear their label wherever standards have been established and their label service is regularly furnished.

8.7 Verify and locate all receptacles prior to installation of drywall.

8.8 All switched outlets shall be one-half hot (unless noted otherwise).

8.9 Provide G.F.I. circuits in the kitchen, bathrooms, garage, exterior locations, and at whirlpool where applicable. Provide trip reset receptacles where noted. Kitchen G.F.I. receptacles shall not be wired in series with other G.F.I. locations.

8.10 Install outlets as per local/ state codes. In general, outlets shall be installed so that no point along the floor line in any wall space is more than 6', measured horizontally, from an outlet in that space. In addition, any isolated wall that is 2'-0" in length or longer with the exception of hallways, bathrooms, and laundry rooms will receive an outlet.

8. ELECTRICAL (Continued):

8.11 All equipment installed outdoors and exposed to weather shall be weather-proof.

8.12 Install receptacles in kitchen and bathrooms above work top unless otherwise noted on plans.

8.13 Provide light fixtures per owner's schedule.

8.14 Smoke detectors and carbon monoxide detectors shall be located in each story of the dwelling unit, including basements and also in the immediate vicinity of the bedrooms.

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LAKE SHORE TOWN HOMES

STATE OF SOUTH CAROLINA
JOHN R. URBAN
Matthews, NC
5409
REGISTERED ARCHITECT

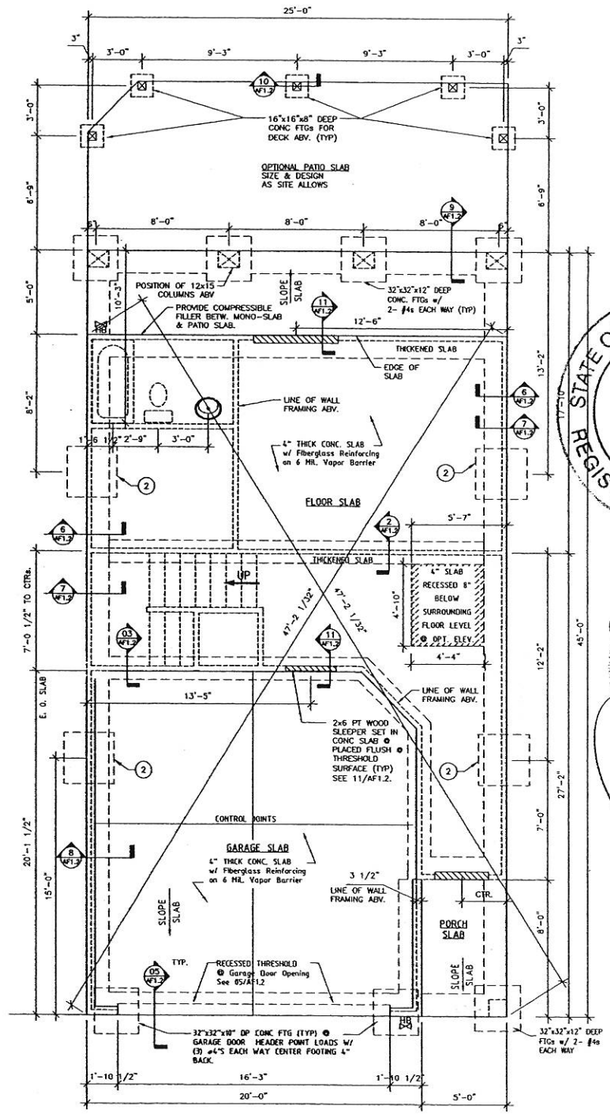
DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

G1.3

STRUCTURAL ELEMENTS	
#	DESCRIPTION:
②	3'-0" x 3'-0" x 1'-0" DEEP FOOTING w/ 4- #4s BOTTOM EACH WAY, 3000 psi NORMAL WEIGHT CONCRETE.
⑤	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.

FOUNDATION NOTES

1. Footings designed for 2,000 psf min. soil bearing capacity. All concrete to be 3,000 psi u.n.o.
2. Plumbing Contractor shall field verify all plumbing locations prior to work.
3. Sill plate at exterior walls shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center. Anchor bolts shall also be located within 12 inches from the ends of each plate section. Bolts shall be at least 1/2 inch in diameter and shall extend a minimum of 7 inches into masonry or concrete. Interior bearing wall sole plates on monolithic slab foundations shall be positively anchored with approved fasteners.
4. Bora-Care termite treatment to be sprayed to interior & exterior framing materials 2'-0" A.F.F. on 1st Floor only.
5. Foundation is designed for trusses.
6. Provide Support for porch and steps to grade as required.
7. 5" footing extension required for brick or stone option.



01 -A- FOUNDATION PLAN

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FOUNDATION PLANS OF UNIT A

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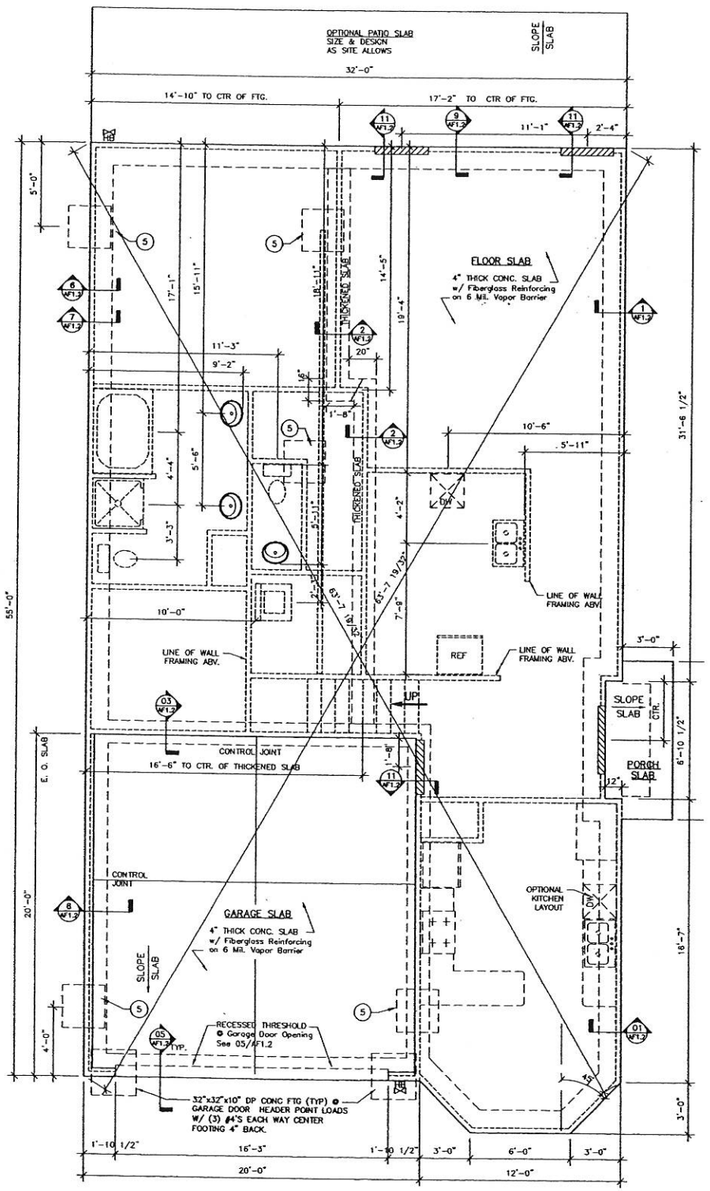
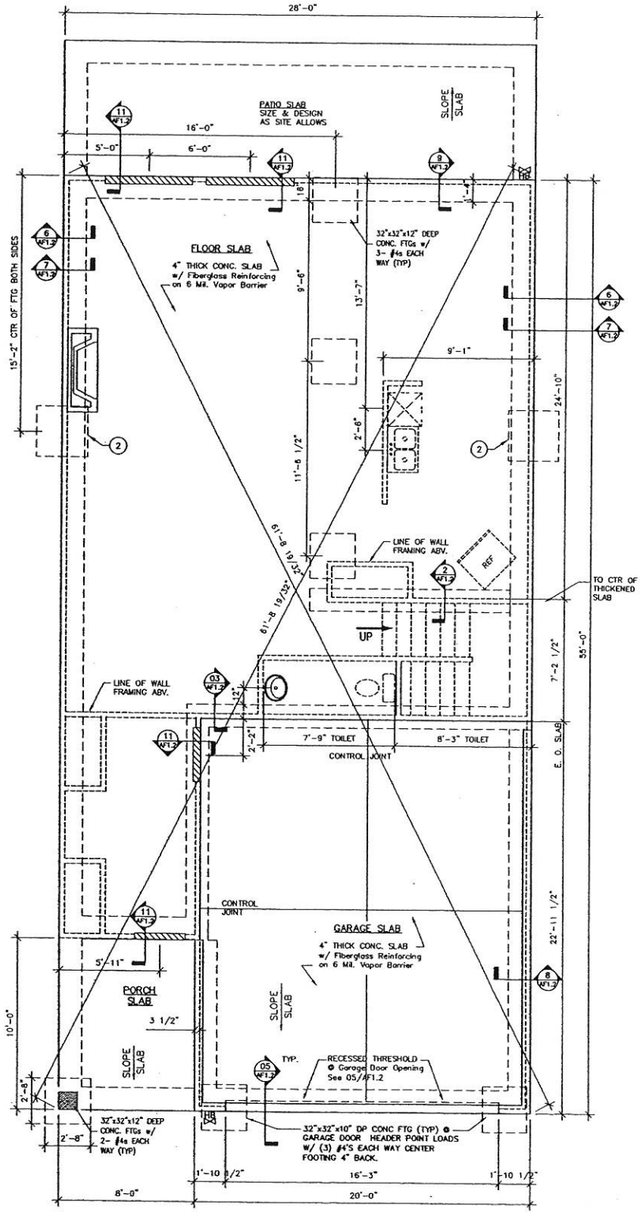
5 JUNE 2006

AF1



03 -C- FOUNDATION PLAN

1/4" = 1'-0"



02 -B- FOUNDATION PLAN

FOUNDATION NOTES

1. Footings designed for 2,000 psf min. soil bearing capacity. All concrete to be 3,000 psi u.n.o.
2. Plumbing Contractor shall field verify all plumbing locations prior to work.
3. Sill plate at exterior walls shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center. Anchor bolts shall also be located within 12 inches from the ends of each plate section. Bolts shall be at least 1/2 inch in diameter and shall extend a minimum of 7 inches into masonry or concrete. Interior bearing wall sole plates on monolithic slab foundations shall be positively anchored with approved fasteners.
4. Bora-Care termite treatment to be sprayed to interior & exterior framing materials 2'-0" A.F.F. on 1st Floor only.
5. Foundation is designed for trusses.
6. Provide Support for porch and steps to grade as required.
7. 5" Footing extension required for brick or stone option.

STRUCTURAL ELEMENTS	
#	DESCRIPTION:
②	3'-0" x 3'-0" x 1'-0" DEEP FOOTING w/ 4- #4s BOTTOM EACH WAY, 3000 psi NORMAL WEIGHT CONCRETE.
③	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.

01 NOT USED

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FOUNDATION PLANS for UNITS B & C

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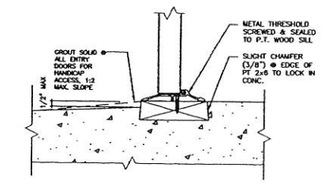
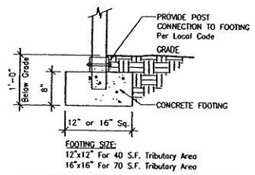
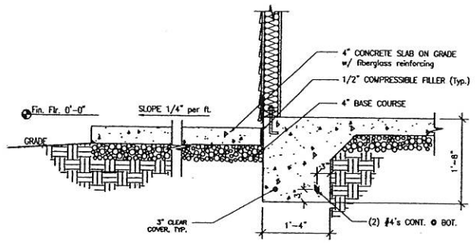
AF1.1



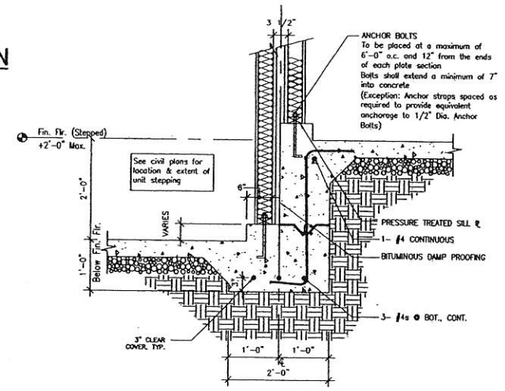
11 EXTERIOR DOOR SILL
NTS



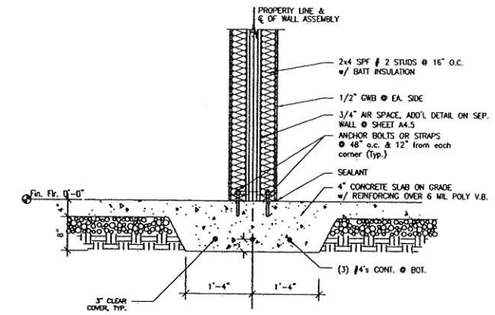
10 DECK FOOTING SECTION
3/4" = 1'-0"



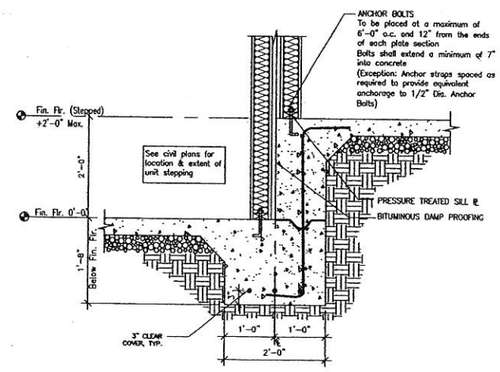
09 WALL SECTION @ Rear w/ Patio
3/4" = 1'-0"



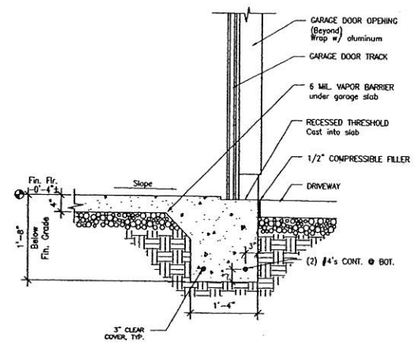
08 GARAGES @ Stepped Separation Walls
3/4" = 1'-0"



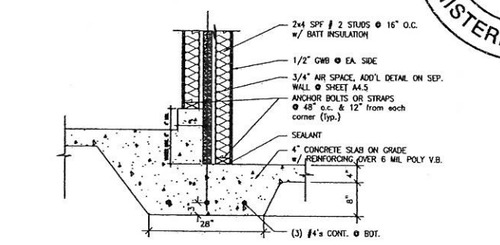
07 THRESHOLD SLAB @ Unit Separation Walls
3/4" = 1'-0"



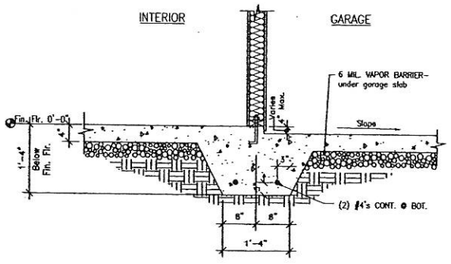
06 FOUNDATION @ Stepped Separation Walls
3/4" = 1'-0"



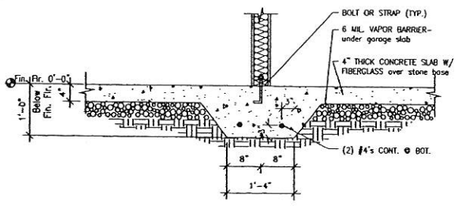
05 WALL SECTION @ Garage Opening
3/4" = 1'-0"



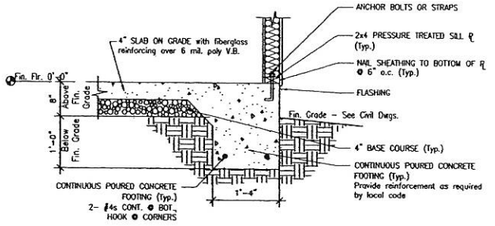
04 SEPARATION WALL FOOTING- @ Garage
3/4" = 1'-0"



03 WALL SECTION @ Garage Perimeter
3/4" = 1'-0"



02 THRESHOLD SLAB @ Interior Bearing Walls



01 WALL SECTION @ Exterior

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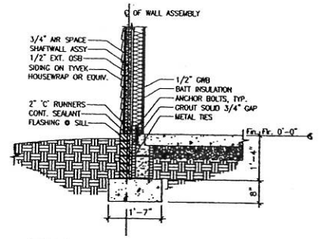
AF1.2

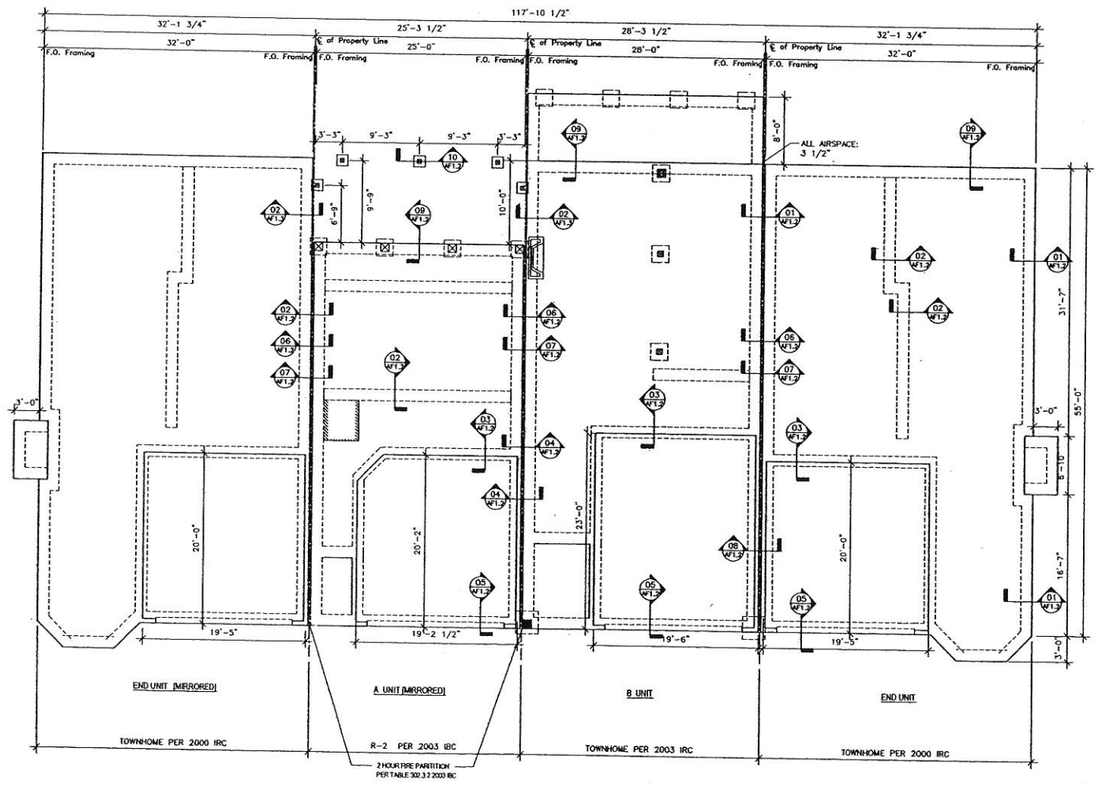


02 SEPARATION WALL @ EXTERIOR

1/2" = 1'-0" (1/16" = 1'-0" @ 11x17)

NOTE :

1. WALL SECTIONS ARE SIMILAR @ ALL PLANS SEE SHEET A4.1 FOR WALL SECTIONS.
2. FOUNDATION DETAILS IDENTIFIED ON SHEET AF.1, DETAILS SHOWN ON SHEET AF.2
3. APPLIANCE LOCATIONS DIMENSIONED @ AF.1
4. G.C. TO COORDINATE BUILDING PAD ELEVATIONS & DIMENSIONS WITH CIVIL DRAWINGS.
5. G.C. TO COORDINATE LOCATIONS WITH PLUMBER ON ALL FIXTURES & FIELD VERIFY LOCATION.



01 4-UNIT COMBINED FOUNDATIONS PLAN

(SEE CIVIL DRAWINGS FOR SPECIFIC BLDG. ELEVs (F.F.E.))

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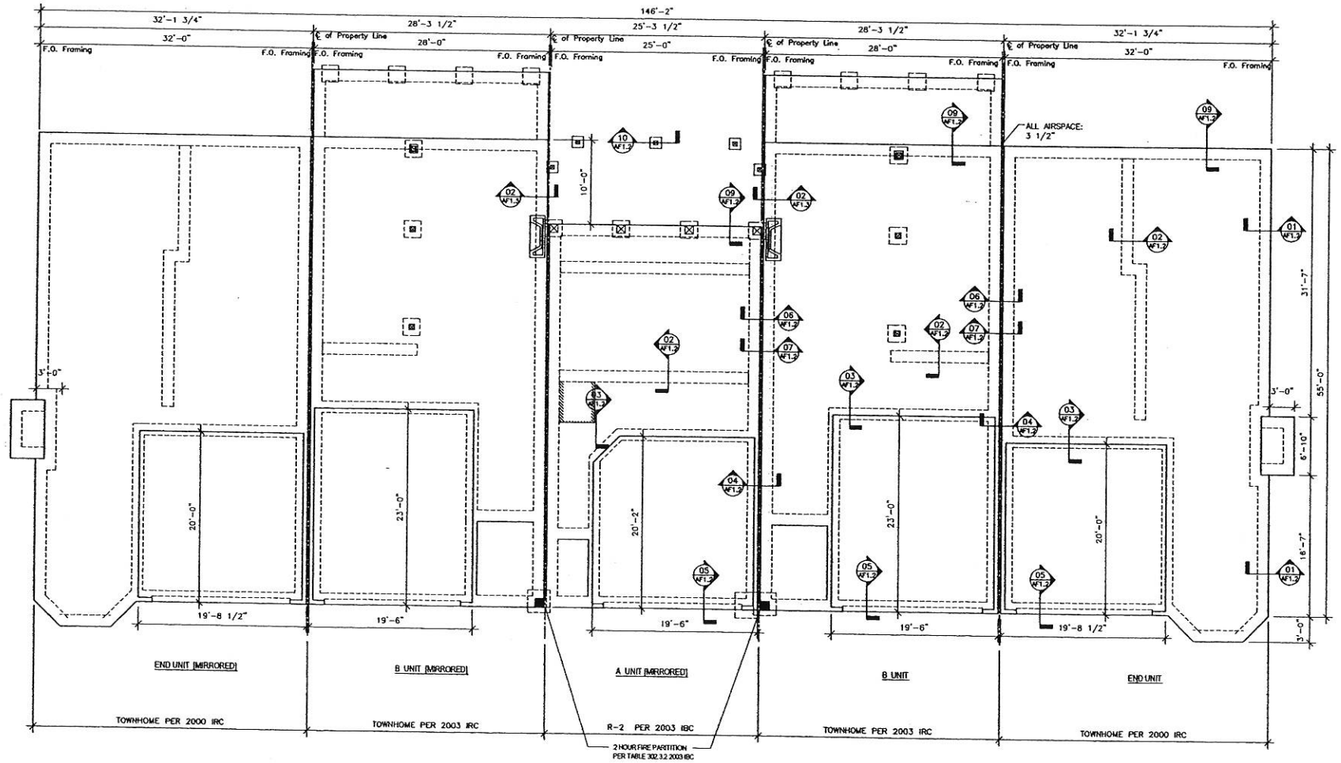
AF1.3

NOTE :

1. WALL SECTIONS ARE SIMILAR @ ALL PLANS SEE SHEET A4.1 FOR WALL SECTIONS.
2. FOUNDATION DETAILS IDENTIFIED ON SHEET AF.1, DETAILS SHOWN ON SHEET AF.2
3. APPLIANCE LOCATIONS DIMENSIONED @ AF.1
4. G.C. TO COORDINATE BUILDING PAD ELEVATIONS & DIMENSIONS WITH CIVIL DRAWINGS.
5. G.C. TO COORDINATE LOCATIONS WITH PLUMBER ON ALL FIXTURES & FIELD VERIFY LOCATION.



01 5-UNIT COMBINED FOUNDATIONS PLAN

(SEE CIVIL DRAWINGS FOR SPECIFIC BLDG. ELEVs (F.F.E.))

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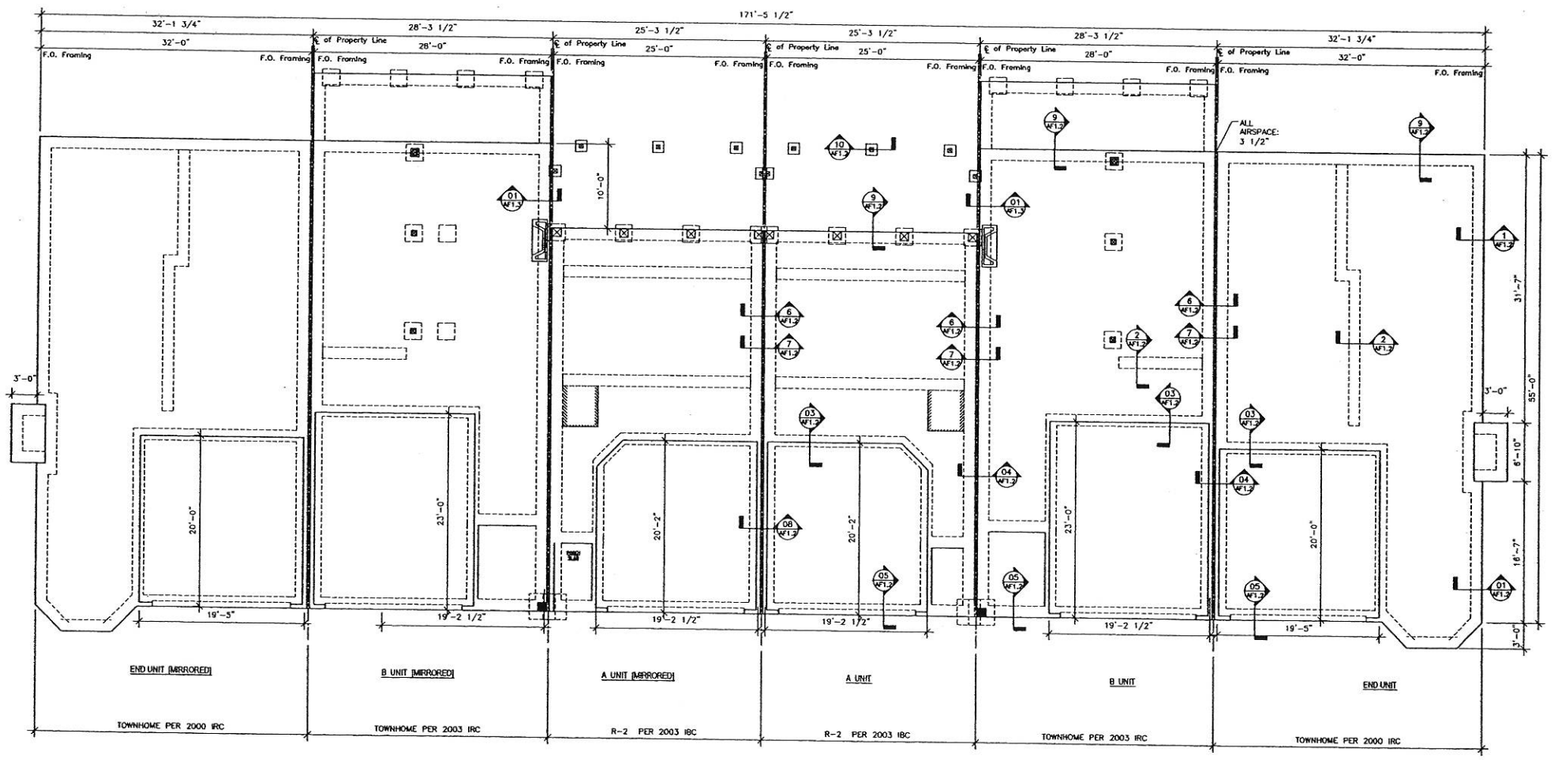
AF1.4

NOTE :

1. WALL SECTIONS ARE SIMILAR ◆ ALL PLANS SEE SHEET A1.4 FOR WALL SECTIONS.
2. FOUNDATION DETAILS IDENTIFIED ON SHEET AF.1, DETAILS SHOWN ON SHEET AF.2
3. APPLIANCE LOCATIONS DIMENSIONED ◆ AF.1
4. G.C. TO COORDINATE BUILDING PAD ELEVATIONS & DIMENSIONS WITH CIVIL DRAWINGS.
5. G.C. TO COORDINATE LOCATIONS WITH PLUMBER ON ALL FIXTURES & FIELD VERIFY LOCATION.
6. NOTE: DRAWING FOR REFERENCE ONLY. COMBINATIONS SUBJECT TO CHANGE. FOR UNIT COMBINATIONS, SEE CIVIL DWGs. FOR DETAILS SEE INDIVIDUAL UNIT PLANS & ELEVATIONS.



01 6-UNIT COMBINED FOUNDATIONS PLAN
1/8"=1'-0" (1/16"=1'-0" @ 11x17)

(SEE CIVIL DRAWINGS FOR SPECIFIC BLDG. ELEVs (F.F.E.))

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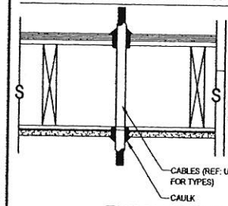
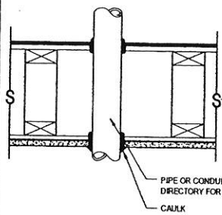
AF1.5

PENETRATION FIRESTOP TYPES



P3 THROUGH-PENETRATION FIRESTOP SYSTEMS

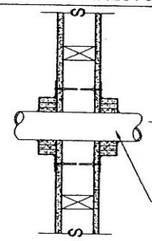
UL DESIGN NO. F-C-3014



P4 THROUGH-PENETRATION FIRESTOP SYSTEMS

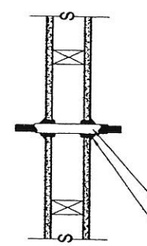
UL DESIGN NO. F-C-1006

PENETRATION FIRESTOP TYPES



P2 THROUGH-PENETRATION FIRESTOP SYSTEMS

UL # W-L-2002

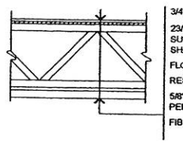


P1 THROUGH-PENETRATION FIRESTOP SYSTEMS

UL # W-L-3001

GENERAL NOTES:
1. ALL INSULATION TO BE STAPLED OR FASTENED, FRICTION FIT IS UNACCEPTABLE.
2. REFER TO LATEST VOLUME OF UNDERWRITER'S LABORATORY.

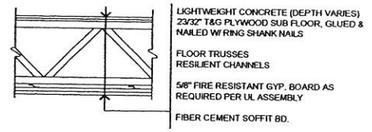
ACOUSTIC SUPPRESSION NOTES:
1. OFFSET ELECTRICAL BOXES ONE STUD SPACE AND SEAL OPENINGS THROUGH PARTITION.
2. USE FLEXIBLE SEALANT WHERE PARTITION TOUCHES FLOOR AND ATTACHES AT TOP PLATE TO REDUCE SOUND LEAKS.



5B 1 HR. FLOOR /CEILING ASSEMBLY

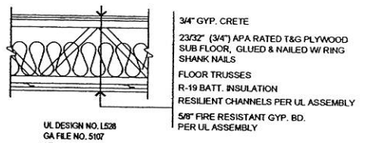
@ COVERED EXTERIOR BALCONIES

UL DESIGN NO. L528



6A 1 HR. FLOOR/CEILING ASSEMBLY

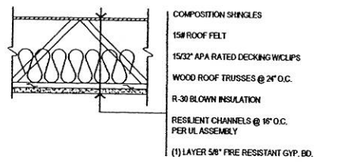
UL DESIGN NO. L528 AT EXTERIOR BALCONIES



UL DESIGN NO. L528
GA FILE NO. 5107
STC -50 MIN.

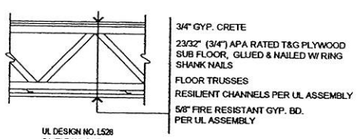
5A 1 HR. FLOOR /CEILING ASSEMBLY- GARAGE

UL DESIGN NO. L528



6 1 HR. ROOF/CEILING ASSEMBLY

UL DESIGN NO. P531

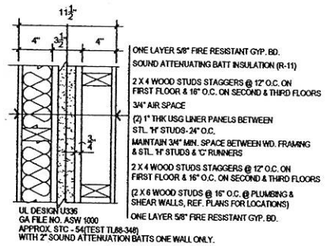


UL DESIGN NO. L528
GA FILE NO. 5107
STC -50 MIN.

5 1 HR FLOOR /CEILING ASSEMBLY

UL DESIGN NO. L528

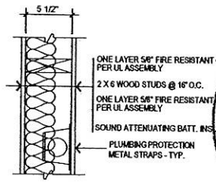
02 TYPICAL FLOOR/CEILING ASSEMBLY TYPES



UL DESIGN U336
GA FILE NO. ASW 1000
APPROX. STC - 54(TEST TL88-348)
WITH 2" SOUND ATTENUATION BATTS ONE WALL ONLY.

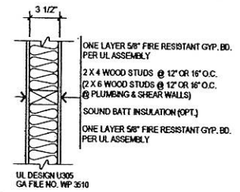
4 FIRE WALL

SEE A4.5 FOR DETAILS



3B 1 HR INTERIOR WALL W/ PLUMBING

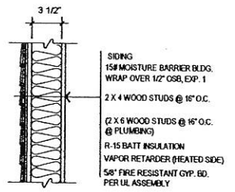
3A NOT USED



UL DESIGN U305
GA FILE NO. WP 3610

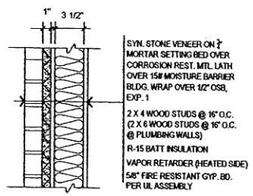
3 1-HR INTERIOR WALL

UL DESIGN NO. U305



1A 1-HR EXTERIOR WALL-SIDING

UL DESIGN NO. U356



1 1-HR EXTERIOR WALL-STONE FACE

UL DESIGN NO. U356

01 TYPICAL WALL TYPES

Architectural Group P.A.
1242 Mann Drive, Suite 200
Matthews North Carolina 28105
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P: 704.841.1899 F: 704.841.8440

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STATE OF SOUTH CAROLINA — REGISTERED ARCHITECTS — Urban Architectural Group PA Charlotte, NC 01054

LAKE SHORE TOWN HOMES

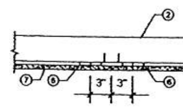
TEGA CAY, SC

STATE OF SOUTH CAROLINA — JOHN R. URBAN — REGISTERED ARCHITECT — 6/6/06

DATE DRAWN: June 05, 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

A0.1

Design No. P531
Unrestrained Assembly Rating – 1 Hr.
Finish Rating – 20 Min.



1. ROOFING SYSTEM* – Any UL Class A, B, or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with construction adhesive and No. 6d ringed shank nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
2. TRUSSES – Pitch or Parallel chord trusses, spaced max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq. ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.
3. BATTS AND BLANKETS* (Optional) – Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel / gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating has only been determined when the insulation is secured to the decking.

3A. LOOSE FILL MATERIAL* As an alternate to Item 3 – Any thickness of loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a min density of 0.5 pcf, fitted in the concealed space, draped over the resilient channel / gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating when loose fill material is used has not been determined.

4. AIR DUCT* – Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.
5. DAMPER* – Max nom 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom. 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions by the manufacturer. Max damper openings not to exceed 360 sq. in. per 100 sq. ft. of ceiling area.
   - ATLAS AIR CONDITIONING CO L P – Types 0856, 0856D, 0857, 0857D, 0857FP, 0857DFP.
   - MANUFACTURED AIR PRODUCTS – Models CRD-7, -8, -9, -10, -11, followed by suffix AA, NI RM, or SM.
   - NAILOR INDUSTRIES INC – Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DFP, 0758, 0759, 0760, 0761, 0762, CRD5, CRD5D, CRD6, CRD6D, CRD6FP, CRD6DFP.
   - ROYAL METAL PRODUCTS INC – Models 241FRD, 243FRD, 505RD, 507RD, 509.
   - SHERER MFG INC – Models FRDB, TTRDB, RDB Type T, SRDB, RDB Type S.
6. FURRING CHANNELS – Resilient channels, nom 1/2 in. deep by 2-3/8 in. wide at the base and 1-3/8 in. wide at the face, formed from 0.020 in. thick galv steel, spaced 16 in. OC, installed perpendicular to trusses. When batt and blanket material, Item 3, is draped over the resilient in. OC. Channels secured to each truss with 1-1/4 in. long Type S steel screws. Channels overlapped 4 in. at splices. Channels oriented opposite at wallboard butt joints (spaced 6 in. OC) as shown in the above illustration.
7. WALLBOARD, GYPSUM* – Nom 5/8 in. thick, 48 in. wide, installed with long dimension perpendicular to resilient channels with 1 in. long Type S screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. At end joints, two resilient channels are used, extending a min of 6 in. beyond both ends of the joint. When batt and blanket insulation, Item 3, is draped over the resilient channel / gypsum wallboard ceiling membrane, screws shall be installed at 8 in. OC.
   - CANADIAN GYPSUM COMPANY – Types C, IP-X2, IPC-AR.
   - UNITED STATES GYPSUM CO – Types C, IP-X2, IPC-AR.
   - USG MEXICO S A DE C V, MEX – Types C, IP-X2, IPC-AR.
8. FINISHING SYSTEM (Not Shown) – Vinyl, dry, or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.
9. STEEL FRAMING MEMBERS –
   - a. MAIN RUNNERS Installed perpendicular to trusses – Nom 12 ft. long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners hung a min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wires located a max of 48 in. OC.
   - b. CROSS TEES OR CHANNELS – Nom 4 ft. long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft. long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted wallboard end joists. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
   - c. WALL ANGLES OR CHANNELS Used to support steel framing member ends and for screw-attachment of the gypsum wallboard – Painted or galv steel angles with 1 in. legs or channels with 1 in. legs and 1-9/16 in. deep, attached to walls at perimeter of ceiling with fasteners 16 in. OC.
     - CGC INC – Type DGL or RX.
     - USG INTERIORS INC – Type DGL or RX.
10. GYPSUM BOARD* For use with STEEL FRAMING MEMBERS* (Item 9) when BATTS AND BLANKETS* (Item 3) are not used – One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Wallboard fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel midspan, and one screw located 1-1/2 in. from each wallboard side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At wallboard end joints, wallboard screws shall be located 1/2 in. from the joint. Wallboard fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent wallboard sheets attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7. -- For use with STEEL FRAMING MEMBERS* (Item 9) when BATTS AND BLANKETS* (Item 3) are used – Ratings limited to 1 Hour – 5/8 in. thick, 4 ft. wide; installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long steel wallboard screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long wallboard screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft. OC.
    - CANADIAN GYPSUM COMPANY – Types C, IP-X2, IPC-AR.
    - UNITED STATES GYPSUM CO – Types C, IP-X2, IPC-AR.
    - USG MEXICO S A DE C V, DF – Types C, IP-X2, IPC-AR.

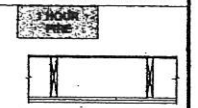
*Bearing the UL Classification Mark

SYSTEM DESCRIPTION | **SKETCH AND DESIGN DATA**

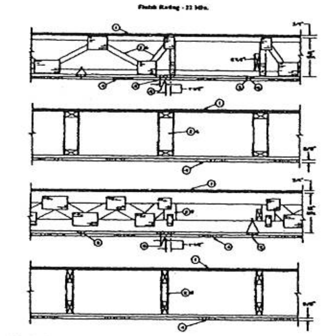
1 HOUR FIRE

GYPSUM BOARD, WOOD JOISTS, ROOF COVERING

Base layer ⅝" type X gypsum wallboard applied at right angles to 2 x 10 wood joists 24" o.c. with 1¼" Type W or S drywall screws 24" o.c. Face layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to joists with 1⅞" Type S drywall screws 12" o.c. at joints and intermediate joists and 1½" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood joists supporting [illegible] plywood with exterior glue applied at right angles to joists with 6d nails. Appropriate roof covering. Ceiling provides one hour fire resistance protection for wood framing, including trusses.

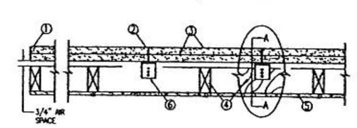


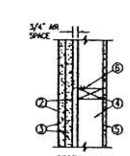
Approx. Ceiling Weight: 5 psf
Fire Test: FM FC 172, 2-25-72



UL LISTING– L528

Design No. U336
Exposed to fire from separation Wall side only
Non-Bearing Wall Rating – 2 HR.
Finish Rating – 120 Min.





SECTION A–A

SEPARATION WALL: (Max. Height – 44 ft)

1. Floor, Intermediate or Top Wall– 2 in. wide channel shaped with 1 in. long legs formed from No. 25 MSG galv steel, secured with suitable fasteners spaced 24 in. O.C.

2. Metal Studs– Steel members formed from No. 25 MSG galv steel having "H"-shaped flanged spaced 24 in. OC; overall depth 2 in. and flange width 1-3/8 in.

3. Wallboard, Gypsum*– Two layers of 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. widths. Vertical edges of panels friction fitted into "H"-shaped studs.

   UNITED STATES GYPSUM CO. – Type SLX

PROTECTION WALL: (Bearing or Non-Bearing Wall)

4. Wood Studs– Nom 2 by 4 in. max spacing 24 in OC. Studs cross braced at mid-height where necessary for clip attachment. Min 3/4 in. separation between wood framing and fire separation wall.

5. Wallboard, Gypsum– Classified or Unclassified – Min 1/2 in. thick, 4 ft wide, applied either horizontally or vertically. Wallboard attached to studs with 1-1/4 in. long steel drywall nails spaced 8 in. OC. Vertical joints located over studs. (Optional) Joints covered with paper tape and joint compound. Nail heads covered with joint compound.

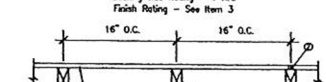
6. Attachment Clips– Aluminum angle, 0.063 in. thick, 2 in. wide with 2 in. and 2-1/4 in. legs. Clips secured with Type S screws 3/8 in. long to "H" studs and with Type W screws 1-1/4 in. long to wood framing through holes provided in clip.

6A. Clip placement (Item 6) for separation walls up to 23 ft high. Space clips a max of 10 ft OC vertically between wood framing and "H" studs.

6B. Clip placement (Item 6) for separation walls up to 44 ft high. Space clips as described in Item 6A for upper 24 ft. Remaining wall area below required clips spaced a max of 5 ft OC vertically between wood framing and "H" studs.

*Bearing the UL Classification Marking

Design No. U305
Bearing Wall Rating – 1 HR.
Finish Rating – See Item 3



1. NAILHEADS– Exposed or covered with joint compound.

2. JOINTS– Exposed or covered with fiber tape and joint compound, except where required for specific edge configuration. For tapered, rounded-edge wallboard, joints covered with joint compound or fiber tape and joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

3. WALLBOARD, GYPSUM*-5/8 in. thick wallboard paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Wallboard nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam beads. When used in widths other than 48 in., wall board is to be installed horizontally.

   BORAL GYPSUM INC.
   CANADIAN GYPSUM CO., LTD.
   CELOTEX CORP.
   CONTINENTAL GYPSUM COMPANY
   DOMTAR GYPSUM INC.
   EAGLE-GYPSUM PRODUCTS
   GEORGIA-PACIFIC CORP., GYPSUM DIV.
   JAMES HARDIE GYPSUM
   NATIONAL GYPSUM CO., CHARLOTTE, NC
   NATIONAL GYPSUM CO., RIYADH, SAUDI ARABIA
   PABCO GYPSUM
   REPUBLIC GYPSUM CO.
   STANDARD GYPSUM CORP.
   TEMPLE-INLAND FOREST PRODUCTS CORP.
   UNITED STATES GYPSUM CO.
   WESTROC INDUSTRIES LTD.

*See actual Fire Resistance Directory for additional information of approved manufacturers.

3a. WALLBOARD, GYPSUM*-(As an alternate to Item 3)-Nom 3/4 in. thick, installed as described in Item 3
   United States Gypsum Co.-Type AR.

3b. WALLBOARD, GYPSUM*-(As an alternate to Item 3 and 3a)-5/8 in. thick, 4 ft wide, square edge, applied vertically. Wallboard nailed 8 in OC with 1-3/4 in. long galvanized roofing nails. Joint covering (item 2) not required.
   United States Gypsum Co.-Type AR.

4. STEEL CORNER FASTENERS-(optional)-For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protuding into the 5/8 in. wide channel, fabricated from 24 gauge galv. steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the wallboard, no greater than 2 in. from corner of the wallboard, max spacing16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement-coated nail per fastener. Corners of wallboard shall be nailed to top and bottom plate using No. 6d cemet-coated nails.

5. BATTS and BLANKETS*-(optional, not shown)- Glass fiber or mineralwool insulation.

   CERTAINTEED CORP.
   KNAUF FIBER GLASS GmbH
   MANVILLE SALES CORP.
   OWENS-CORNING FIBERGLASS CO.
   UNITED STATES GYPSUM CO.
   USG INTERIORS INC.

*Bearing the UL Classification Marking

STATE OF SOUTH CAROLINA
Urban Architectural Group PA
Charlotte, NC
01054
REGISTERED ARCHITECTS

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TEGA CAY, SC

STATE OF SOUTH CAROLINA
JOHN R. URBAN
Matthews, NC
9409
6/6/06
REGISTERED ARCHITECT

DATE DRAWN: June 05, 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

A0.2

STRUCTURAL NOTES (FOR UNIT 'A' ONLY)

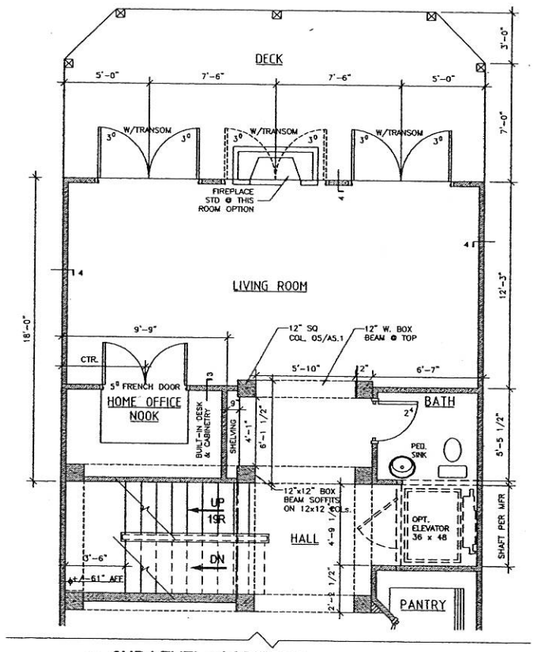
#	DESCRIPTION:
①	3" DIA. STANDARD PIPE COLUMN. 1/2"x9"x9" PLATE w/ 4- 1/2" DIA x 6" LONG EXPANSION BOLTS. 3/8"x 5 1/4"w x 3"LONG x 12"HIGH SADDLE PLATE w/ 4- 1/2" DIA. THRU BOLTS INTO WOOD BEAM.
②	3'-0" x 3'-0" x 1'-0" DEEP FOOTING w/ 4- #4s BOTTOM EACH WAY, 3000 psi NORMAL WEIGHT CONCRETE.
③	3" DIA. STD. PIPE COLUMN w/ $\frac{1}{2}$" x 9" x 9" BASE PLATE w/4- $\frac{1}{2}$"x6" EXPANSION BOLTS. 8"x8"x8" LONG x 8" HIGH SADDLE PLATE w/ 2- $\frac{1}{2}$" DIA. THRU BOLTS INTO WOOD BEAM.
④	3- 1 3/4 x 12" LVL GIRDER, CONTINUOUS OVER CENTER SUPPORT.
⑤	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi. NORMAL WT CONC.
⑥	4- 2x6 STUD POST, FACE NAIL EA. 2x4 STUD TO THE NEXT STUD w/ 16d NAILS, 2 ROWS @ 16" O.C.
⑦	2- 1 3/4" x 16" LVL CONTINUOUS, x ± 25'-0" LONG.
⑧	3- 1 3/4" x 16" LVL CONTINUOUS, x ± 16'-0" LONG.
⑨	2- 1 3/4" x 12" LVL HEADER x ± 12'-0" LONG. 2- 2x4 JACK STUDS + 1- 2x4 KING STUD EA. END.
⑩	5 1/4" x 5 1/4" PSL COLUMN.
⑪	2- 1 3/4" x 14" LVL HEADER x 16'-9" LONG. 3- 2x4 JACK STUDS + 2- 2x4 KING STUDS EA. END.
⑫	3 1/2" x 7 1/4" PSL COLUMN.
⑬	3 1/2" x 5 1/4" PSL COLUMN.
⑭	3- 2x4 STUD POST.
⑮	3 1/2 x 3 1/2 PSL COLUMN.
⑯	2- 1 3/4 x 11 1/4 LVL BEAM.
⑰	2- 2x12 BEAM.
⑱	1- 1/2" x 15.5" FLITCH PLATE BETW 2- 1 3/4 x 16" LVLs x ± 25'-0" LONG, w/ 1/2" THRU BOLTS , 2 ROWS @ 24" O.C.
⑲	2- 2x4 JACK STUD + 1- 2x4 KING STUD.

NOTE:
JACK STUDS ON UPPER LEVEL NEED TO HAVE THE SAME NUMBER OF JACK STUDS ON THE LOWER LEVEL LOCATED DIRECTLY BENEATH TO CARRY LOAD TO FOUNDATION.

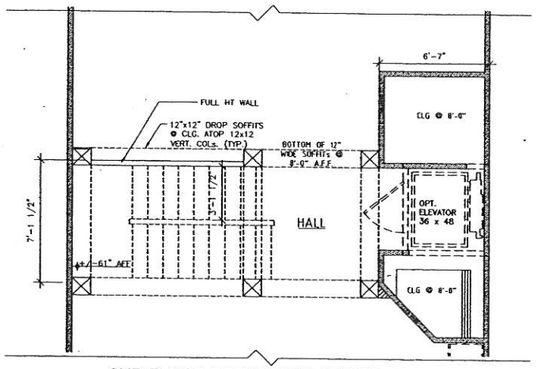
GENERAL NOTES:

1. ALL INTERIOR DOORS TO BE INSTALLED @ 6" FROM ADJACENT WALLS WHENEVER POSSIBLE.
2. HOT WATER HEATERS TO BE PLACED IN ATTIC OR UPPER LEVEL MECH. ROOM.

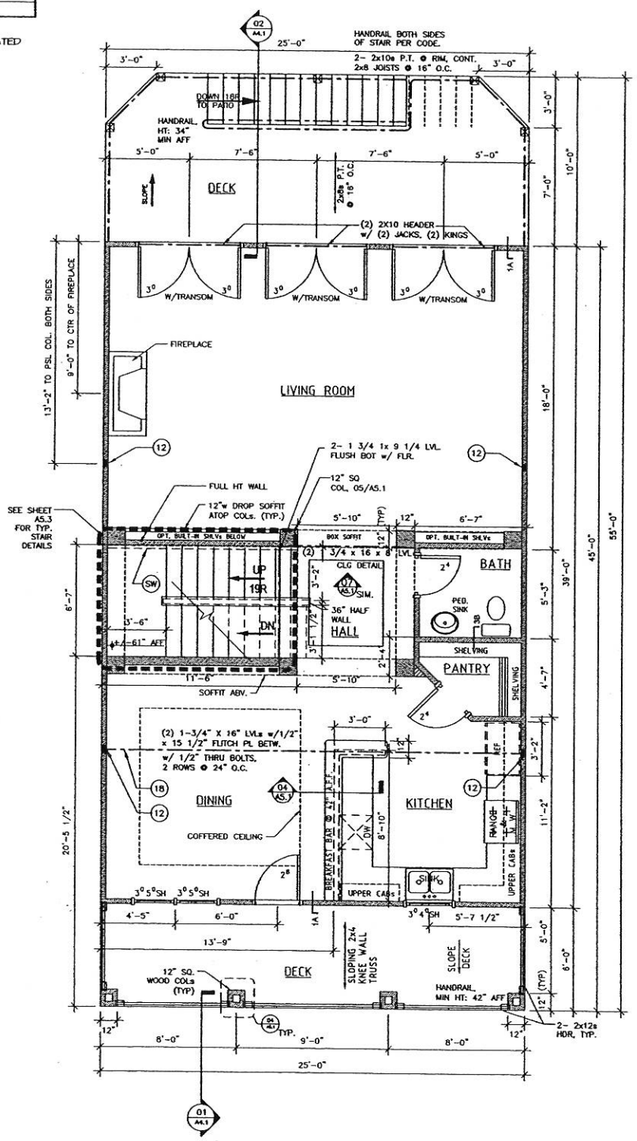
Square Footage 'A' UNIT		
FIRST FLOOR	=	566 sq.ft.
SECOND FLOOR	=	987 sq.ft.
THIRD FLOOR	=	1,068 sq.ft.
FOURTH FLOOR	=	536 sq.ft.
TOTAL HEATED	=	3,077 sq.ft.
GARAGE	=	393 sq.ft.
TOTAL	=	3,470 sq.ft.
LESS OPT. ELEVATOR SHAFT -84 sq ft		
TOTAL	=	3,386 sq.ft.



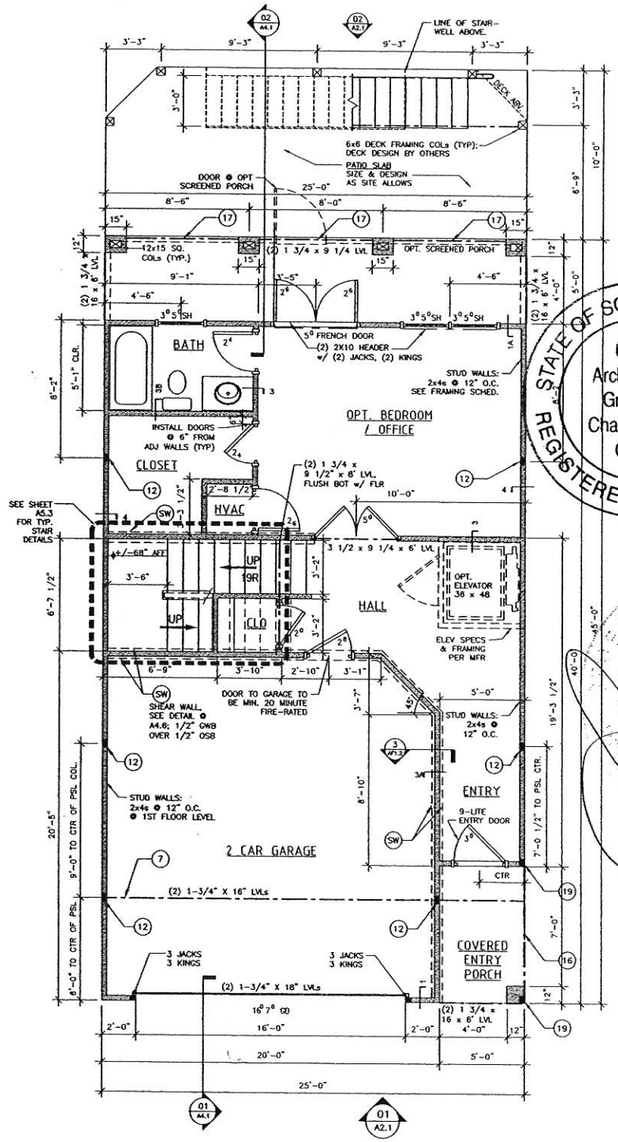
03 2ND LEVEL w/ OPTIONS
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



04 2ND FLOOR REFLECTED CEILING DETAIL
SCALE: 1/4"=1'-0" (1/8" = 1'-0" IF 11x17)



02 2ND FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 1ST FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)

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STATE OF SOUTH CAROLINA REGISTERED ARCHITECTS
Urban Architectural Group PA Charlotte, NC 01054

STATE OF SOUTH CAROLINA
JOHN R. URBAN
REGISTERED ARCHITECT
6/6/06

LAKE SHORE TOWN HOMES

TEGA CAY, SC

A UNIT
1ST & 2ND LEVELS

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

A1a

FLOOR PLANS 1 & 2

STRUCTURAL NOTES (FOR UNIT 'A' ONLY)

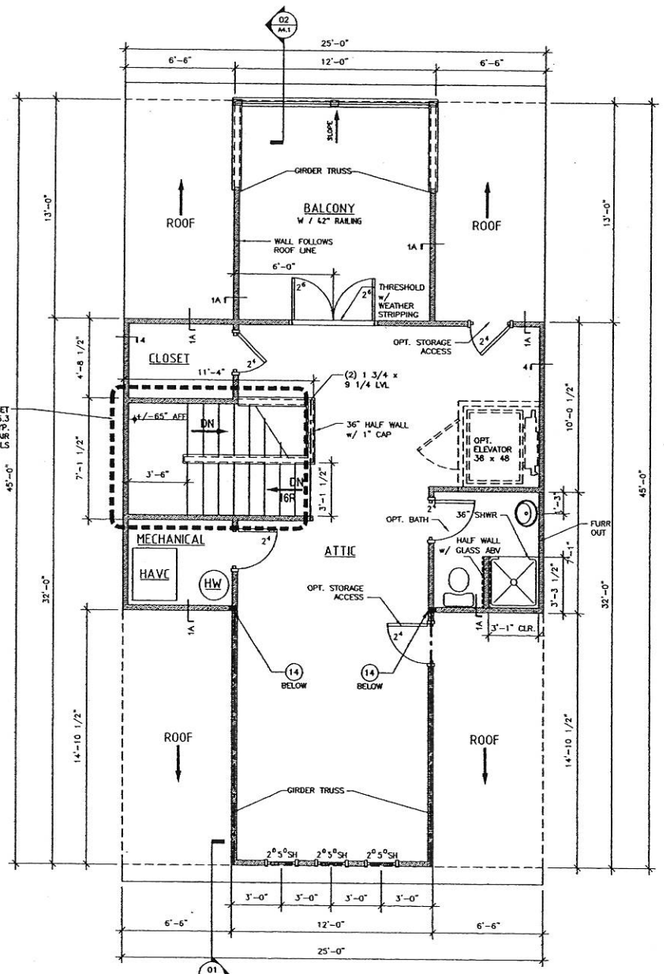
#	DESCRIPTION:	#	
①	3" DIA. STANDARD PIPE COLUMN. 1/2"x9"x9" PLATE w/ 4- 1/2" DIA x 6" LONG EXPANSION BOLTS. 3/8"x 5 1/4"w x 3"LONG x 12"HIGH SADDLE PLATE w/ 4- 1/2" DIA. THRU BOLTS INTO WOOD BEAM.	⑧	3- 1 3/4" x 16" LVL CONTINUOUS, x ± 16'-0" LONG.
		⑨	2- 1 3/4" x 12" LVL HEADER x ± 12'-0" LONG. 2- 2x4 JACK STUDS + 1- 2x4 KING STUD EA. END.
②	3'-0" x 3'-0" x 1'-0" DEEP FOOTING w/ 4- #4s BOTTOM EACH WAY, 3000 psi NORMAL WEIGHT CONCRETE.	⑩	5 1/4" x 5 1/4" PSL COLUMN.
③	3" DIA. STD. PIPE COLUMN w/ 2" x 9" x 9" BASE PLATE w/4- 3/4"x6" EXPANSION BOLTS. 8x6wx8" LONG x 8" HIGH SADDLE PLATE w/ 2- 1" DIA. THRU BOLTS INTO WOOD BEAM.	⑪	2- 1 3/4" x 14" LVL HEADER x 16'-8" LONG. 3- 2x4 JACK STUDS + 2- 2x4 KING STUDS EA. END.
		⑫	3 1/2" x 7 1/4" PSL COLUMN.
		⑬	3 1/2" x 5 1/4" PSL COLUMN.
④	3- 1 3/4 x 12" LVL GIRDER, CONTINUOUS OVER CENTER SUPPORT.	⑭	3- 2x4 STUD POST.
		⑮	3 1/2 x 3 1/2 PSL COLUMN.
⑤	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT. CONC.	⑯	2- 1 3/4 x 11 1/4 LVL BEAM.
		⑰	2- 2x12 BEAM.
⑥	4- 2x6 STUD POST. FACE NAIL EA. 2x4 STUD TO THE NEXT STUD w/ 16d NAILS, 2 ROWS @ 16" O.C.	⑱	1- 1/2" x 15.5" FLITCH PLATE BETW 2- 1 3/4 x 16" LVLs x ± 25'-0" LONG, w/ 1/2" THRU BOLTS , 2 ROWS @ 24" O.C.
⑦	2- 1 3/4" x 16" LVL CONTINUOUS, x ± 25'-0" LONG.	⑲	2- 2x4 JACK STUD + 1- 2x4 KING STUD.

NOTE:
JACK STUDS ON UPPER LEVEL NEED TO HAVE THE SAME NUMBER OF JACK STUDS ON THE LOWER LEVEL LOCATED DIRECTLY BENEATH TO CARRY LOAD TO FOUNDATION.

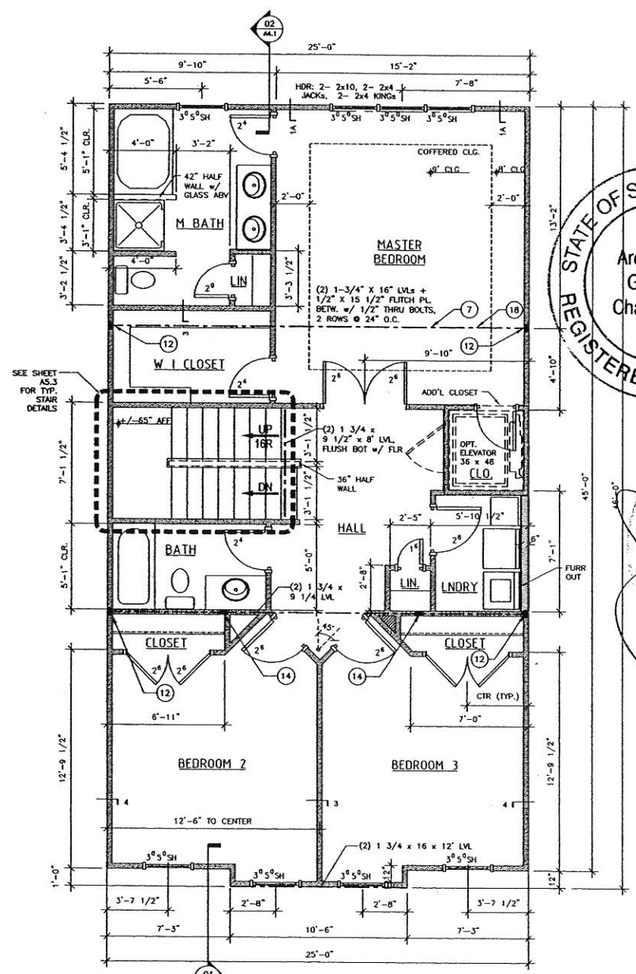
GENERAL NOTES:

1. ALL INTERIOR DOORS TO BE INSTALLED @ 6" FROM ADJACENT WALLS WHENEVER POSSIBLE.
2. HOT WATER HEATERS TO BE PLACED IN ATTIC OR UPPER LEVEL MECH. ROOM.

Square Footage 'A' UNIT		
FIRST FLOOR	=	566 sq.ft.
SECOND FLOOR	=	907 sq.ft.
THIRD FLOOR	=	1,068 sq.ft.
FOURTH FLOOR	=	536 sq.ft.
TOTAL HEATED	=	3,077 sq.ft.
GARAGE	=	393 sq.ft.
TOTAL	=	3,470 sq.ft.
LESS OPT. ELEVATOR SHAFT -84 sq ft		
TOTAL	=	3,386 sq.ft.



02 ATTIC PLAN w/ Optional Bath



01 3RD FLOOR PLAN

Architectural GROUP P.A.
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Matthews North Carolina 28105
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Urban Architectural Group PA Charlotte, NC 01054

STATE OF SOUTH CAROLINA REGISTERED ARCHITECT

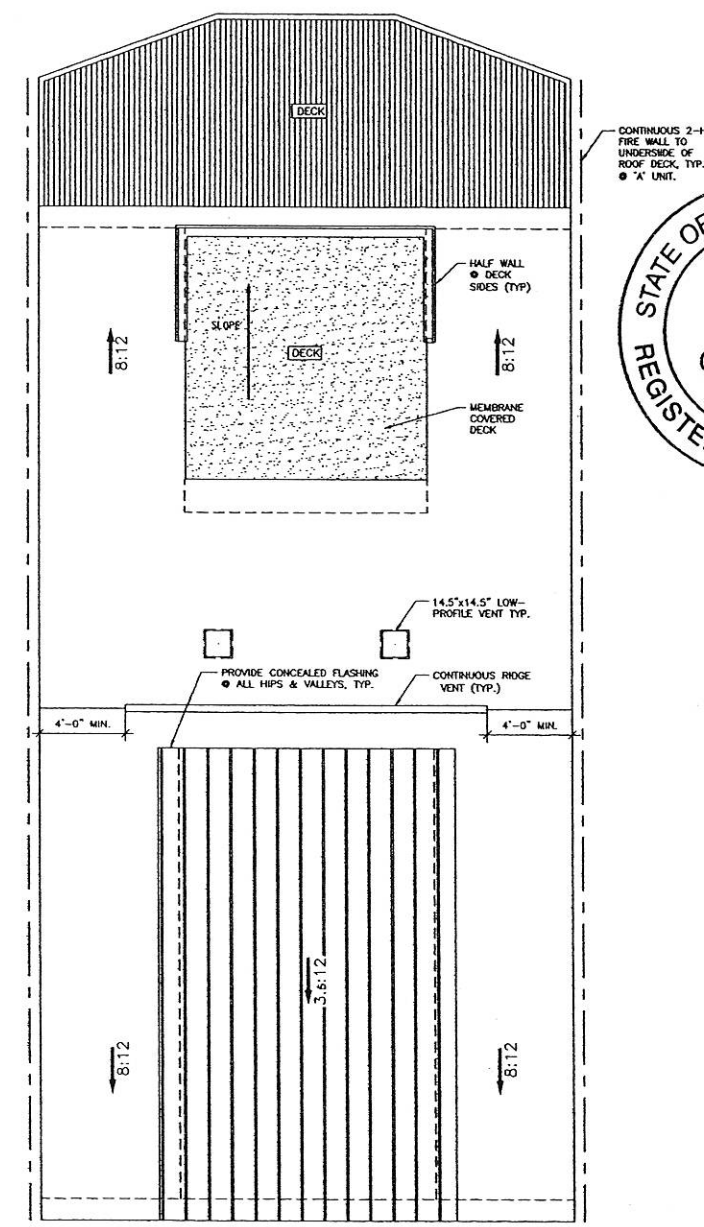
LAKE SHORE TOWN HOMES

TEGA CAY, SC

UNIT -A-
3RD & 4TH LEVELS

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

A1b



ROOF PLAN— @ UNIT —A—

—A— UNIT ATTIC VENTILATION CALCULATION

1.	AREA:	972 SQ FT / 150 = 6.48 SQ FT 6.48 x 144 = 933 SQ. INCHES
2.	REQUIRED VENT AREA:	933 SQ. INCHES
3.	RIDGE VENTS PROVIDED:	17 LN.FT. @ 18"/FT = 306 SQ INCHES
4.	SOFFIT VENTING PROVIDED:	38 LN.FT. @ 9"/FT = 342 SQ INCHES
5.	LOW PROFILE ROOF VENTS:	(2) @ 14.5"x14.5" = 420. SQ. INCHES
6.	TOTAL VENT AREA PROVIDED:	1,068 SQ. INCHES SUPPLIED

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01054

STATE OF SOUTH CAROLINA REGISTERED ARCHITECT
JOHN R. URBAN
MATTHEWS, NC
6/6/06

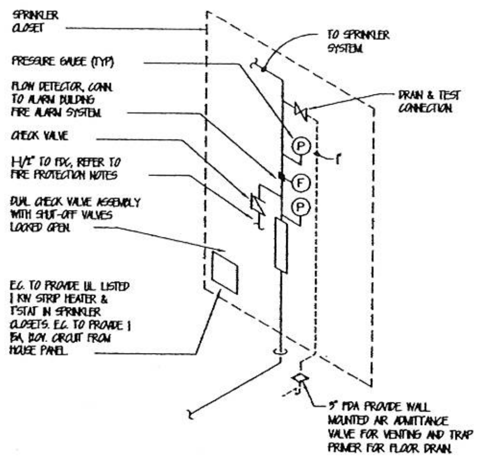
LAKE SHORE TOWN HOMES

TEGA CAY, SC

A Unit ROOF PLAN

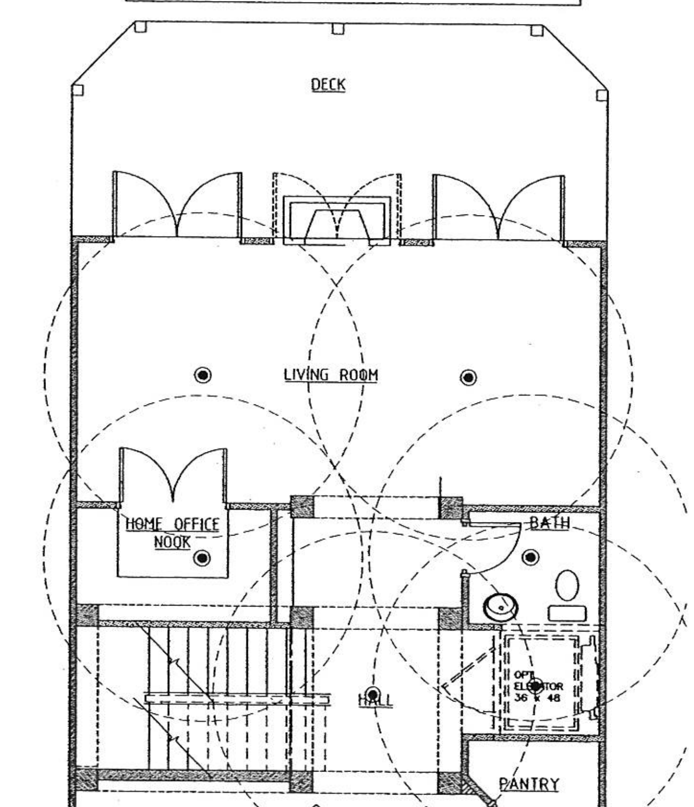
DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

A1c

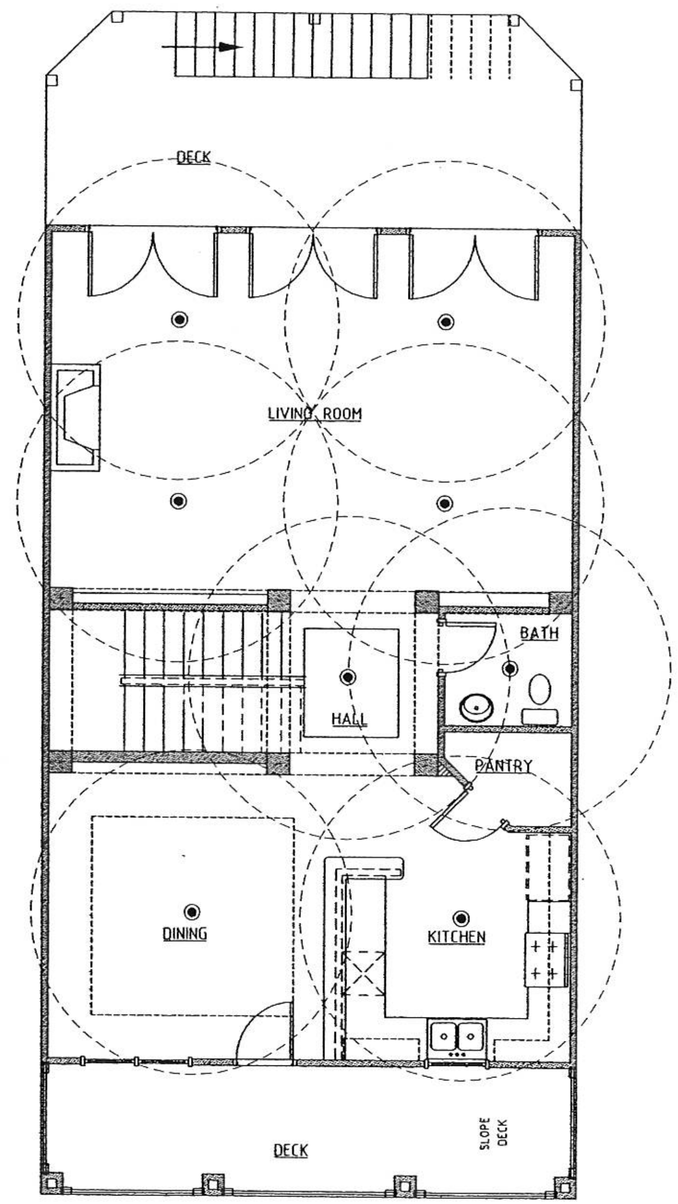


FIRE PROTECTION GENERAL NOTES

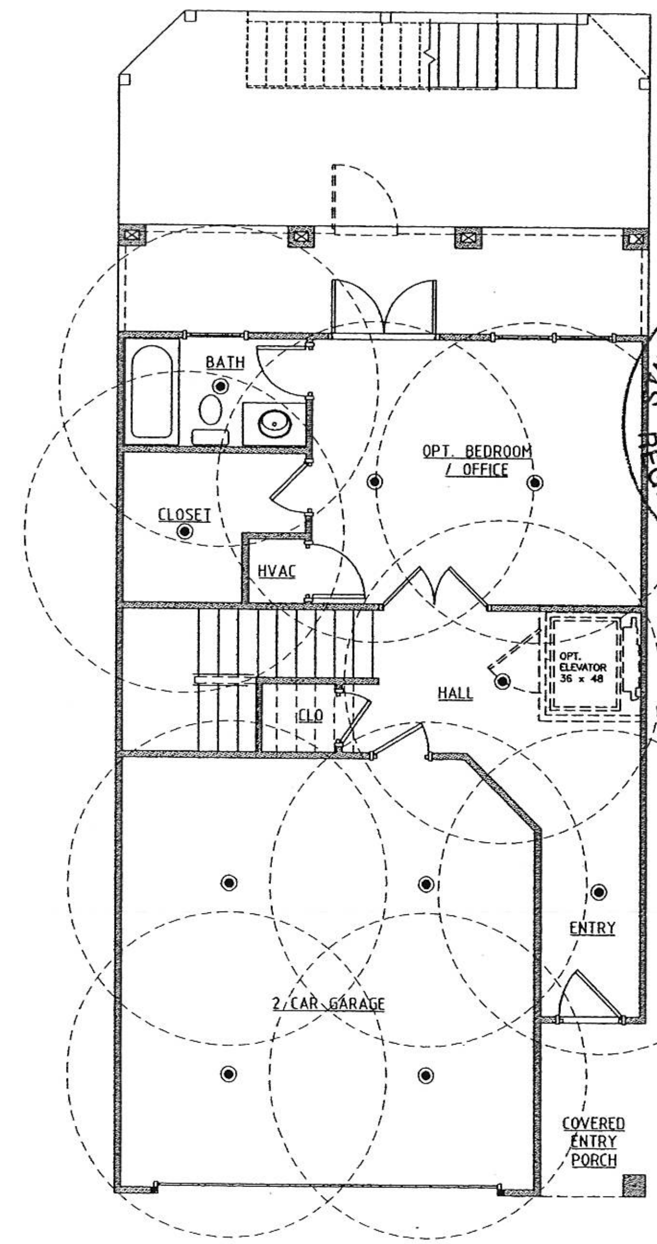
1. THE FIRE PROTECTION OF THIS BUILDING SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES AND SHALL CONFORM TO NFPA 13R GENERAL REQUIREMENTS AND IN FULL COMPLIANCE WITH LOCAL AMENDMENTS AND COUNTY FIRE MARSHAL.
2. THE CONTRACTOR SHALL PRODUCE SHOP DRAWINGS OF A 13R SYSTEM SHOWING COORDINATION WITH ALL STRUCTURAL AND HVAC COMPONENTS.
3. THE CONTRACTOR SHALL PRODUCE HIS OWN HYDRAULICALLY DESIGNED SYSTEM FOR REVIEW AND APPROVAL BY THE LOCAL FIRE MARSHALS OFFICE AND ARCHITECT FOR USE ON THIS PROJECT.
4. SPRINKLER SYSTEM DESIGN SHALL BE BASED ON THE FOLLOWING CRITERIA:
   - A. SPACING OF HEADS: 16x16-PENDANT
   - B. TYPE OF PIPE: GREY POLYBUTYLENE, "BLAZEMASTER", OR APPROVED EQUAL
   - C. TYPE OF FASTENING OF PIPE: HEAT FUSION
   - D. TYPE OF BACKFLOW PREVENTION: DUAL CHECK VALVE
   - E. SIZE OF MAIN LINE AT STREET: REFER TO CIVIL DRAWINGS
   - F. SIZE OF BRANCH LINES: 3/4"
   - G. TYPE AND DEGREE OF HEADS USED: VIKING MODEL H RESIDENTIAL CHROME PLATED PENDANT WITH CHROME ESCUTCHEON PLATES, 165° F. RATED OR EQUAL
   - H. FLOW VERIFICATION SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO CALLING FIRE MARSHALS OFFICE FOR APPOINTMENT FOR INSPECTORS FLOW TEST.
   - I. HEAD SPACING CRITERIA SHALL BE AS FOLLOWS;
     1. NO MORE THAN 8'-0" OFF WALL
     2. NO LESS THAN 8'-0" APART
     3. NO MORE THAN 16'-0" APART
     4. NO LESS THAN 1'-6" FROM THE RANGE FOOTPRINT
     5. NO LESS THAN 7'-0" IN FRONT OF OR 5'-0" TO THE SIDE OF A RECESSED FIREPLACE
5. FOR WATER FLOW DATA SEE CIVIL PLANS.
6. FIRE DEPARTMENT CONNECTION TO BE BRASS OR AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.



2ND LEVEL w/ OPTIONS



2ND FLOOR PLAN



1ST FLOOR PLAN

Architectural GROUP

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STATE OF SOUTH CAROLINA · JOHN R. URBAN · Matthews, NC · 8400 · REGISTERED ARCHITECT · 6/6/06

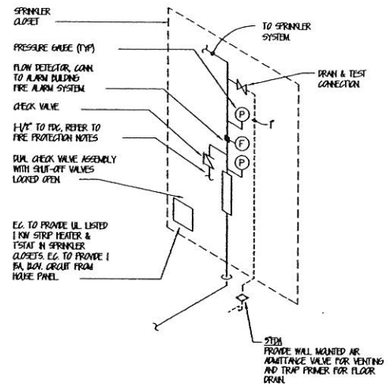
LAKE SHORE TOWN HOMES

TEGA CAY, SC

A-UNIT 1ST & 2ND LEVELS SPRINKLER SCHEMATIC

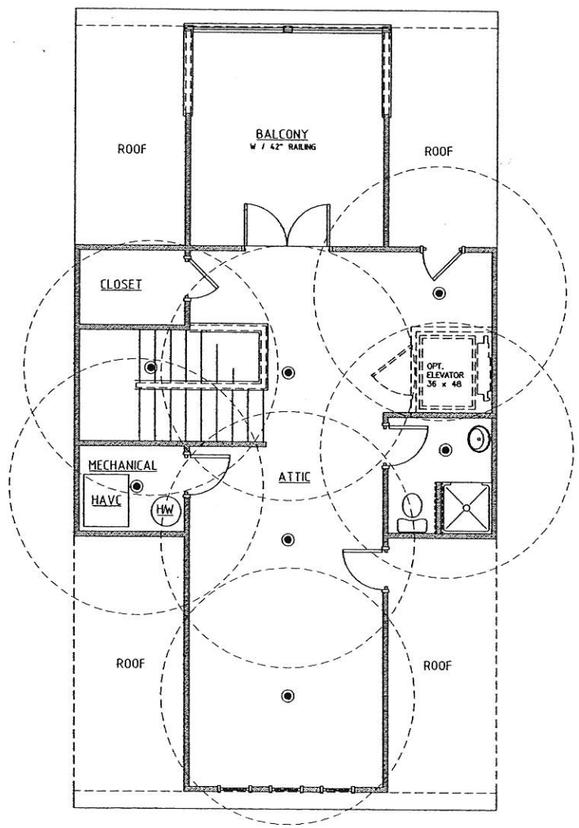
DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

A1d

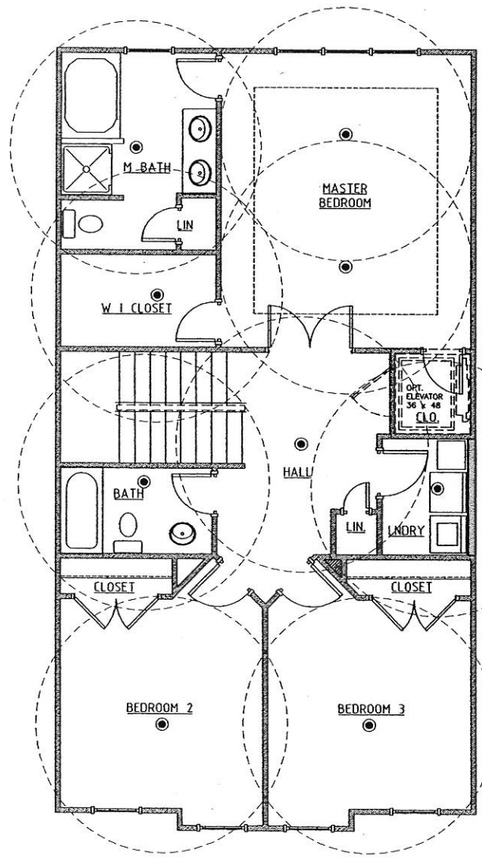


FIRE PROTECTION GENERAL NOTES

1. THE FIRE PROTECTION OF THIS BUILDING SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES AND SHALL CONFORM TO NFPA 13R GENERAL REQUIREMENTS AND IN FULL COMPLIANCE WITH LOCAL ORDINANCES AND COUNTY FIRE MARSHAL.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF A 13R SYSTEM SHOWING COORDINATION WITH ALL STRUCTURAL AND MAC COMPONENTS.
3. THE CONTRACTOR SHALL PROVIDE HIS OWN HYDRAULICALLY DESIGNED SYSTEM FOR REVIEW AND APPROVAL BY THE LOCAL FIRE MARSHALS OFFICE AND ARCHITECT FOR USE ON THIS PROJECT.
4. SPRINKLER SYSTEM DESIGN SHALL BE BASED ON THE FOLLOWING CRITERIA:
   A. SPACING OF HEADS: 16'-0" O.C. MAX.
   B. TYPE OF PIPE: GREY POLYBUTYLENE, "FLAMEMASTER", OR APPROVED EQUAL
   C. TYPE OF FASTENING OF PIPE: HEAT PLENUM
   D. TYPE OF BACKFLOW PREVENTION: DUAL CHECK VALVE
   E. SIZE OF MAIN LINE AT STREET: REFER TO CIVIL DRAWINGS
   F. SIZE OF BRANCH LINES: 3/4"
   G. TYPE AND REGREE OF HEADS USED: VIKING MODEL H RESIDENTIAL UPRIGHT FLUSH PENDANT WITH CHROME ESCUTCHEON PLATES, 165° F MINIMUM RATING.
   H. FLOW VERIFICATION SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO CALLING FIRE MARSHALS OFFICE FOR APPOINTMENT FOR INSPECTORS FLOW TEST.
   I. HEAD SPACING CRITERIA SHALL BE AS FOLLOWS:
      1. NO MORE THAN 8'-0" OFF WALL
      2. NO LESS THAN 8'-0" APART
      3. NO MORE THAN 16'-0" APART
      4. NO LESS THAN 1'-6" FROM THE RANGE FOOTPRINT
      5. NO LESS THAN 1'-0" IN FRONT OF OR 5'-0" TO THE SIDE OF A RECESSED FIREPLACE
5. FOR WATER FLOW DATA SEE CIVIL PLANS.
6. FIRE DEPARTMENT CONNECTION TO BE BRASS OR AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.



02 ATTIC PLAN w/ Optional Bath



01 3RD FLOOR PLAN

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REGISTERED ARCHITECTS

STATE OF SOUTH CAROLINA
JOHN R. URBAN
Matthews, NC 5409
6/6/06
REGISTERED ARCHITECTS

LAKE SHORE TOWN HOMES

TEGA CAY, SC

UNIT -A-
3RD & 4TH LEVELS
SPRINKLER SCHEMATIC

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

A1e

40

? remove Columns

42" cherry

STRUCTURAL NOTES (FOR UNIT 'B' ONLY)

	DESCRIPTION:
①	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.
②	3'-0"x3'-0"x1'-0" DEEP FOOTING w/ 4- #4S @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.
③	3" DIA. STANDARD PIPE COLUMN, 1/2"x9"x9" PLATE w/ 4- 1/2" DIA x 6" LONG EXPANSION BOLTS. 3/8"x5 1/4"w±3"LONG±12"HIGH SADDLE PALTE w/ 4- 1/2" DIA THRU BOLTS INTO WOOD BEAM.
④	3" DIA. STANDARD PIPE COLUMN; 1/2"x9x9 BASE PLATE w/ 4- 1/2" DIA. x 6" LONG EXPANSION BOLTS. 3/8 x 6"w x 6" LONG x 8" HIGH SADDLE PLATE w/ 2- 1/2" DIA. THRU BOLTS INTO WOOD BEAM.
⑤	4- 2x6 STUD POST. FACE NAIL EA. OF STUD w/ 16d NAILS, 2 ROWS @ 16" O.C.
⑥	5 1/4 x 5 1/4" PSL COLUMN
⑦	2- 1 3/4" x 12" LVL HEADER ± ± 12'-0" LONG. 2- 2x4 JACK STUDS + 1- 2x4 KING STUD EA. END.
⑧	3- 1 3/4 x 12" LVL GIRDER, CONTINUOUS OVER CENTER SUPPORT.
⑨	2- 1 3/4" x 16" LVL CONTINUOUS, x ± 28'-0" LONG.
⑩	3- 1 3/4" x 16" LVL CONTINUOUS, x ± 16'-0" LONG.
⑪	2- 1 3/4" x 18" LVL HEADER x 16'-6" LONG. 3- 2x4 JACK STUDS + 2- 2x4 KING STUDS EA. END.
Ⓐ	2- 2x4 JACK STUDS + 1- 2x4 KING STUDS EA. END.
Ⓑ	3- 2x4 JACK STUDS + 1- 2x4 KING STUDS EA. END.

FRAMING SCHEDULE

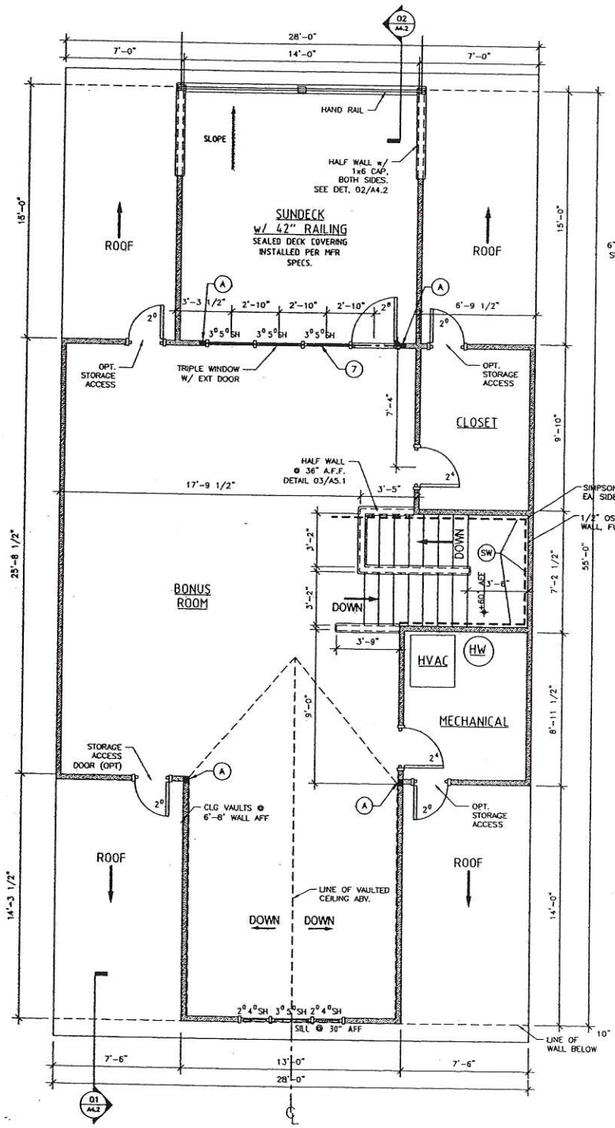
FIRST FLOOR: 2x4 STUDS @ 12" O.C.

ALL OTHER FLRs: 2x4 STUDS @ 16" O.C.

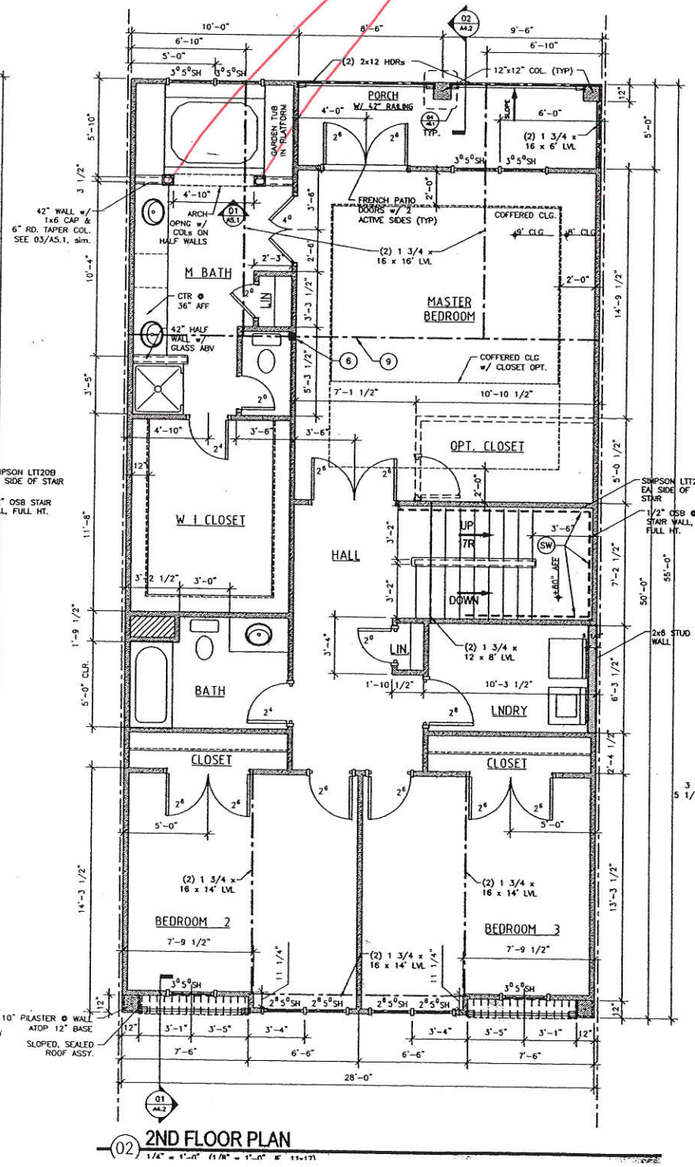
GENERAL NOTES:

1. ALL INTERIOR DOORS TO BE INSTALLED @ 6" FROM ADJACENT WALLS WHENEVER POSSIBLE.
2. HOT WATER HEATERS TO BE PLACED IN ATTIC OR UPPER LEVEL MECH. ROOM.

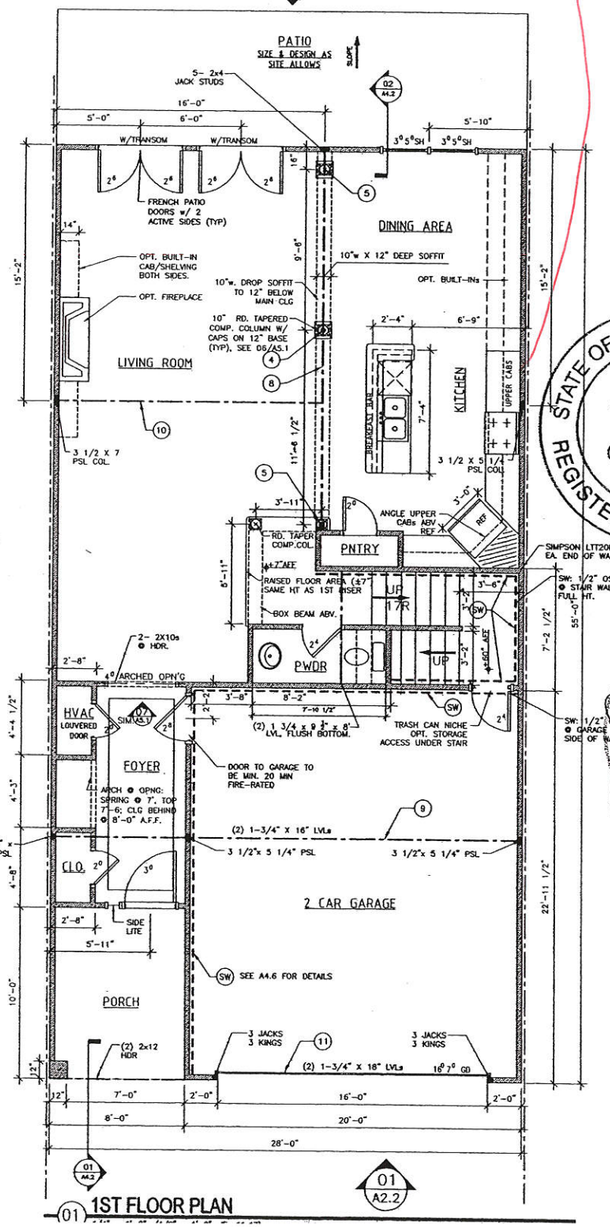
Square Footage	UNIT 'B'
FIRST FLOOR =	1,004 sq.ft.
SECOND FLOOR =	1,367 sq.ft.
THIRD FLOOR =	847 sq.ft.
TOTAL HEATED =	3,218 sq.ft.
GARAGE =	455 sq.ft.
TOTAL =	3,673 sq.ft.



03 3RD FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



02 2ND FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 1ST FLOOR PLAN

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STATE OF SOUTH CAROLINA REGISTERED ARCHITECTS
Urban Architectural Grup PA Charlotte, NC 01054

LAKE SHORE TOWN HOMES
TEGA CAY, SC

STATE OF SOUTH CAROLINA REGISTERED ARCHITECT
JOHN RUNIT URBAN Mathews, NC 5409

DATE DRAWN:
5 JUNE 2006
PROJECT NO.:
2530
ISSUED FOR:
PERMIT & CONSTRUCTION
5 JUNE 2006

A1.2

BUM-40

STRUCTURAL NOTES (FOR UNIT 'B' ONLY)

#	DESCRIPTION:
①	2'-6"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.
②	3'-0"x3'-0"x1'-0" DEEP FOOTING w/ 4- #4S @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.
③	3" DIA. STANDARD PIPE COLUMN. 1/2"x9"x9" PLATE w/ 4- 1/2" DIA x 6" LONG EXPANSION BOLTS. 3/8"x5 1/4"wx3"LONGx12"HIGH SADDLE PALTE w/ 4- 1/2" DIA THRU BOLTS INTO WOOD BEAM.
④	3" DIA. STANDARD PIPE COLUMN; 1/2"x9x9 BASE PLATE w/ 4- 1/2" DIA x 6" LONG EXPANSION BOLTS. 3/8 x 6"w x 8" LONG x 8" HIGH SADDLE PLATE w/ 2- 1/2" DIA. THRU BOLTS INTO WOOD BEAM.
⑤	4- 2x6 STUD POST, FACE NAIL EA. OF STUD w/ 16d NAILS, 2 ROWS @ 16" O.C.
⑥	5 1/4 x 5 1/4" PSL COLUMN.
⑦	2- 1 3/4" x 12" LVL HEADER x ± 12'-0" LONG. 2- 2x4 JACK STUDS + 1- 2x4 KING STUD EA. END.
⑧	3- 1 3/4" x 12" LVL GIRDER, CONTINUOUS OVER CENTER SUPPORT.
⑨	2- 1 3/4" x 16" LVL CONTINUOUS, x ± 28'-0" LONG.
⑩	3- 1 3/4" x 16" LVL CONTINUOUS, x ± 16'-0" LONG.
⑪	2- 1 3/4" x 18" LVL HEADER x 16'-9" LONG. 3- 2x4 JACK STUDS + 2- 2x4 KING STUDS EA. END.
⑫	2- 2x4 JACK STUDS + 1- 2x4 KING STUDS EA. END.
⑬	3- 2x4 JACK STUDS + 1- 2x4 KING STUDS EA. END.

FRAMING SCHEDULE

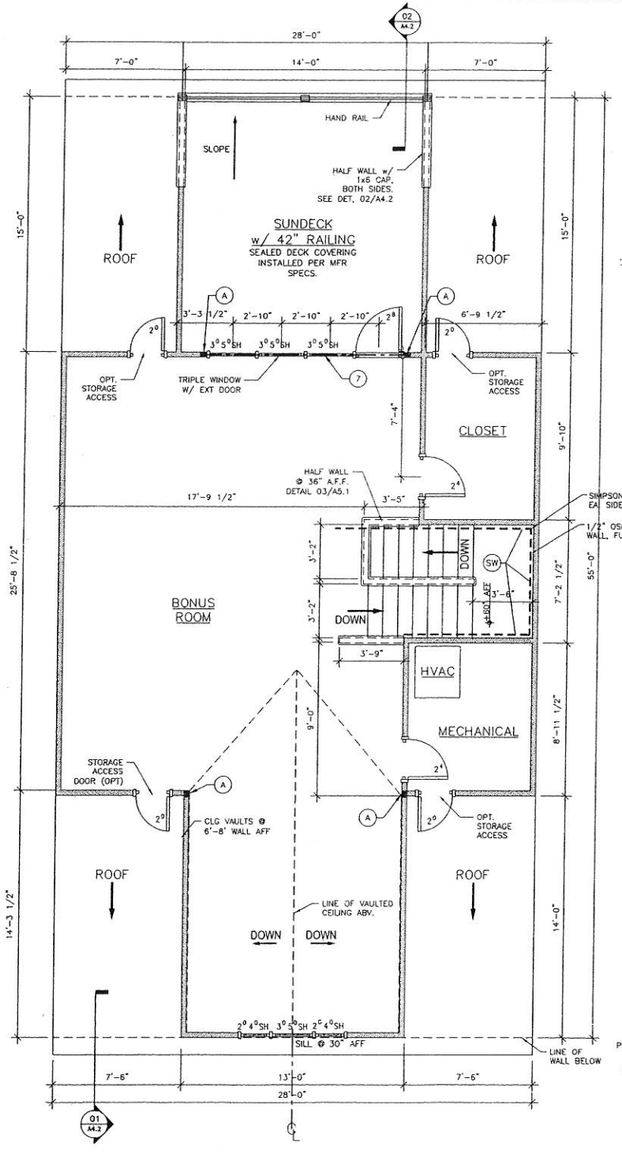
FIRST FLOOR: 2x4 STUDS @ 12" O.C.

ALL OTHER FLRs: 2x4 STUDS @ 16" O.C.

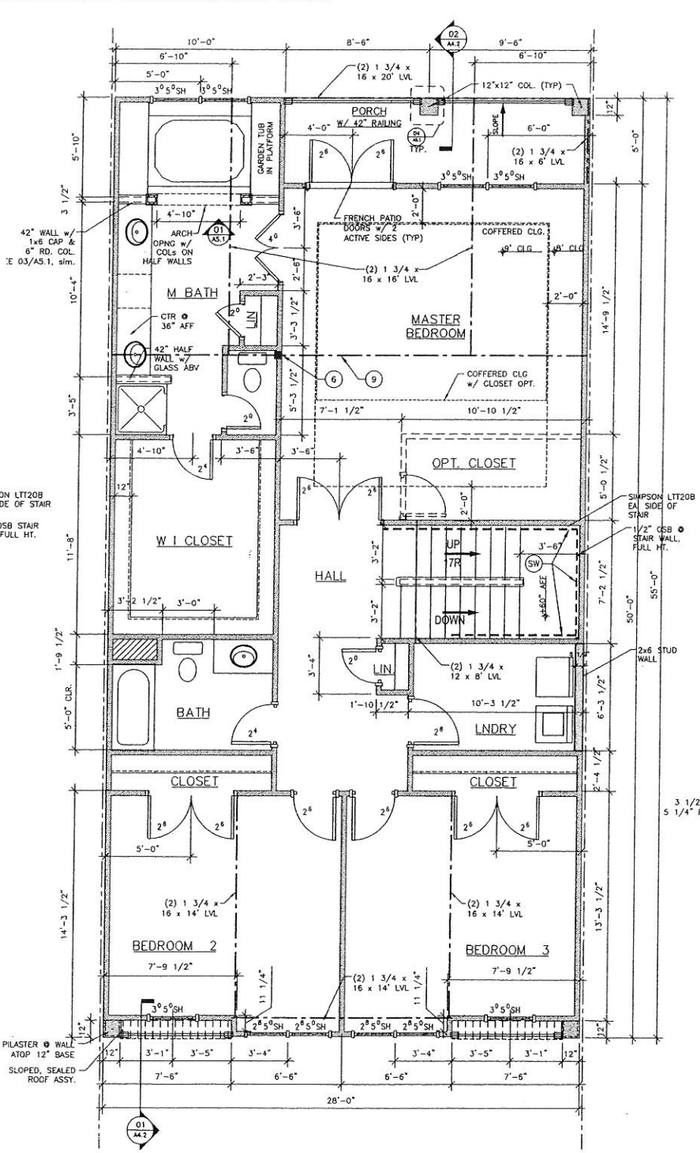
GENERAL NOTES:

1. ALL INTERIOR DOORS TO BE INSTALLED @ 6" FROM ADJACENT WALLS WHENEVER POSSIBLE.
2. HOT WATER HEATERS TO BE PLACED IN ATTIC OR UPPER LEVEL MECH. ROOM.

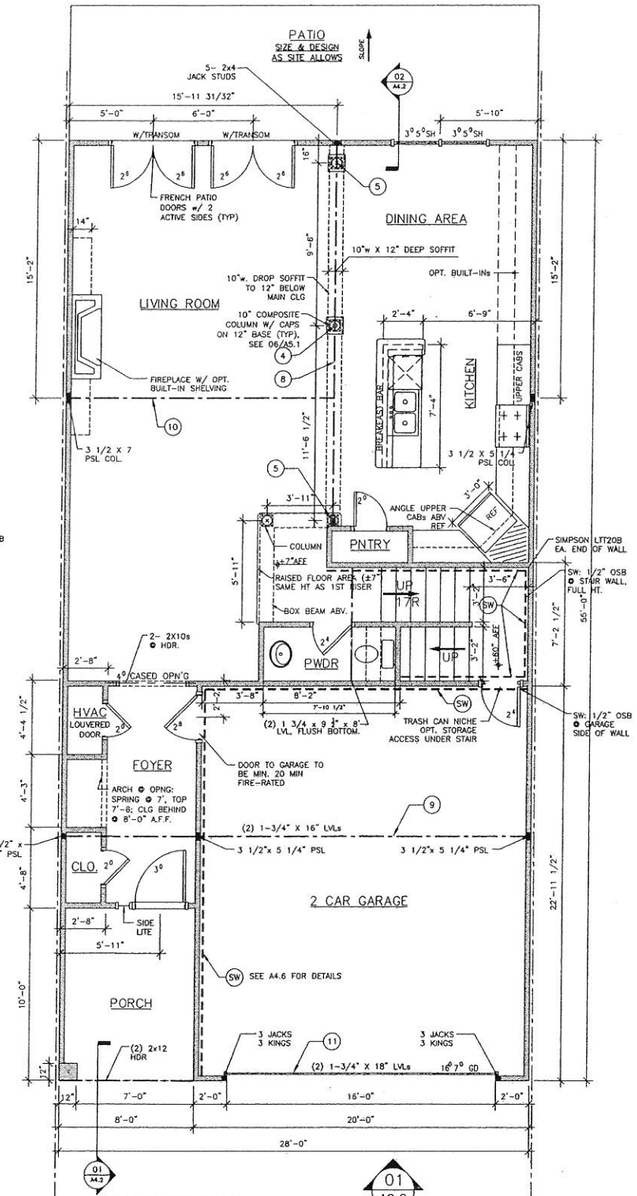
Square Footage		UNIT 'B'
FIRST FLOOR	=	1,004 sq.ft.
SECOND FLOOR	=	1,367 sq.ft.
THIRD FLOOR	=	847 sq.ft.
TOTAL HEATED	=	3,218 sq.ft.
GARAGE	=	455 sq.ft.
TOTAL	=	3,673 sq.ft.



03 3RD FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



02 2ND FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 1ST FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)

URBAN ARCHITECTURAL GROUP P.A.
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STATE OF SOUTH CAROLINA — Urban Architectural Group PA, Charlotte, NC 01054 — REGISTERED ARCHITECT — 9/8/05

STATE OF SOUTH CAROLINA — JOHN R. URBAN, Urban Architectural Group PA, Charlotte, NC 9402 — REGISTERED ARCHITECT — 9/21/05

LAKE SHORE TOWN HOMES

TEGA CAY, SC

UNIT -B-

DATE DRAWN:
8 SEPTEMBER 2005

PROJECT NO.:
2530

ISSUED FOR:
PERMIT & CONSTRUCTION

1 OCTOBER 2005

A1.2

FLOOR PLANS
UNIT -B-

STRUCTURAL NOTES (FOR UNIT 'C' ONLY)

#	DESCRIPTION:	#	DESCRIPTION:
①	3" DIA. STANDARD PIPE COLUMN 1/2 X 9 x 9 base plate W/ 4- 1/2" ø LONG EXPANSION BOLTS. 3/8" x 3 1/4w x 8" LONG x 12" HIGH SADDLE PLATE w/ 4- 1/2" THROUGH BOLTS INTO WOOD BEAM.	⑩	3- 1 3/4" x 16" LVL CONTINUOUS, x ± 16'-0" LONG.
②	3'-0" x 3'-0" x 1'-0" DEEP FOOTING w/ 4- #4s BOTTOM EACH WAY, 3000 psi NORMAL WEIGHT CONCRETE.	⑪	2- 1 3/4" x 12" LVL HEADER x 12'-0" ± LONG. 2- 2x4 JACK STUDS + 1- 2x4 KING STUD EA. END.
③	3' DIA. STD. PIPE COLUMN w/ 1/2" x 9" x 9" BASE PLATE w/4- 1/2"x6" EXPANSION BOLTS. 3/8x6wx8" LONG x 8" HIGH SADDLE PLATE w/ 2- 1/2" DIA. THRU BOLTS INTO WOOD BEAM.	⑫	5 1/4" x 5 1/4" PSL COLUMN.
④	3- 1 3/4 x 12" LVL GIRDER, CONTINUOUS OVER CENTER SUPPORT.	⑬	2- 1 3/4" x 14" LVL HEADER x 16'-9" LONG. 3- 2x4 JACK STUDS + 2- 2x4 KING STUDS EA. END.
⑤	2'-0"x 2'-6"x 1'-0" DEEP FOOTING w/ 3- #4s @ BOTTOM, EACH WAY, 3000 psi, NORMAL WT CONC.	⑭	3 1/2" x 7" PSL COLUMN.
⑥	4- 2x6 STUD POST. FACE NAIL EA. 2x4 STUD TO THE NEXT STUD w/ 16d NAILS, 2 ROWS @ 16" O.C.	⑮	3 1/2" x 5 1/4" PSL COLUMN.
⑦	2- 1 3/4 x 16" LVL CONTINUOUS, 20' ± LONG. (LENGTH VARIES)	⑯	3- 2x4 STUD POST.
		⑰	3 1/2 x 3 1/2 PSL COLUMN.
		⑱	2- 1 3/4 x 11 1/4 LVL BEAM.
		⑲	2- 2x12 BEAM.
		⑳	4- 1 3/4 x 16" LVL x 25'-0 ± LONG.
		㉑	2- 2x4 JACK STUD + 1- 2x4 KING STUD.

FRAMING SCHEDULE

FIRST FLOOR: 2x4 STUDS @ 12" O.C.

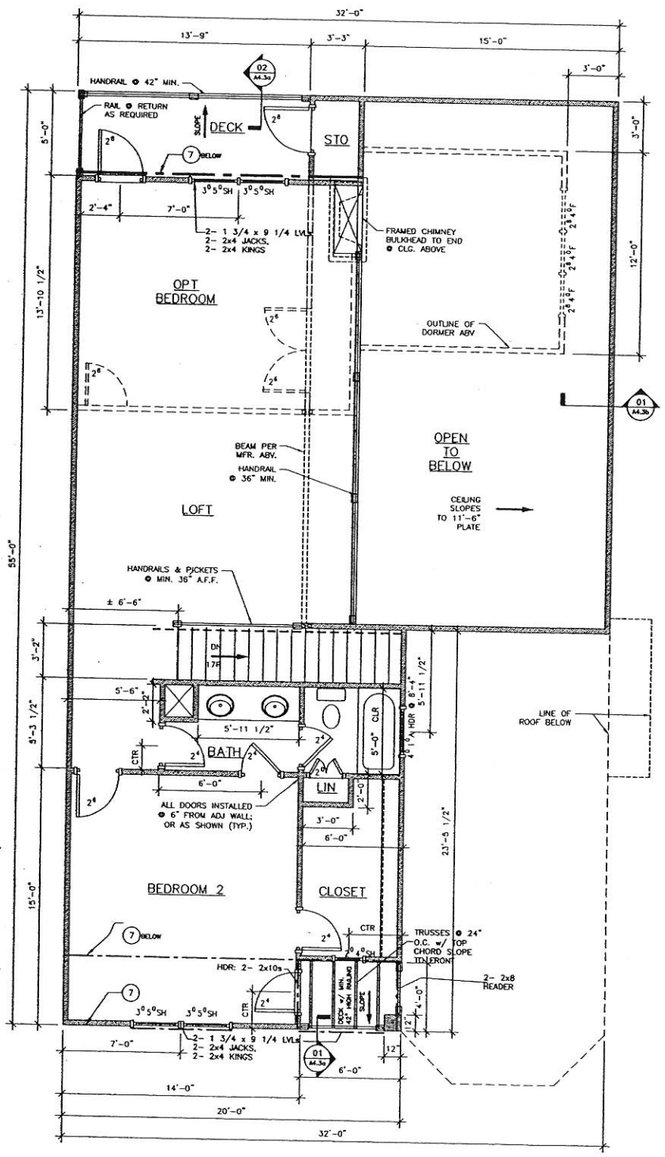
ALL OTHER FLRs: 2x4 STUDS @ 16" O.C.

GENERAL NOTES:

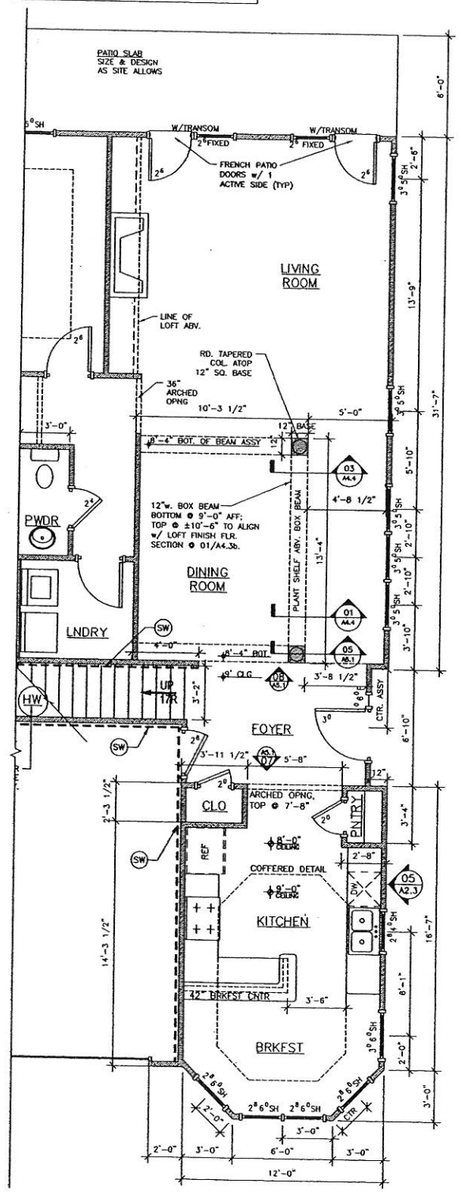
1. ALL INTERIOR DOORS TO BE INSTALLED @ 6" FROM ADJACENT WALLS WHENEVER POSSIBLE.
2. HOT WATER HEATERS TO BE PLACED IN ATTIC OR UPPER LEVEL MECH. ROOM.

Square Footage

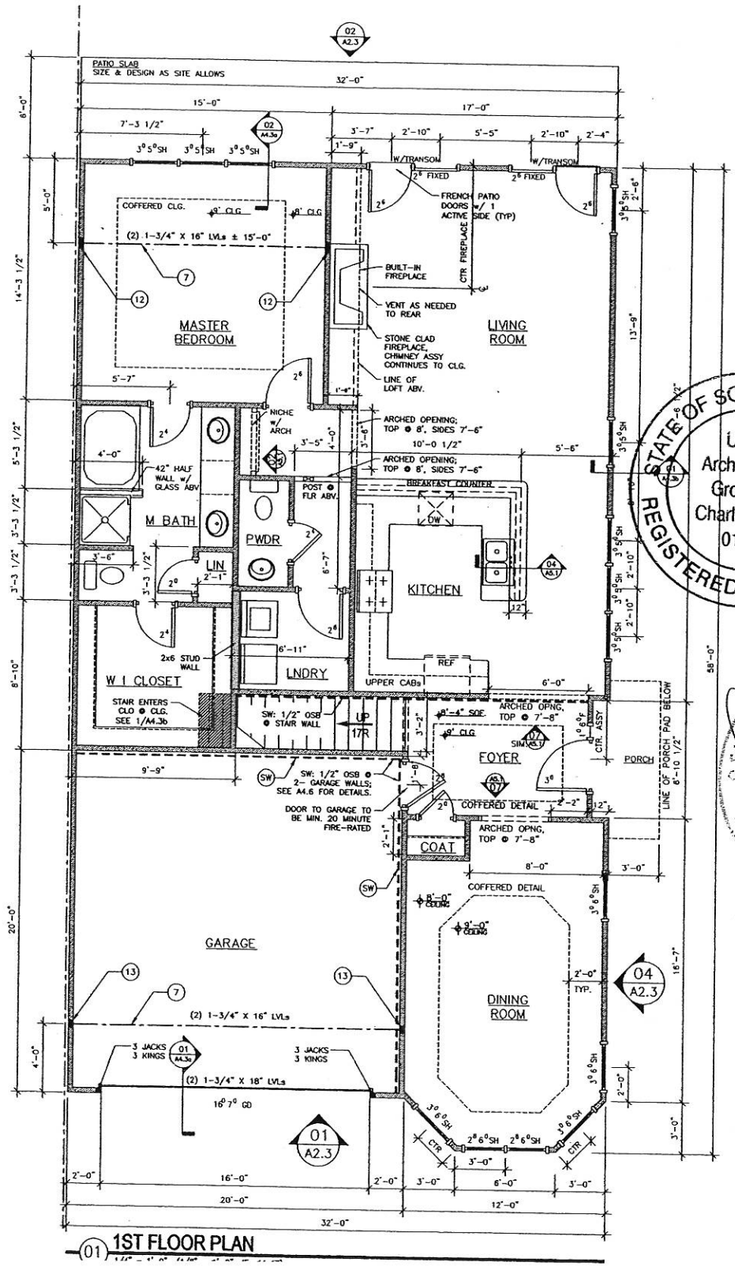
FIRST FLOOR	=	1,386 sq.ft.
SECOND FLOOR	=	854 sq.ft.
TOTAL HEATED	=	2,240 sq.ft.
GARAGE	=	394 sq.ft.
TOTAL	=	2,634 sq.ft.



03 2ND FLOOR PLAN
1/4" = 1'-0" (1/8" = 1'-0" F 11x17)



02 1ST FLOOR PLAN - ALTERNATE
1/4" = 1'-0" (1/8" = 1'-0" F 11x17)



01 1ST FLOOR PLAN

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UNIT C

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PROJECT NO.: 2530
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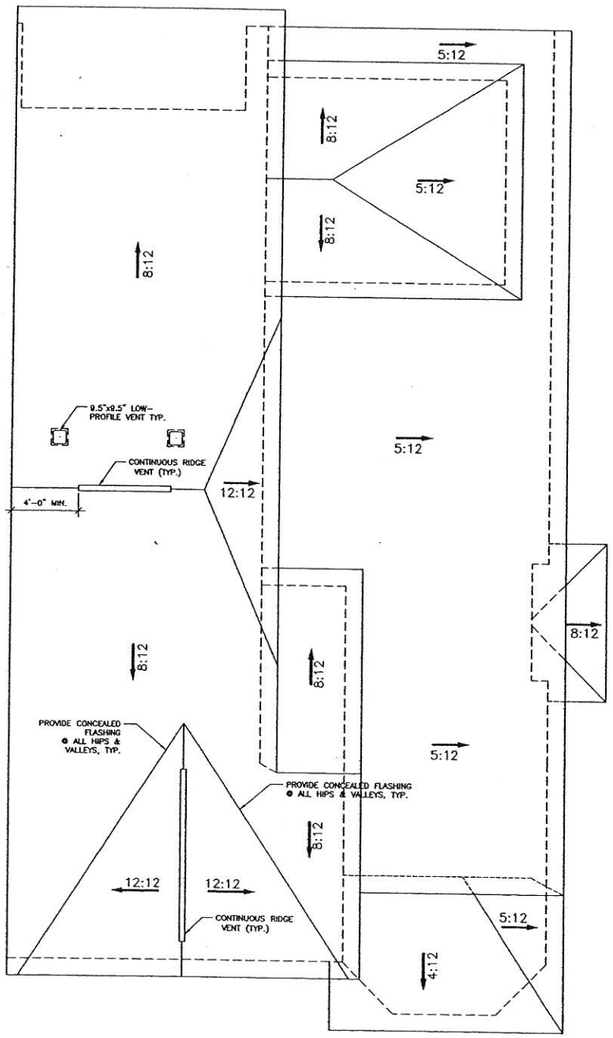
A1.3

–C– UNIT ATTIC VENTILATION CALCULATION

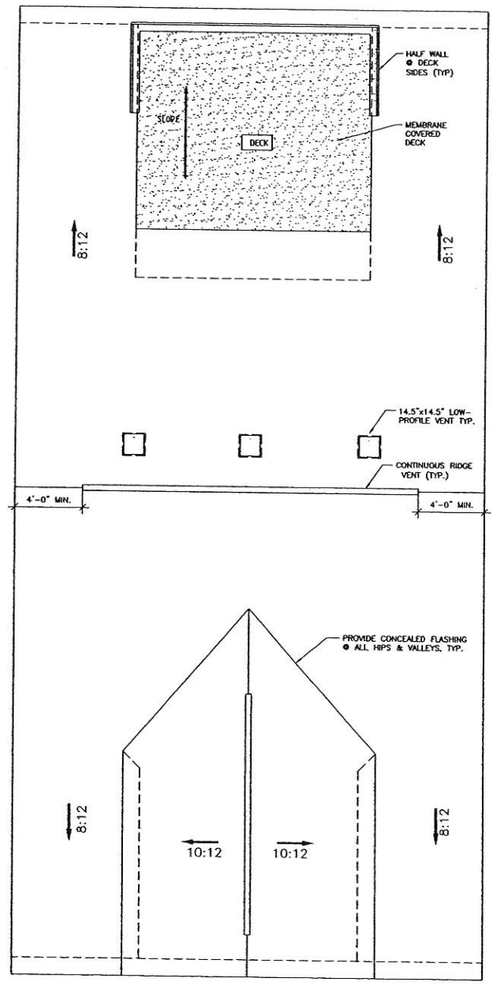
1.	AREA:	1,680 SQ FT / 150 = 11.2 SQ FT 8.33 x 144 = 1,613 SQ. INCHES
2.	REQUIRED VENT AREA:	1,613 SQ. INCHES
3.	RIDGE VENTS PROVIDED:	15.5 LIN.FT. @18"/FT = 278 SQ INCHES
4.	SOFFIT VENTING PROVIDED:	130 LIN.FT. @9"/FT = 1,170 SQ INCHES
5.	LOW PROFILE ROOF VENTS:	(2) @ 9.50" x 9.50" = 180 SQ INCHES
6.	TOTAL VENT AREA PROVIDED:	1,629 SQ. INCHES SUPPLIED



03 ROOF PLAN– @ END UNIT –C–

–B– UNIT ATTIC VENTILATION CALCULATION

1.	AREA:	1,325 SQ FT / 150 = 8.83 SQ FT 8.33 x 144 = 1,272 SQ. INCHES
2.	REQUIRED VENT AREA:	1,272 SQ. INCHES
3.	RIDGE VENTS PROVIDED:	20 LIN.FT. @ 18"/FT = 360 SQ INCHES
4.	SOFFIT VENTING PROVIDED:	42 LIN.FT. @ 9"/FT = 378 SQ INCHES
5.	LOW PROFILE ROOF VENTS:	(3) @ 14.5" x 14.5" = 630. SQ. INCHES
6.	TOTAL VENT AREA PROVIDED:	1,368 SQ. INCHES SUPPLIED



02 ROOF PLAN– @ UNIT –B–

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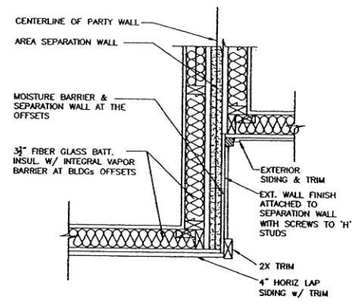
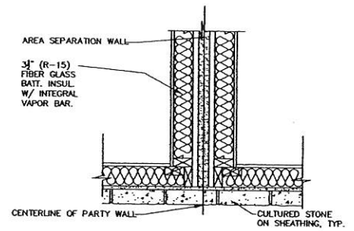
A1.4



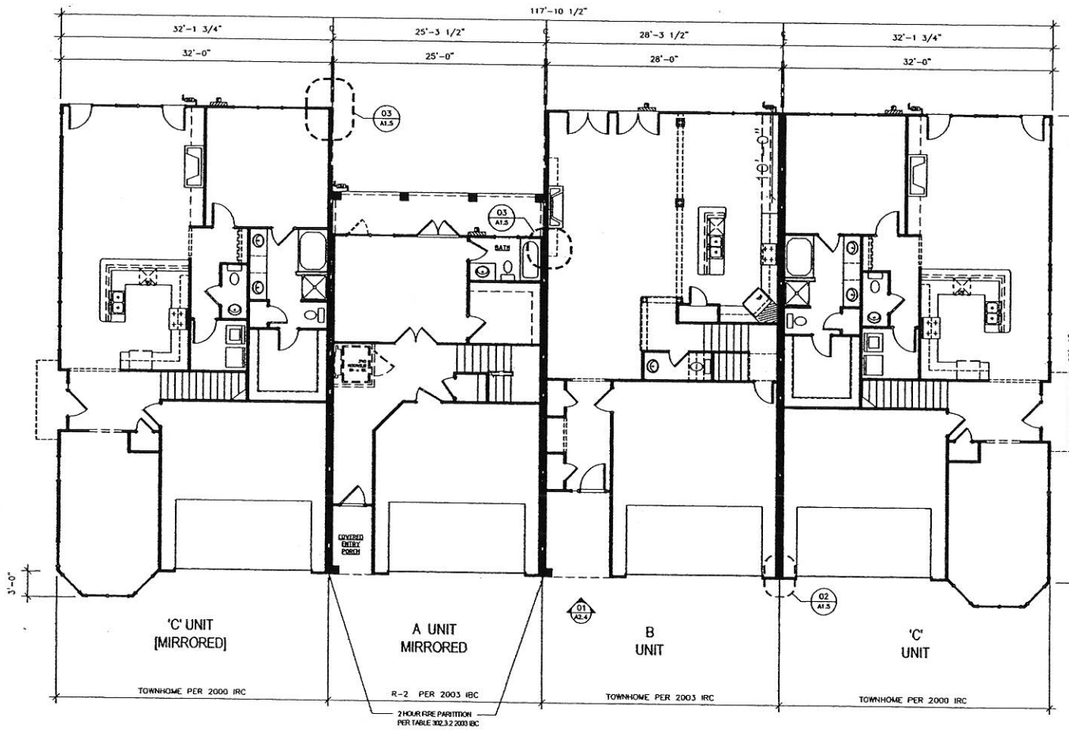
03 TYP. SEP. WALL @ REAR FACE

SCALE: 1" = 1'-0" (1/2" = 1'-0" if on 11x17)



02 TYP. SEP. WALL @ FLUSH FACE

SCALE: 1" = 1'-0" (1/2" = 1'-0" if on 11x17)



LEGEND

2 HOUR FIRE PARTITION PER UL DESIGN NO. U336

01 4 - UNIT COMBO FLOOR PLANS

SCALE: 1/8" = 1'-0" (1/16" = 1'-0" if on 11x17)

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JOAN E. URBAN
NUMBER 5409
6/6/06
REGISTERED ARCHITECT

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A1.5

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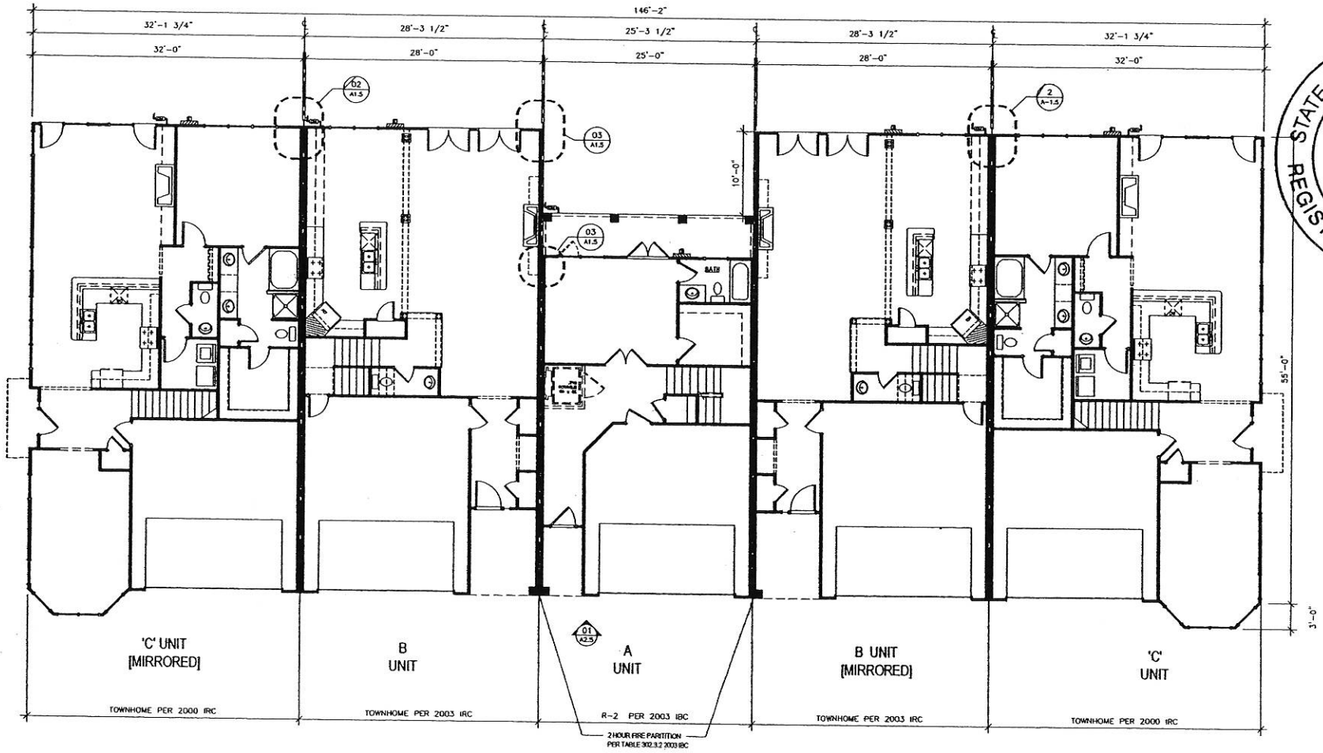

01 5 - UNIT COMBO FLOOR PLANS

SCALE: 1/8" = 1'-0" (1/16" = 1'-0" @ 11x17)

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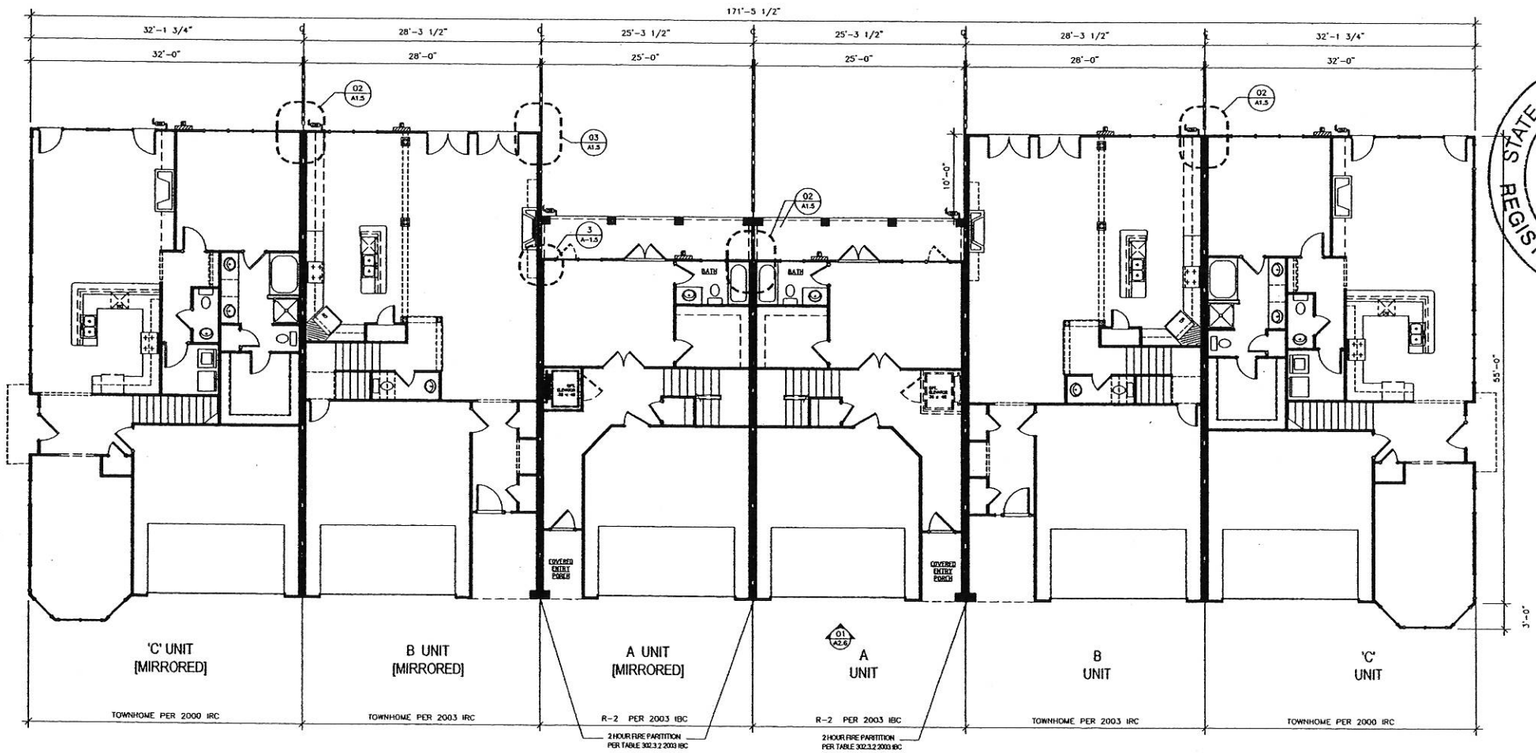
A1.6



01 6 - UNIT COMBO FLOOR PLANS

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JOHN R. URBAN
REGISTERED ARCHITECT
6/6/06

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5 JUNE 2006
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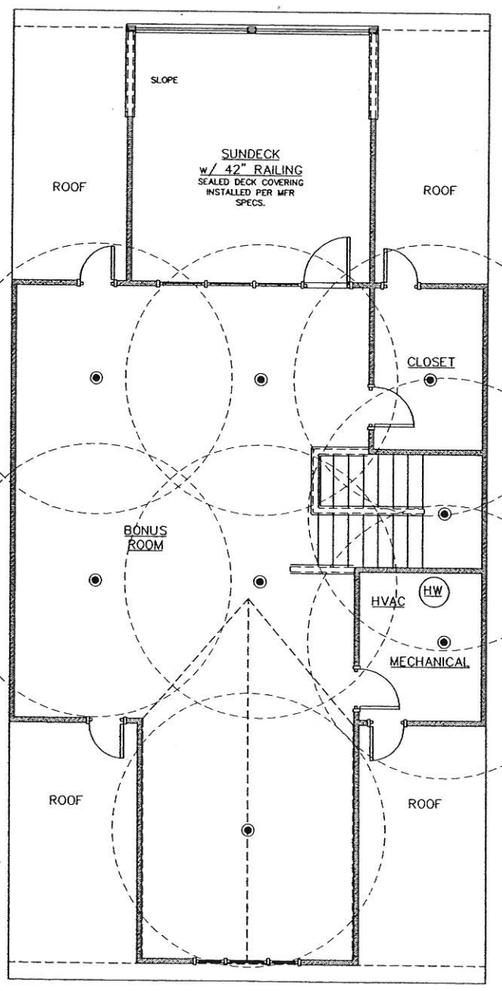
5 JUNE 2006

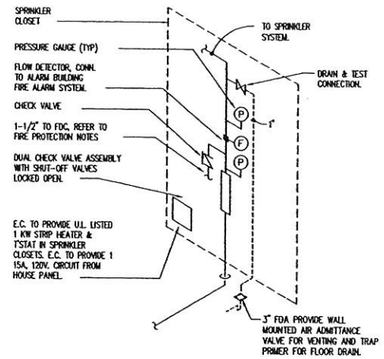
A1.7

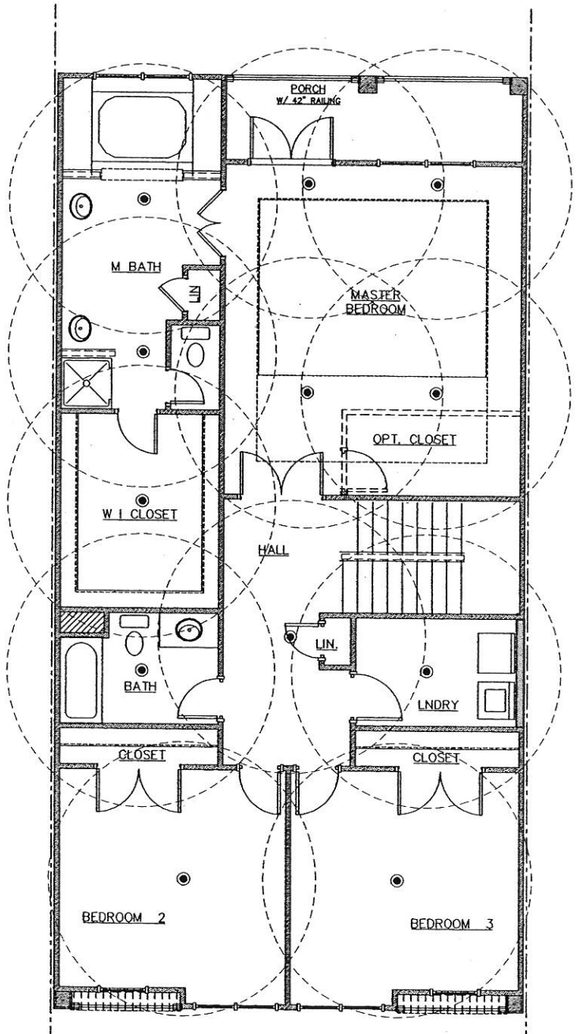
FIRE PROTECTION GENERAL NOTES

1. THE FIRE PROTECTION OF THIS BUILDING SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES AND SHALL CONFORM TO NFPA 13R GENERAL REQUIREMENTS AND IN FULL COMPLIANCE WITH LOCAL AMENDMENTS AND COUNTY FIRE MARSHAL.
2. THE CONTRACTOR SHALL PRODUCE, SHOP DRAWINGS OF A 13R SYSTEM SHOWING COORDINATION WITH ALL STRUCTURAL AND HVAC COMPONENTS.
3. THE CONTRACTOR SHALL PRODUCE HIS OWN HYDRAULICALLY DESIGNED SYSTEM FOR REVIEW AND APPROVAL BY THE LOCAL FIRE MARSHALS OFFICE AND ARCHITECT FOR USE ON THIS PROJECT.
4. SPRINKLER SYSTEM DESIGN SHALL BE BASED ON THE FOLLOWING CRITERIA:
   - A. SPACING OF HEADS: 16'x16'-PENDANT
   - B. TYPE OF PIPE: GREY POLYBUTYLENE, "BLAZEMASTER", OR APPROVED EQUAL
   - C. TYPE OF FASTENING OF PIPE: HEAT FUSION
   - D. TYPE OF BACKFLOW PREVENTION: DUAL CHECK VALVE
   - E. SIZE OF MAIN LINE AT STREET: REFER TO CIVIL DRAWINGS.
   - F. SIZE OF BRANCH LINES: 1/4"
   - G. TYPE AND DEGREE OF HEADS USED: RESIDENTIAL WHITE PENDANT WITH WHITE ESCUTCHEON PLATES, 165 F. RATED OR EQUAL
   - H. FLOW VERIFICATION SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO CALLING FIRE MARSHALS OFFICE FOR APPOINTMENT FOR INSPECTORS FLOW TEST.
   - I. HEAD SPACING CRITERIA SHALL BE AS FOLLOWS;
     1. NO MORE THAN 8'-0" OFF WALL
     2. NO LESS THAN 8'-0" APART
     3. NO MORE THAN 16'-0" APART
     4. NO LESS THAN 1'-6" FROM THE RANGE FOOTPRINT
     5. NO LESS THAN 7'-0" IN FRONT OF OR 3'-0" TO THE SIDE OF A RECESSED FIREPLACE
5. FOR WATER FLOW DATA SEE CIVIL PLANS.
6. FIRE DEPARTMENT CONNECTION TO BE BRASS OR AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.

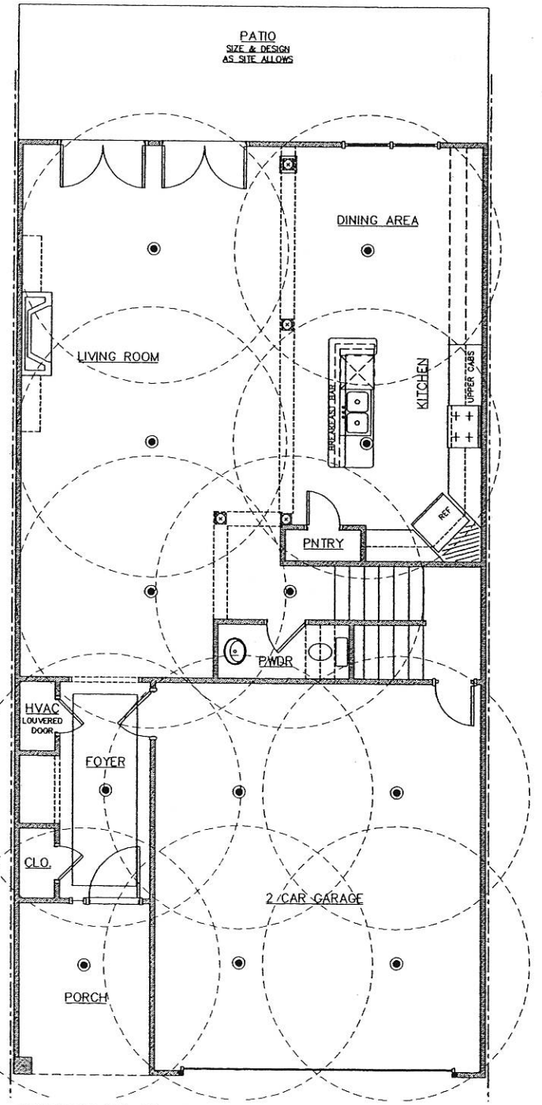


FLOOR PLAN - Third Floor Sprinkler Schematic





FLOOR PLAN - Second Floor Sprinkler Schematic



FLOOR PLAN - First Floor Sprinkler Schematic

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TEGA CAY, SC

UNIT -B-

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1 Permit Revisions: 07/06/06

A1.8

FIRE PROTECTION GENERAL NOTES

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   - D. TYPE OF BACKFLOW PREVENTION: DUAL CHECK VALVE
   - E. SIZE OF MAIN LINE AT STREET: REFER TO CIVIL DRAWINGS
   - F. SIZE OF BRANCH LINES: 3/4"
   - G. TYPE AND DEGREE OF HEADS USED: RESIDENTIAL WHITE PENDANT WITH WHITE ESCUTHEON PLATES, 165° F. RATED OR EQUAL
   - H. FLOW VERIFICATION SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO CALLING FIRE MARSHALS OFFICE FOR APPOINTMENT FOR INSPECTORS FLOW TEST.
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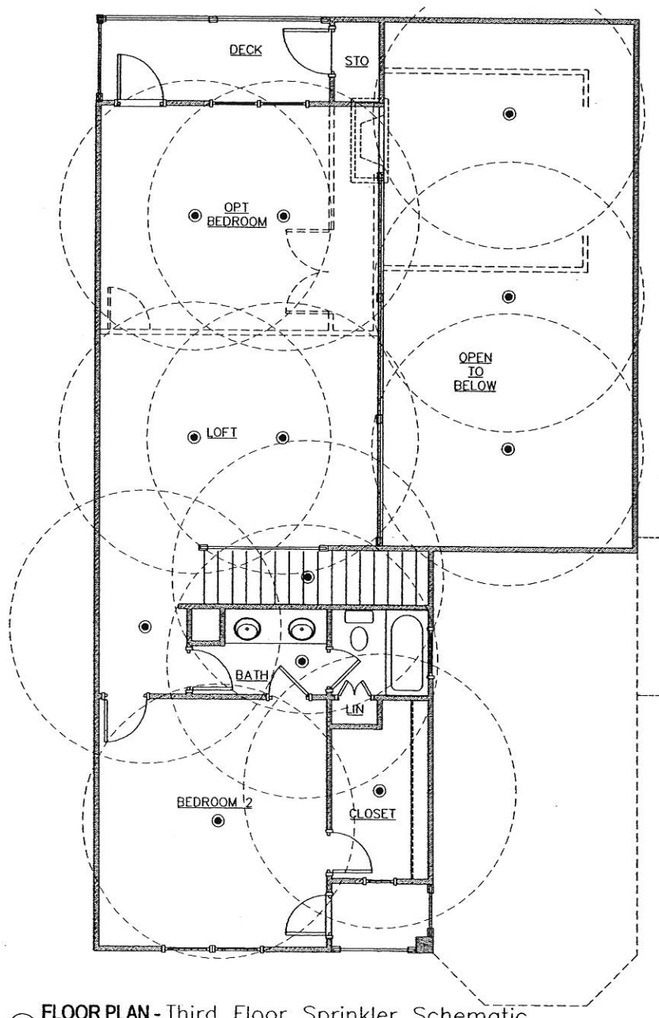
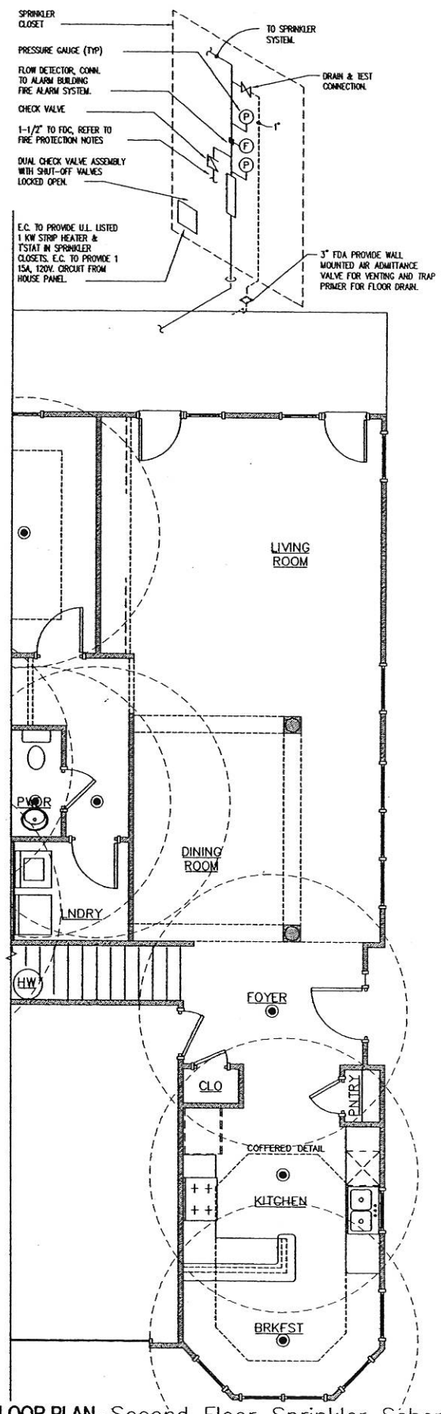
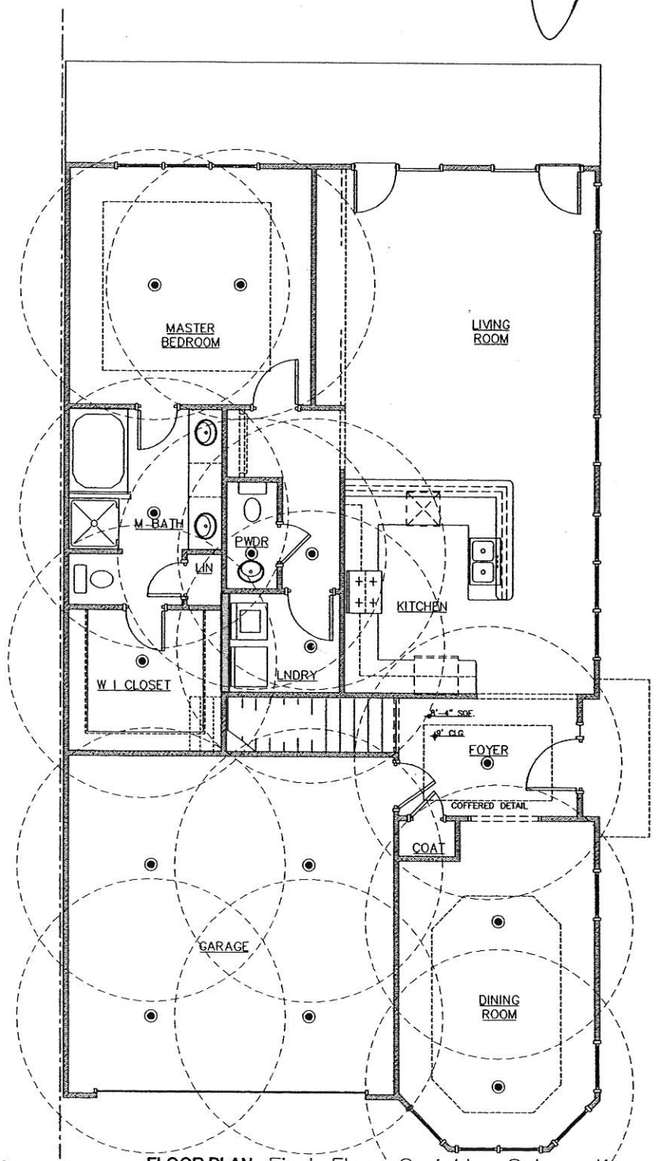
     5. NO LESS THAN 7'-0" IN FRONT OF OR 3'-0" TO THE SIDE OF A RECESSED FIREPLACE
5. FOR WATER FLOW DATA SEE CIVIL PLANS.
6. FIRE DEPARTMENT CONNECTION TO BE BRASS OR AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.



03 **FLOOR PLAN -** Third Floor Sprinkler Schematic



02 **FLOOR PLAN -** Second Floor Sprinkler Schematic



01 **FLOOR PLAN -** First Floor Sprinkler Schematic

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5 JUNE 2006
⚠ Permit Revisions: 07/06/06

A1.9

GENERAL NOTES:

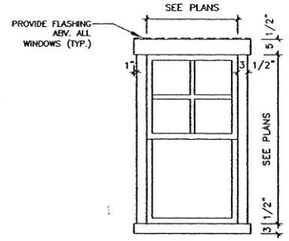
1. EXTERIOR WALLS SHALL BE INSULATED w/ BATT INSULATION w/ VAPOR RESISTANT BARRIER ATTACHED TO BATT OR INSTALLED SEPARATELY.

2. PUT VAPOR BARRIER ON HEATED SIDE OF WALL OR USE KRAFT-FACED INSULATION.

3. REFER TO TRUSS SHOP DRAWINGS FOR ORIENTATION AND LAYOUT.

4. REFER TO SHEET A4.1, A4.2,A4.3,A4.4 FOR BALCONY & DECK DETAILS.

5. USE HARDIE SIDING PRODUCTS FOR SIDING, TRIM, SOFFITS, ETC; OR EQUIVALENT CEMENTIOUS SIDING PRODUCTS.



03 TYP. WINDOW TRIM DETAIL
SCALE: 1/2" = 1'-0" (1/4" = 1'-0" IF 11x17)

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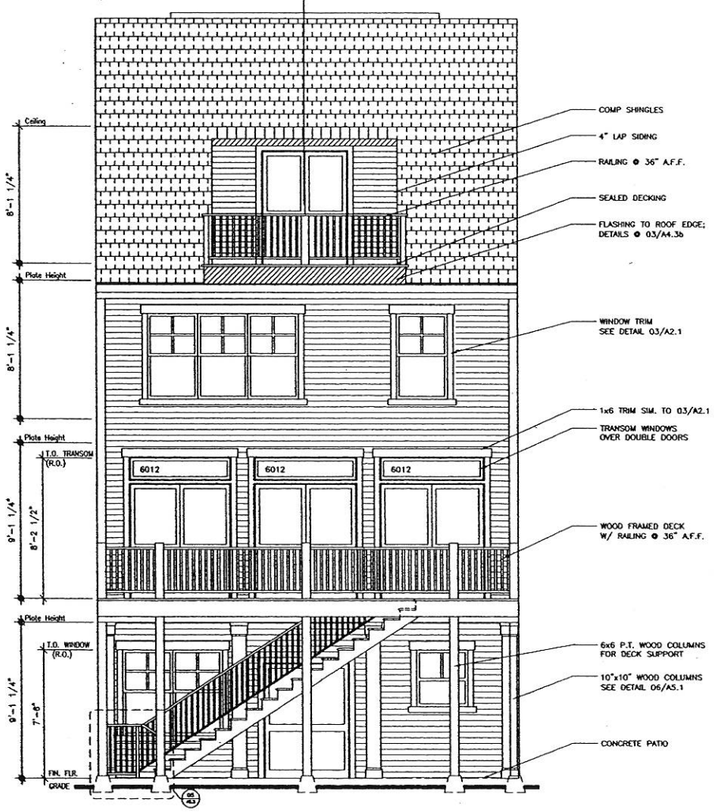
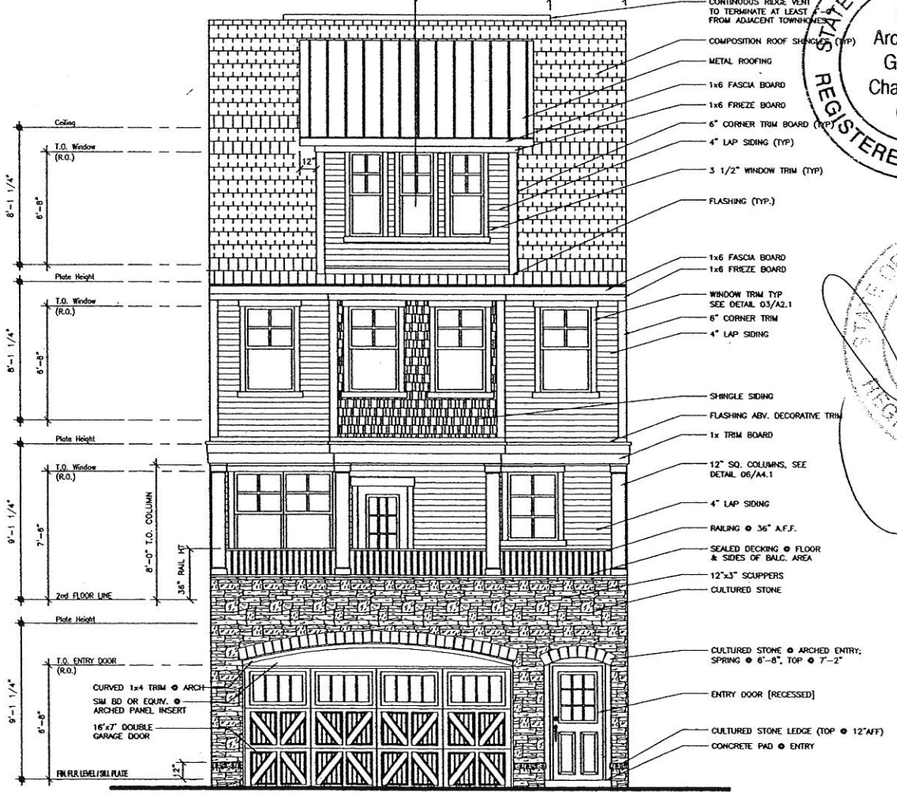
02 A4.1



REAR ELEVATION

01 A4.1



FRONT ELEVATION

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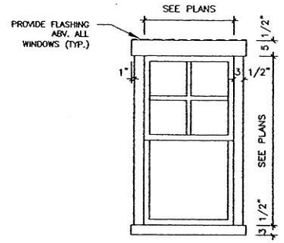
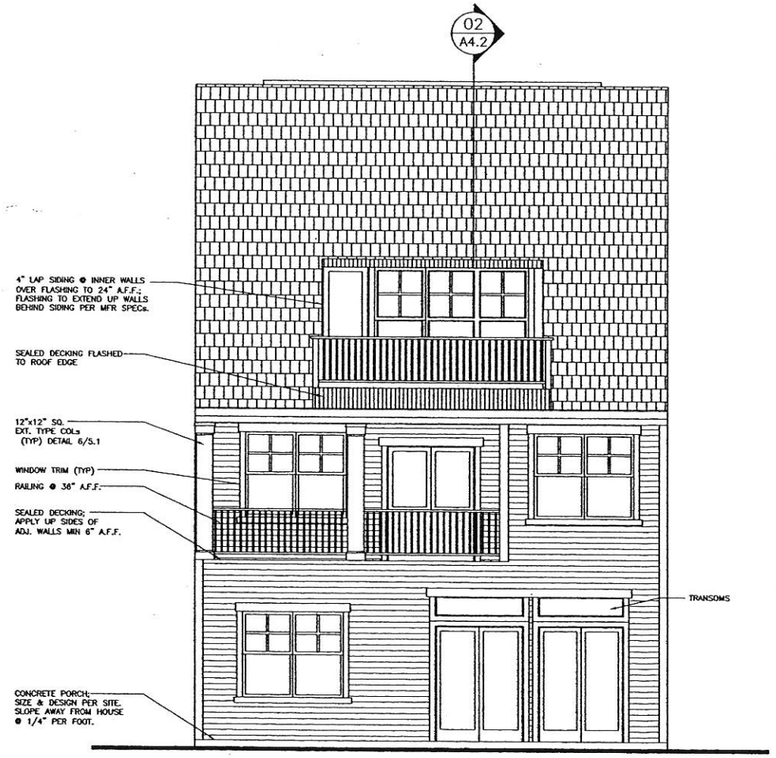
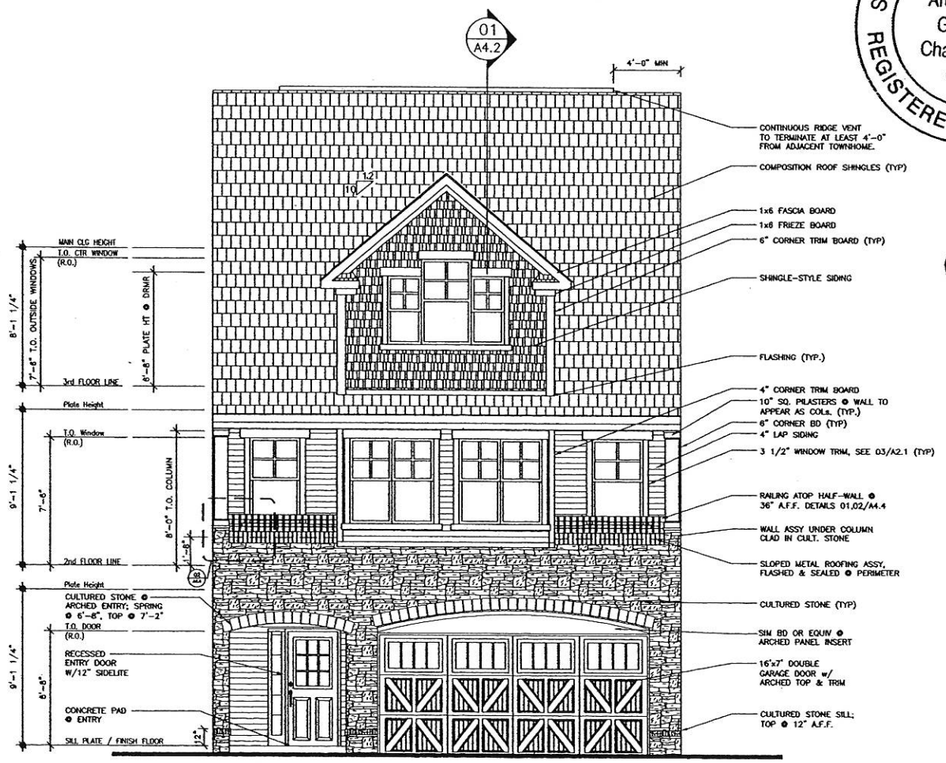
A2.1



03 TYP. WINDOW TRIM DETAIL
SCALE: 1/2" = 1'-0" (1/4" = 1'-0" IF 11x17)



02 REAR ELEVATION
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 FRONT ELEVATION

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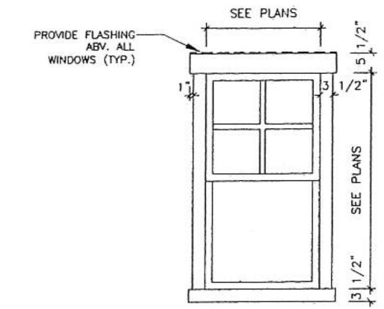
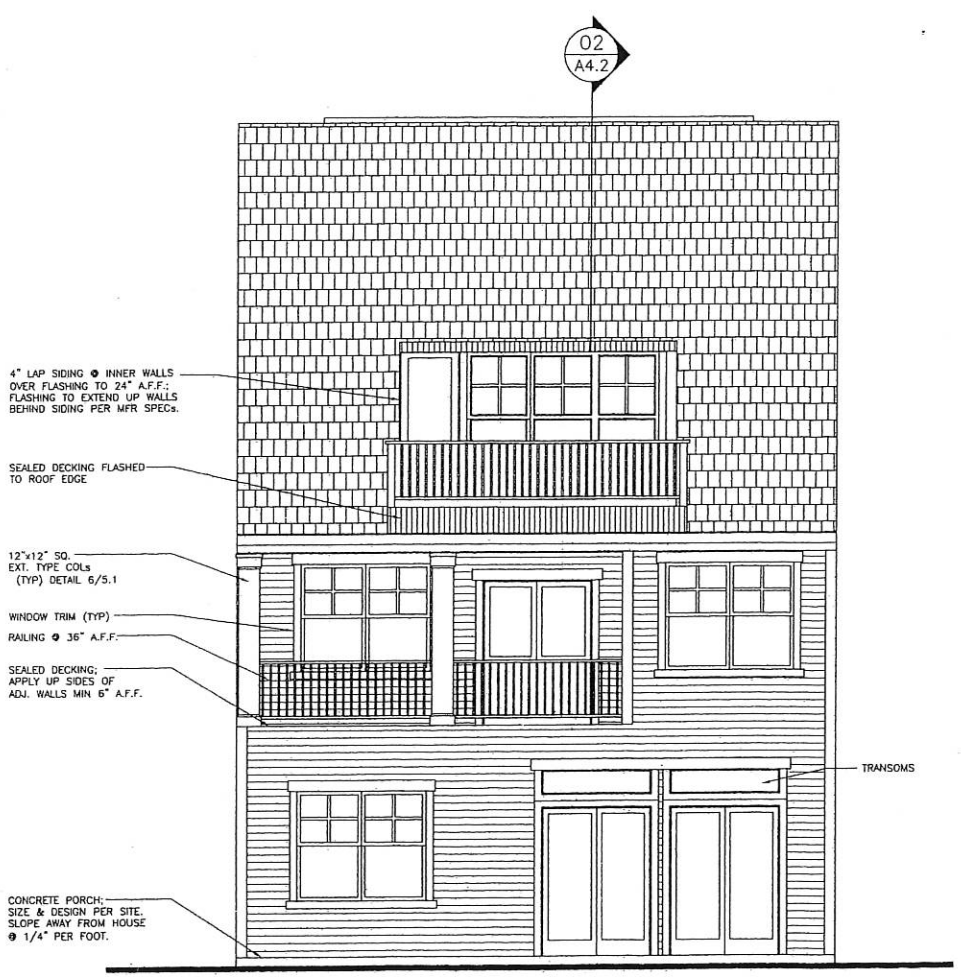
A2.2

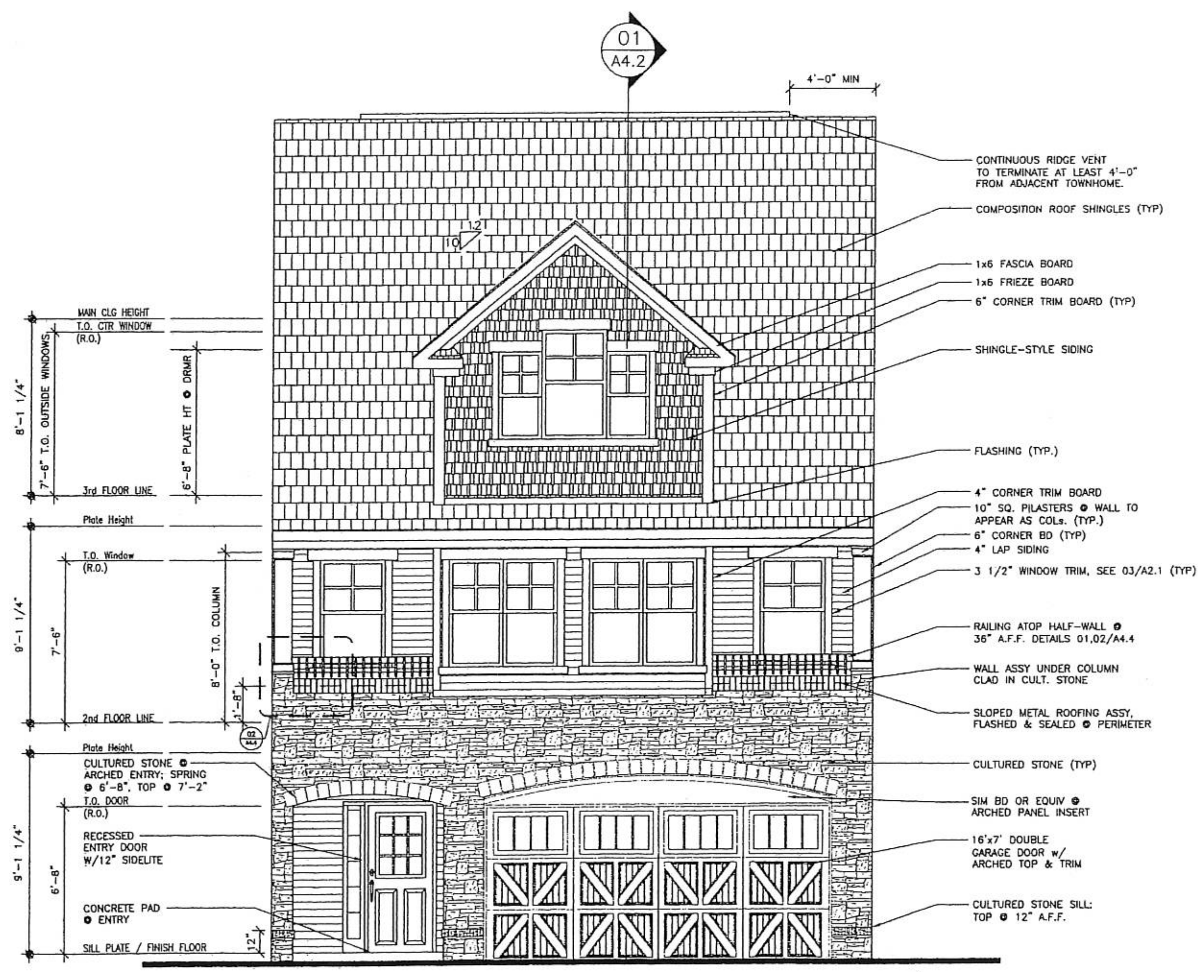
Bum-40



03 TYP. WINDOW TRIM DETAIL
SCALE: 1/2" = 1'-0" (1/4" = 1'-0" IF 11x17)



02 REAR ELEVATION
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 FRONT ELEVATION
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)

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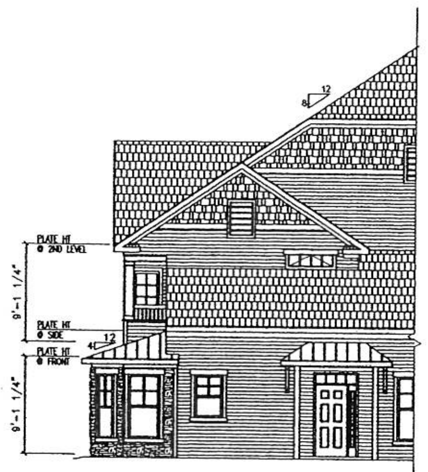
LAKE SHORE TOWN HOMES

TEGA CAY, SC

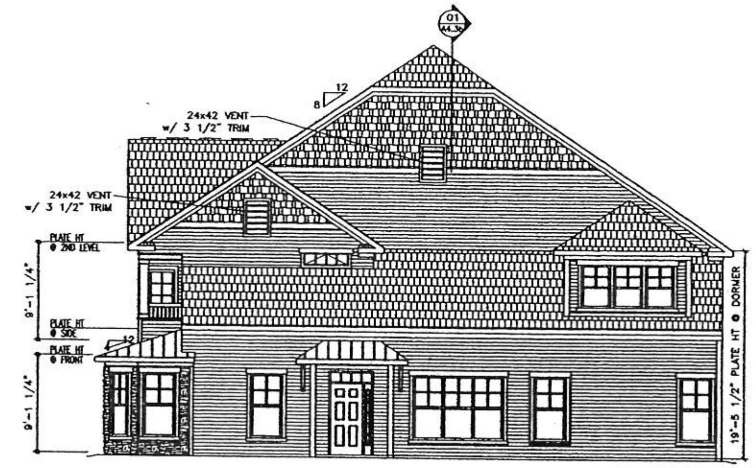
UNIT -B-

DATE DRAWN: 8 SEPTEMBER 2005
PROJECT NO: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
1 OCTOBER 2005

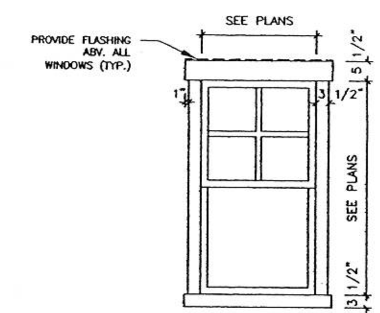
A2.2
UNIT -B- ELEVATIONS



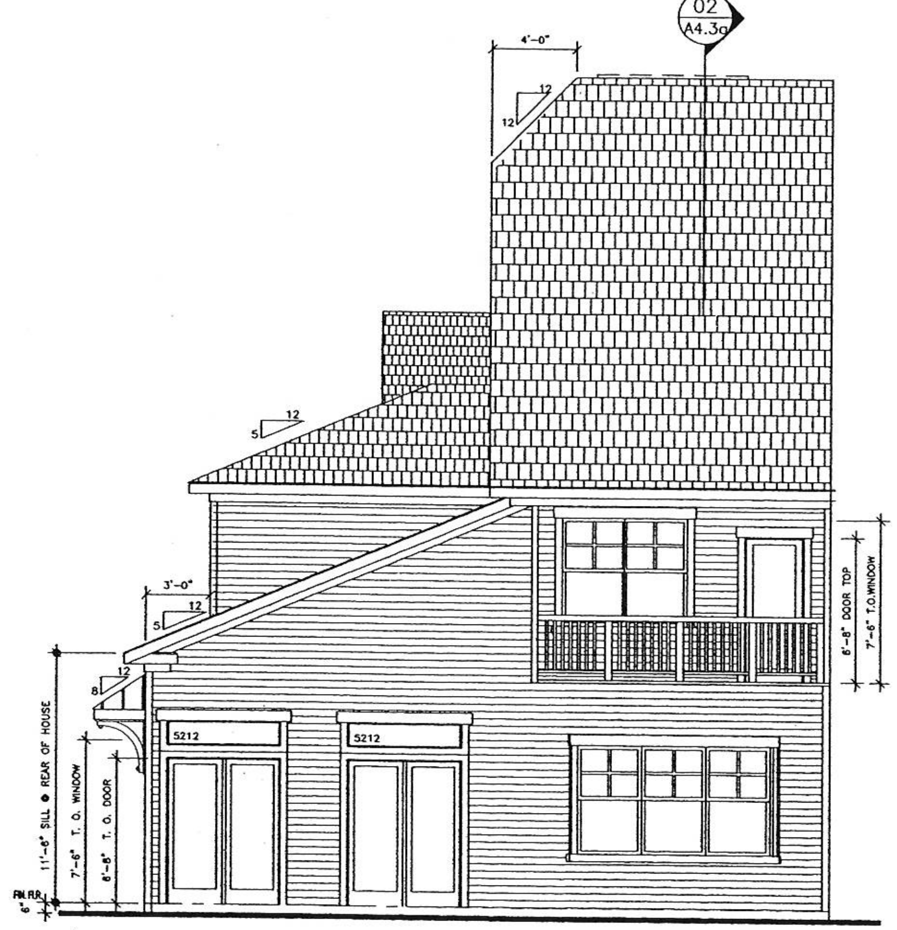
05 OPT. SIDE ELEVATION
1/8" = 1'-0" (1/16" = 1'-0" IF 11x17)



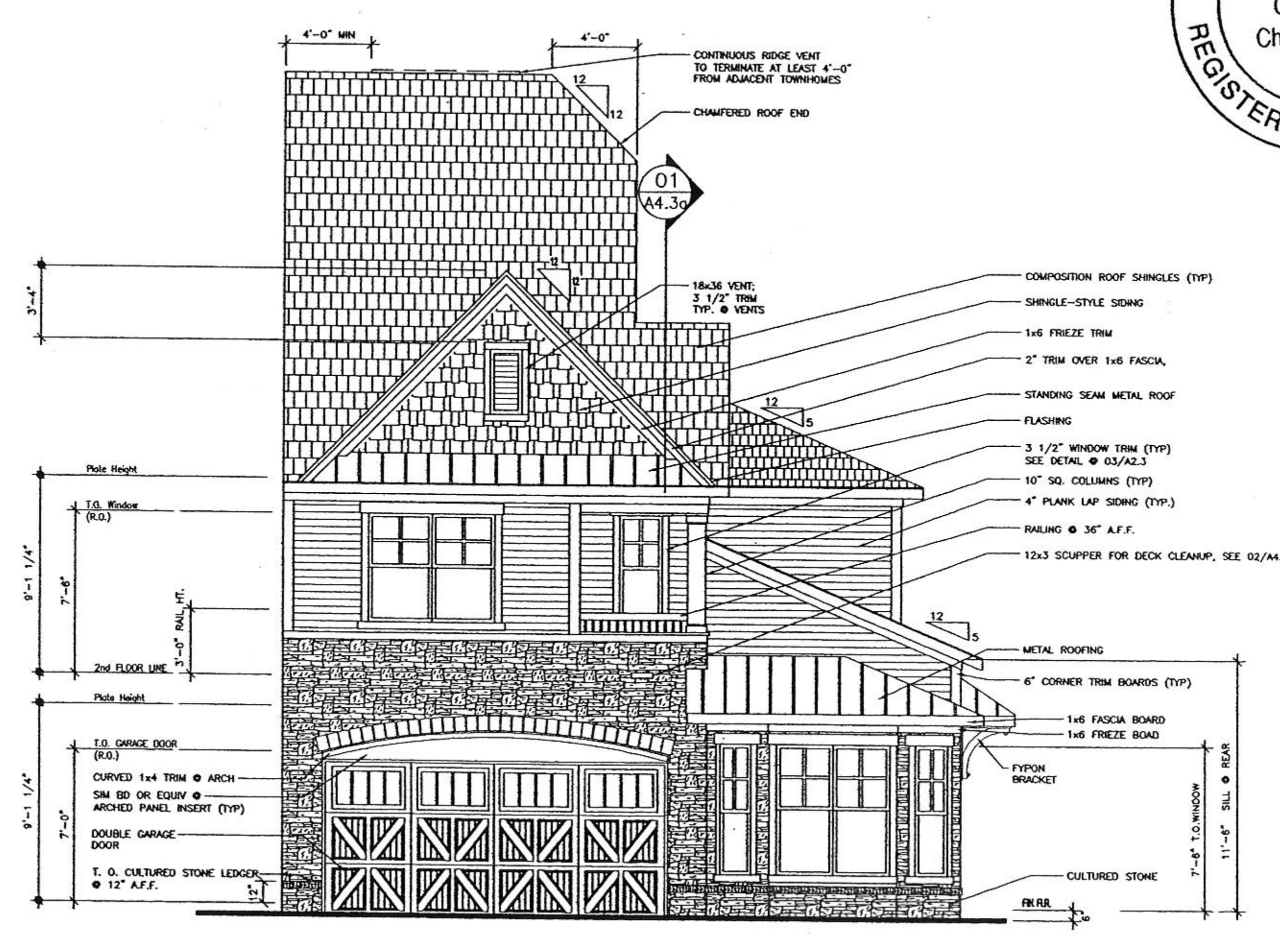
04 STD. SIDE ELEVATION
1/8" = 1'-0" (1/16" = 1'-0" IF 11x17)



03 TYP. WINDOW TRIM DETAIL
SCALE: 1/2" = 1'-0" (1/4" = 1'-0" IF 11x17)



02 REAR ELEVATION
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)



01 FRONT ELEVATION
1/4" = 1'-0" (1/8" = 1'-0" IF 11x17)

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JOHN ... URBAN
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UNIT
6/6/06

DATE DRAWN: 5 JUNE 2006
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A2.3

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COMBINED ELEVATIONS

4 UNIT

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01 4 - UNIT COMBINED ELEVATIONS
1/8" = 1'-0" [1/16" = 1' - 0" @ 11x17]

A2.4

(01) 5 - UNIT COMBINED ELEVATIONS
1/8" = 1'-0" (1/16" = 1'-0" IF 11x17)

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Matthews, NC
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COMBINED ELEVATIONS 5 - UNIT

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A2.5

01 6 - UNIT COMBINED ELEVATIONS
1/8" = 1'-0" (1/16" = 1'-0" IF 11x17)

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COMBINED ELEVATIONS 6 UNIT

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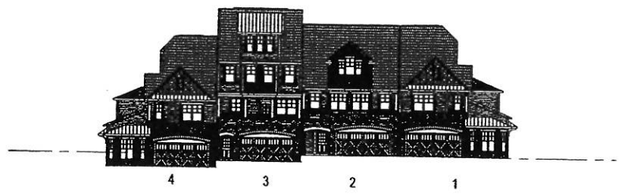
A2.6



01 COMBINED STREET ELEVATIONS w/ LOT NUMBERS
1/16" = 1'-0"

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LAKE SHORE TOWN HOMES

TEGA CAY, SC

COMBINED ELEVATIONS

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ISSUED FOR:
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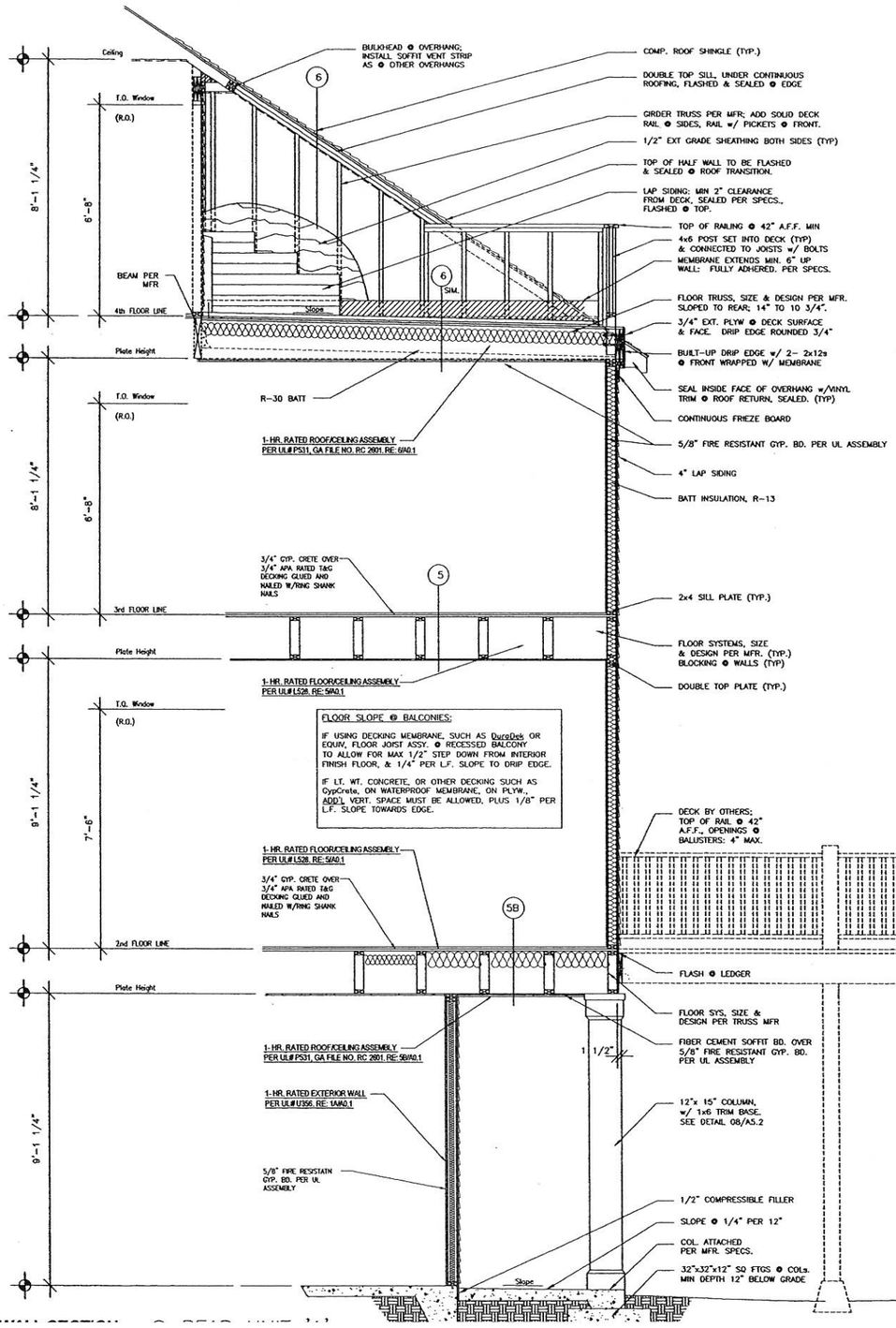
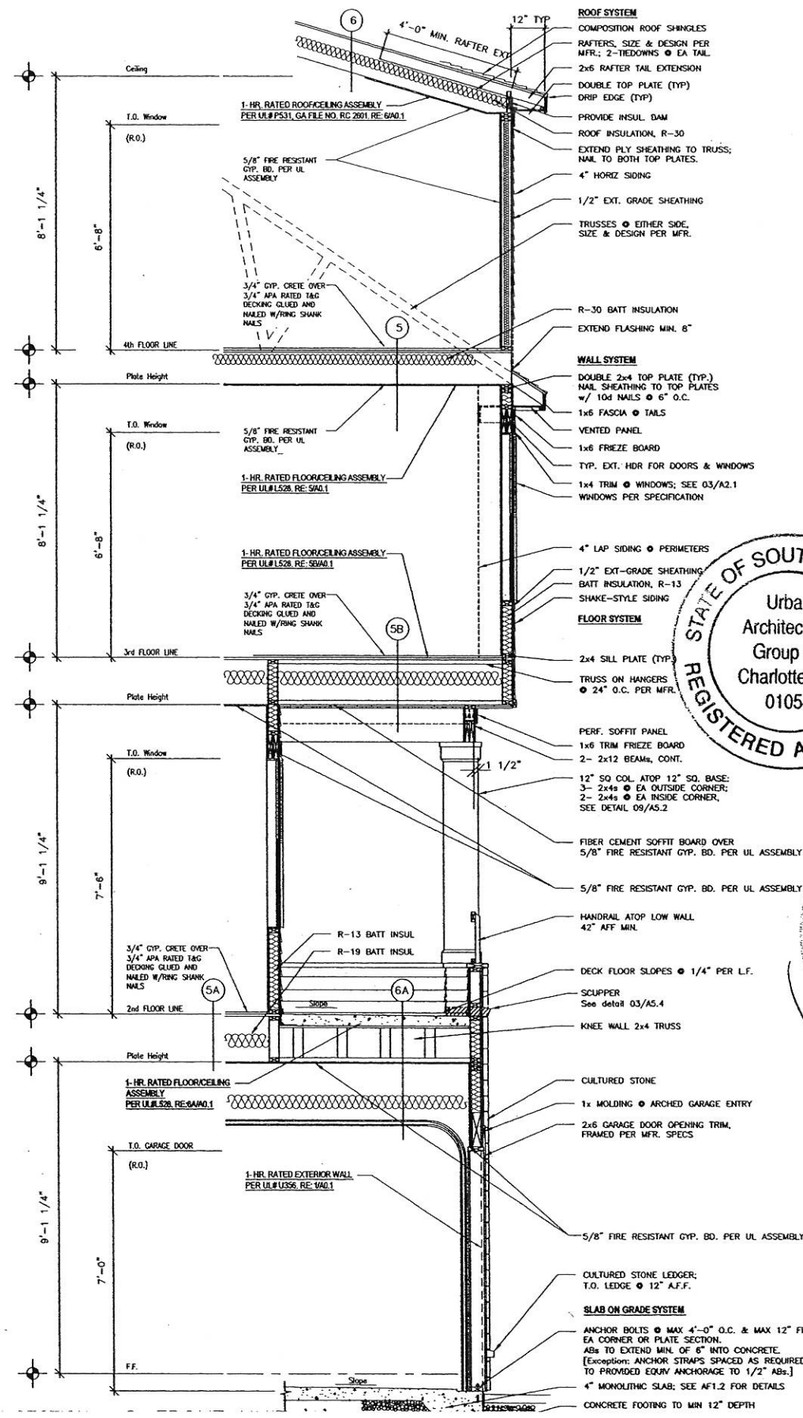
REVISED 26 October 2005

A2.7





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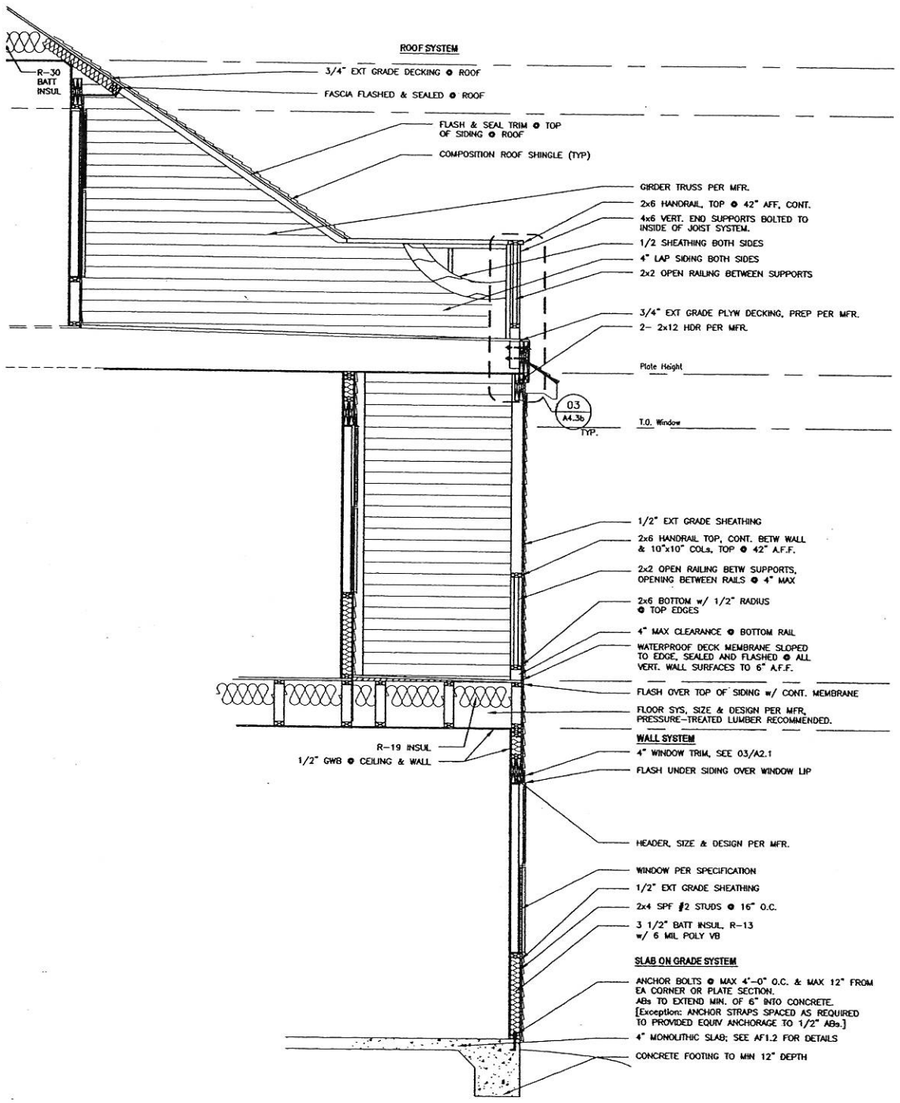
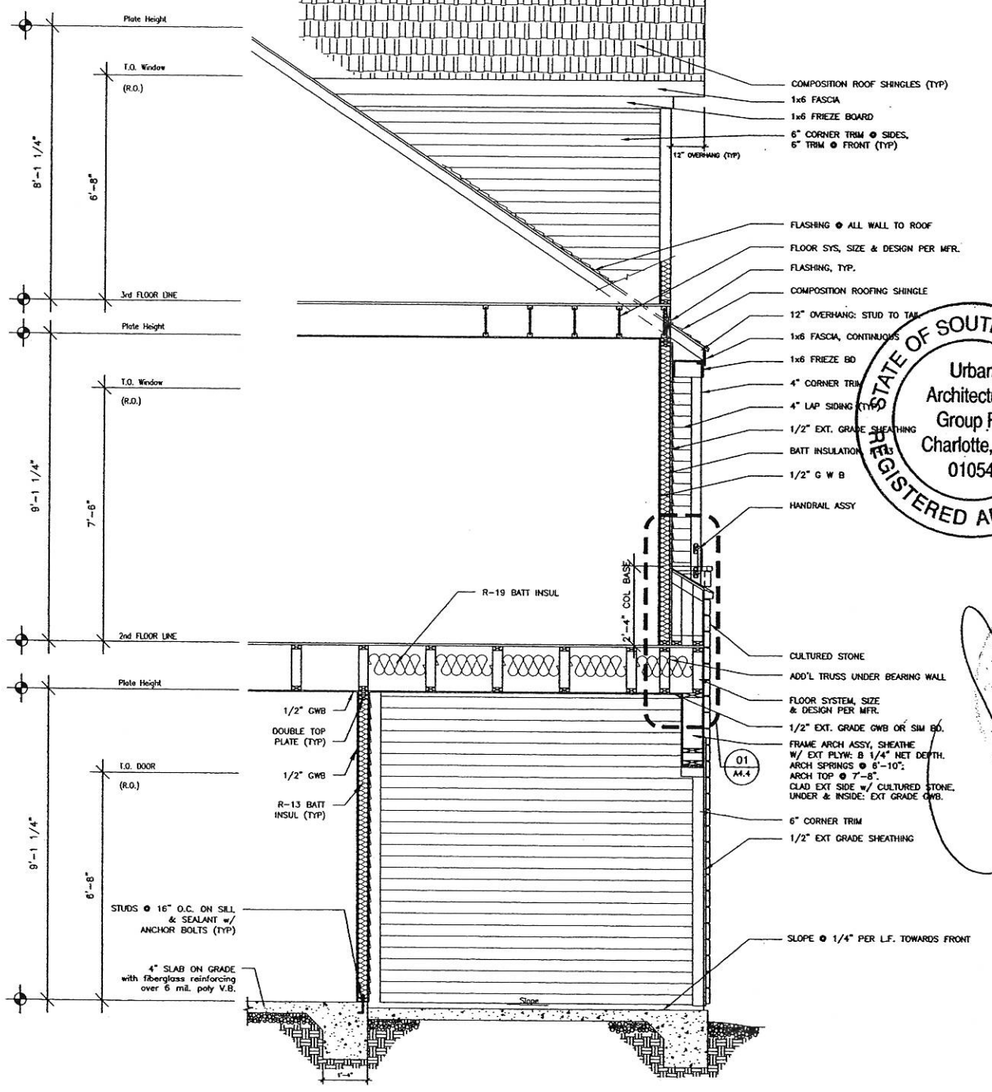
A4.1



02 **WALL SECTION**– @ REAR OF UNIT 'B'
1/2" = 1'-0" (1/4" = 1'-0" if on 11x17)



01 **WALL SECTION**– @ FRONT OF UNIT 'B'

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LAKE SHORE TOWN HOMES

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A4.2

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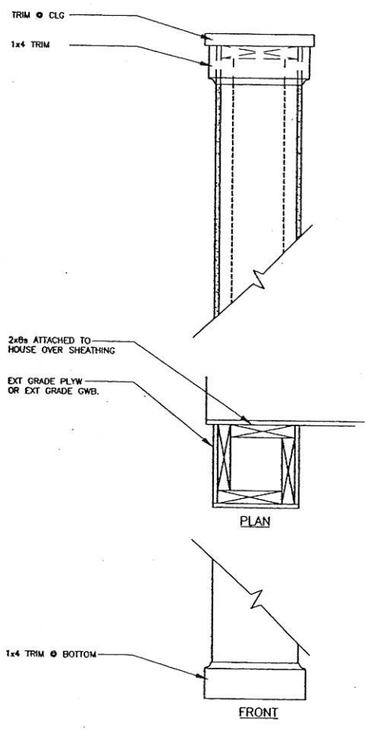
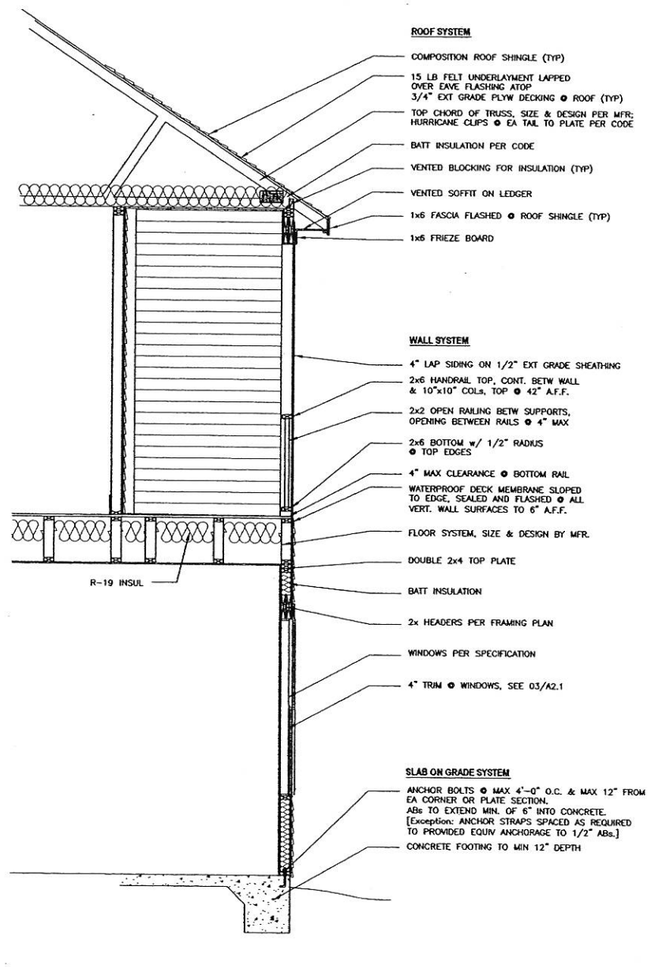
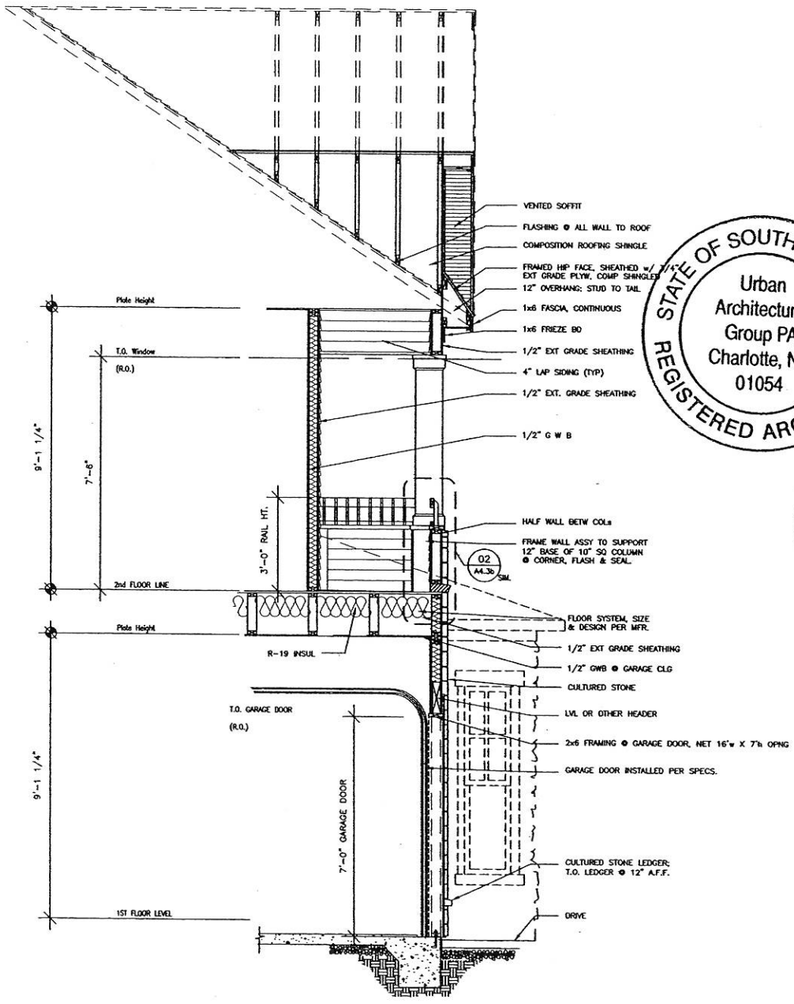


03 PILASTER @ 'B'
SCALE: 1 1/2" = 1'-0"



02 WALL SECTION – @ REAR OF 'END' UNIT 'C'
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)



01 WALL SECTION – @ FRONT OF END UNIT 'C'

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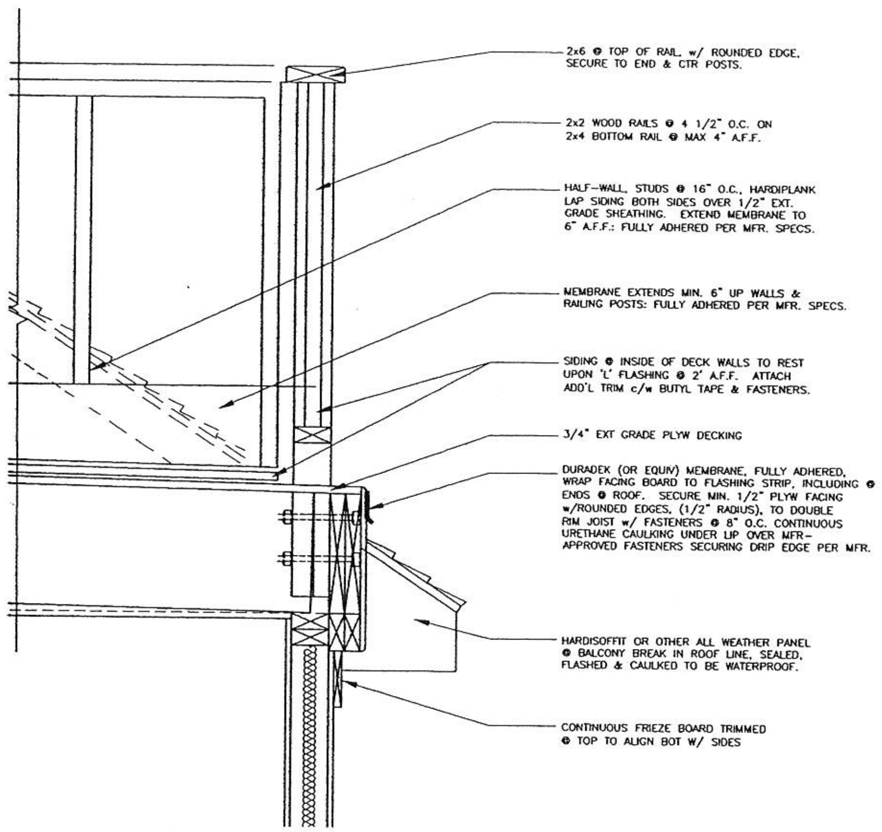
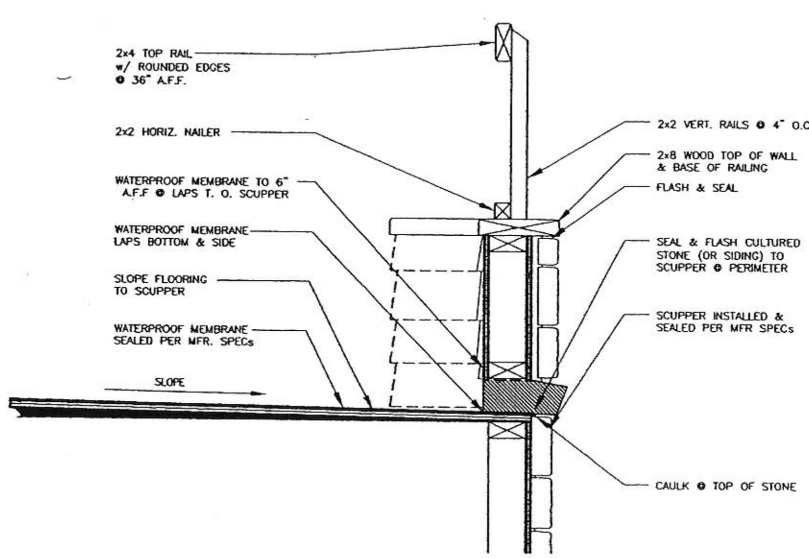
A4.3a



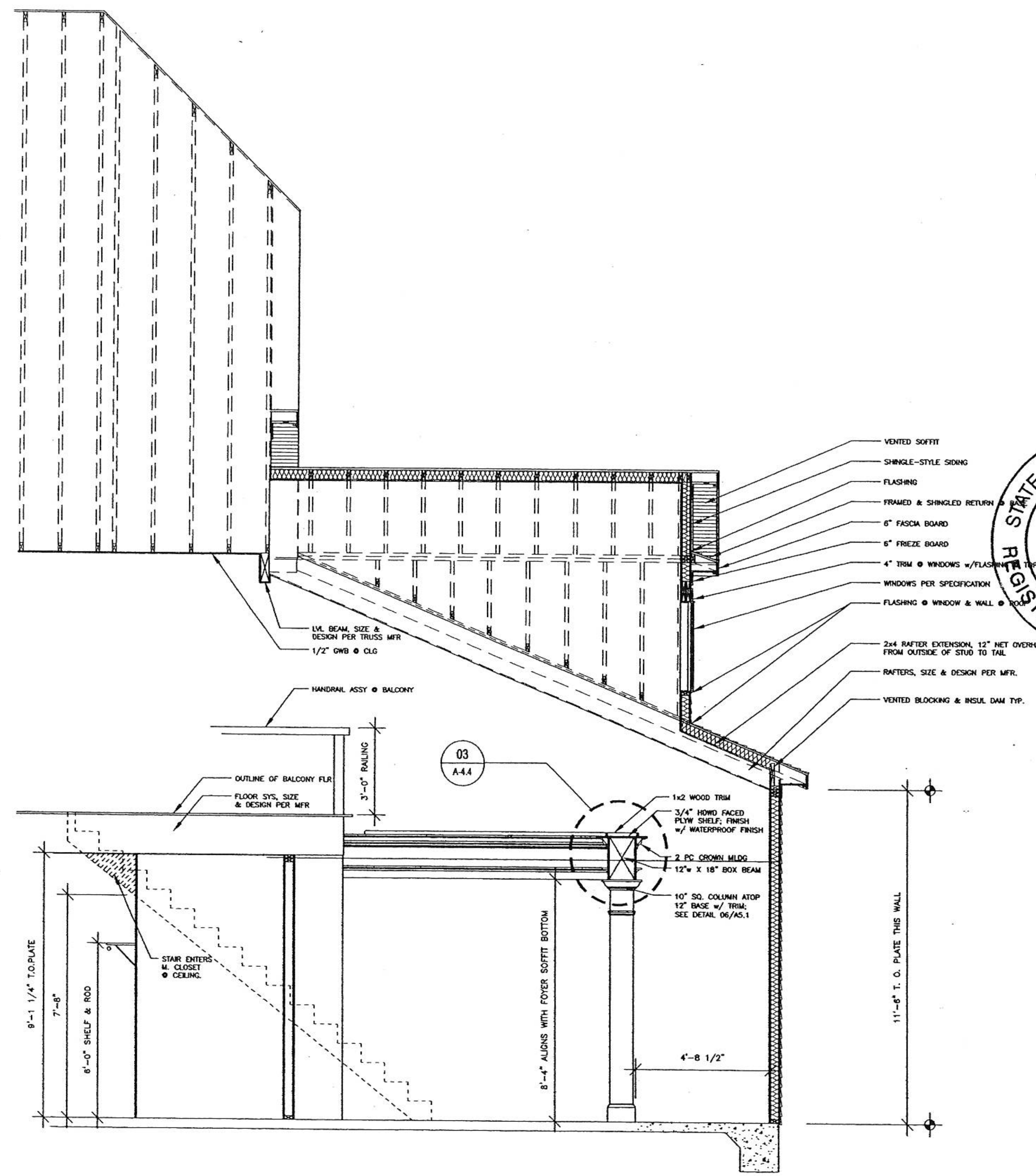
(03) **WALL SECTION**– DECKING MEMBRANE & DRIP EDGE DETAIL

1-1/2" = 1'-0" (3/4" = 1'-0" if on 11x17)



(02) **WALL SECTION**– SCUPPER & HANDRAIL DETAIL

1-1/2" = 1'-0" (3/4" = 1'-0" if on 11x17)



(01) **WALL SECTION**– @ SIDE OF 'END' UNIT 'C'

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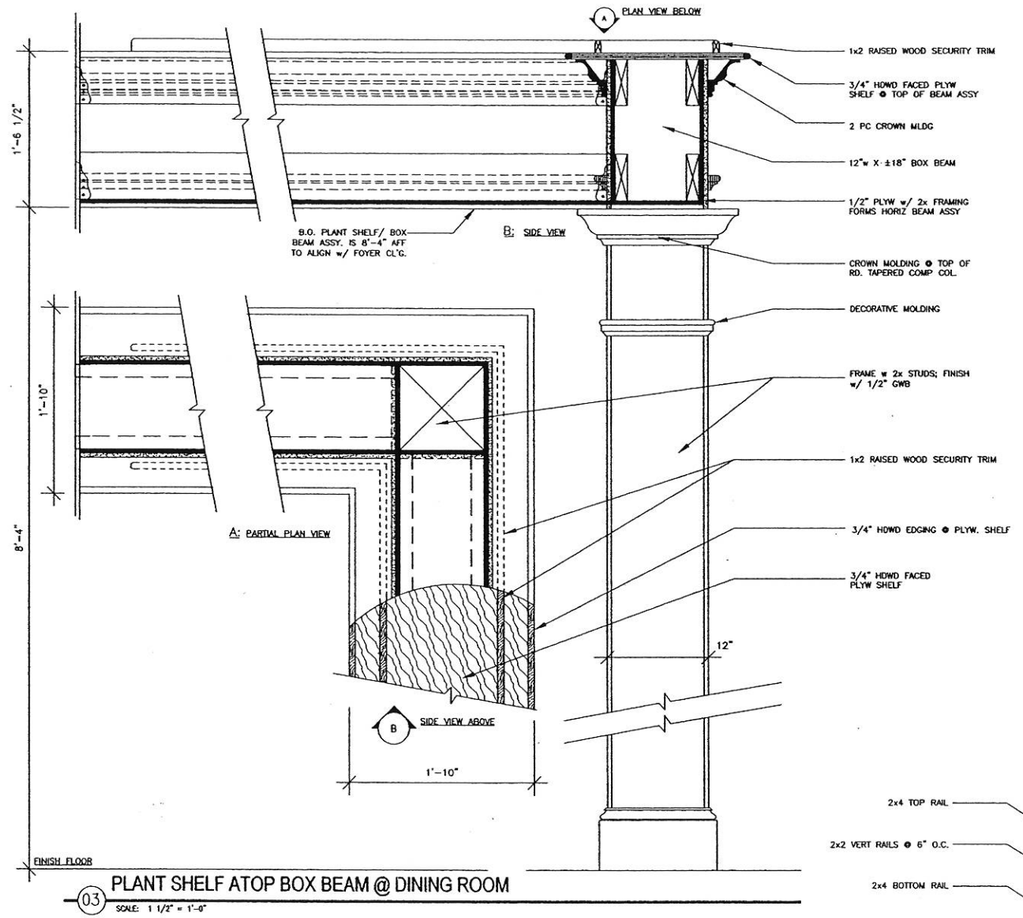
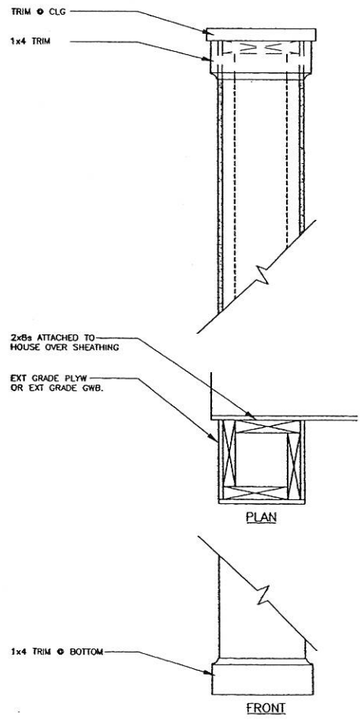
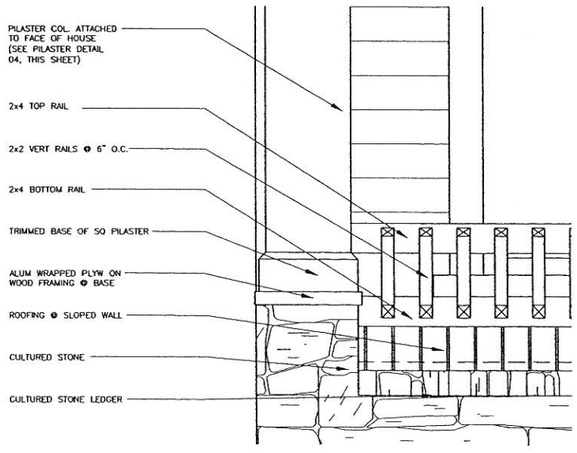
A4.3b



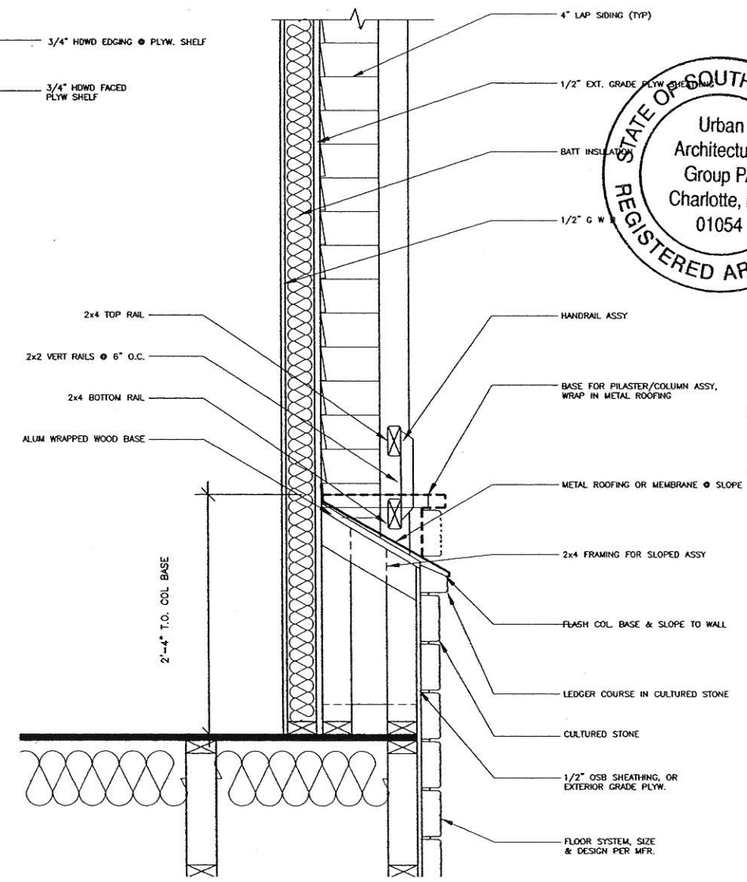
03 PLANT SHELF ATOP BOX BEAM @ DINING ROOM
SCALE: 1 1/2" = 1'-0"



04 DETAIL –FRONT OF PILASTER



05 DETAIL – @ FRONT OF UNIT 'B'



06 WALL SECTION– @ 2ND LEVEL RAIL, UNIT 'B'

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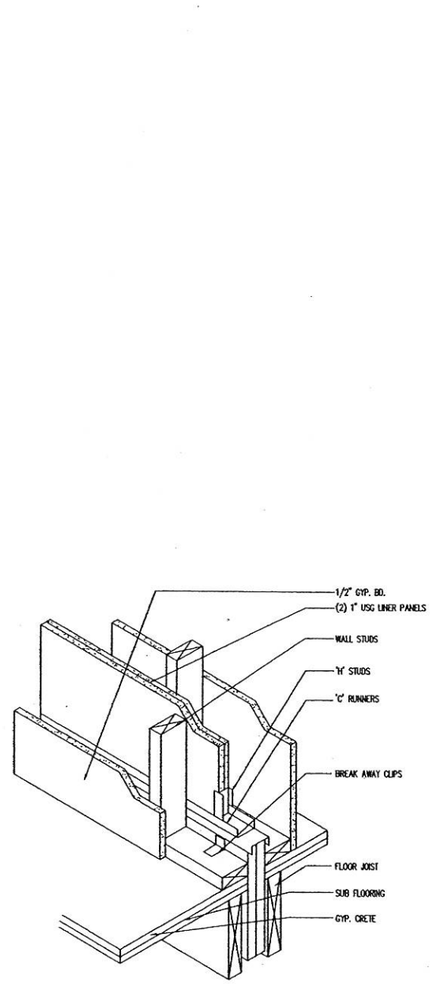
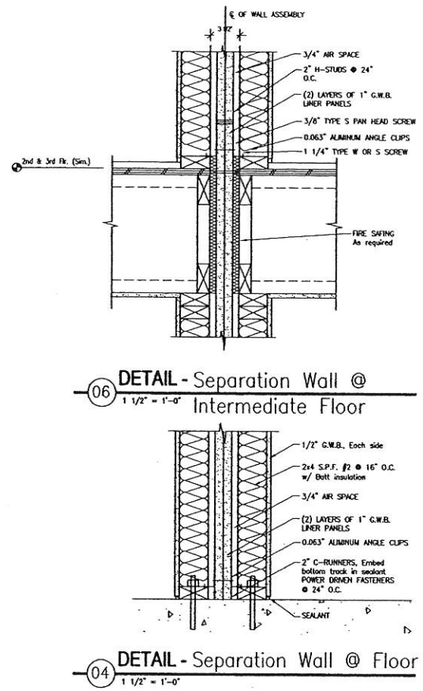
A4.4



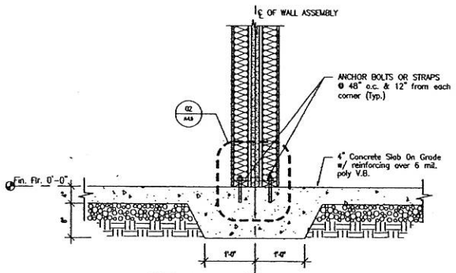
08 **DETAIL** – Fire Wall Isometric
1-1/2" = 1'-0"

07 Not Used

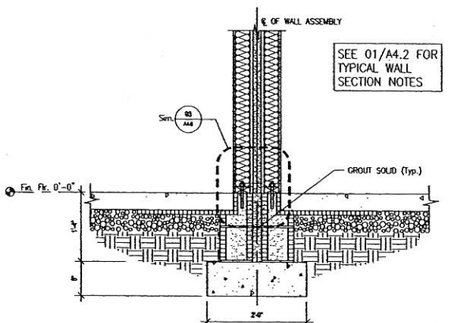


06 **DETAIL** - Separation Wall @ Intermediate Floor
1 1/2" = 1'-0"

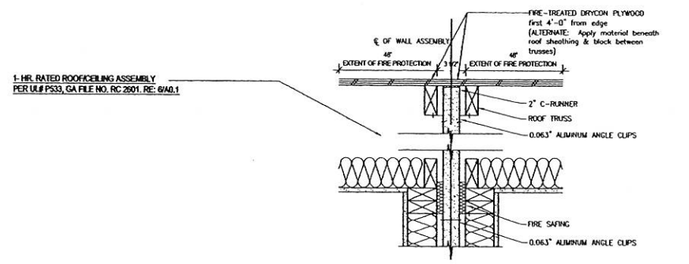
04 **DETAIL** - Separation Wall @ Floor
1 1/2" = 1'-0"



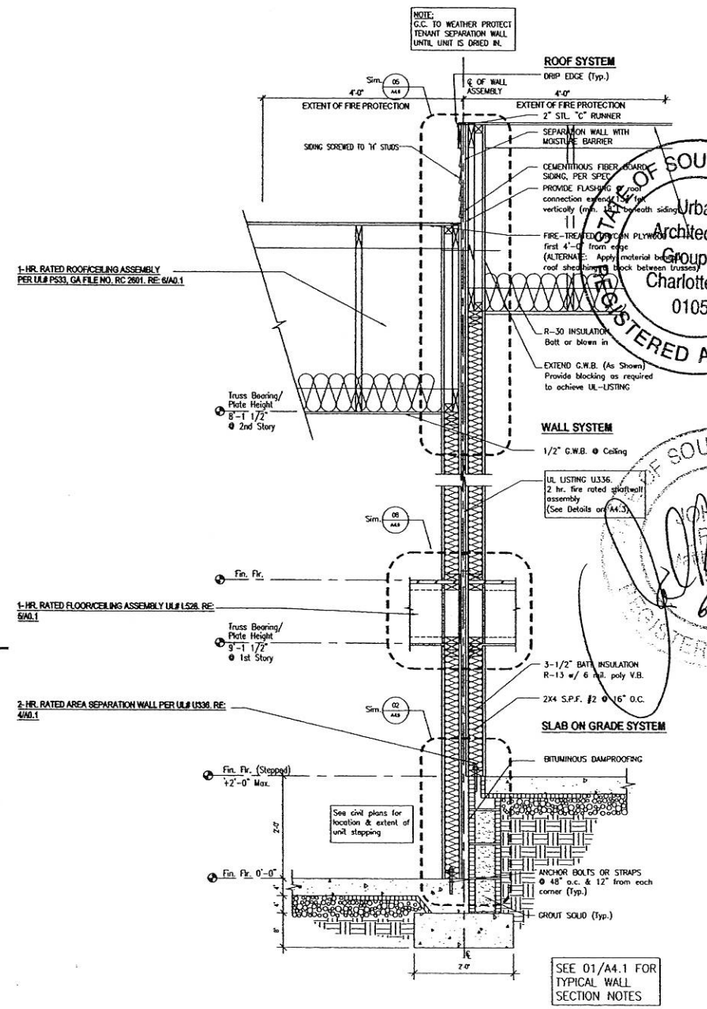
03 **SECTION** - @ Unit Separation
3/4" = 1'-0"



02 **SECTION** - @ Unit Separation (Option)



05 **DETAIL** - Separation Wall @ Roof
1 1/2" = 1'-0"



01 **SECTION** - @ 2 Hr Separation Wall (Stepped)

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Shaft Wall Sections and Details

DATE DRAWN: 5 JUNE 2006
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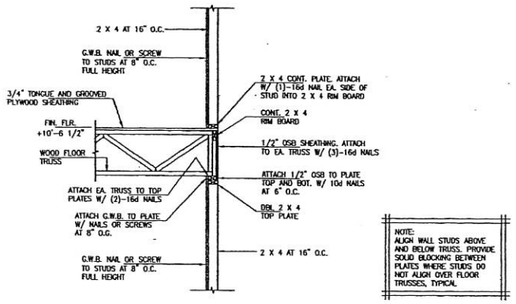
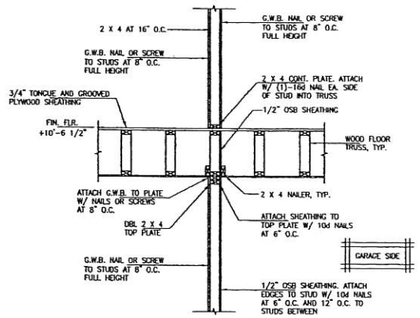
A4.5



Floor Truss Bearing

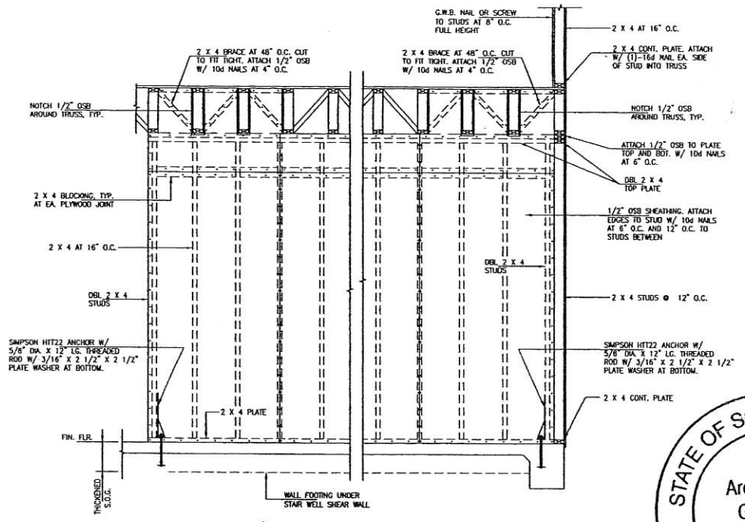
(B) DETAIL – @ Separation Wall, typ.

1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)



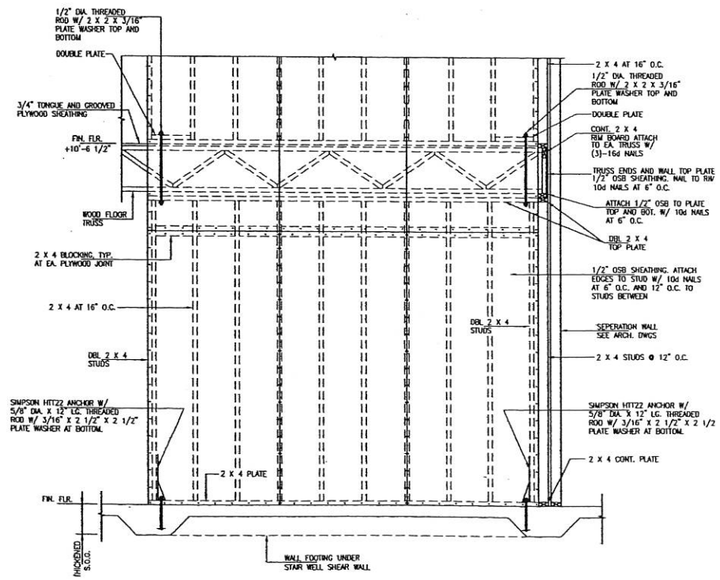
(A) DETAIL – Garage Shear Wall

1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)

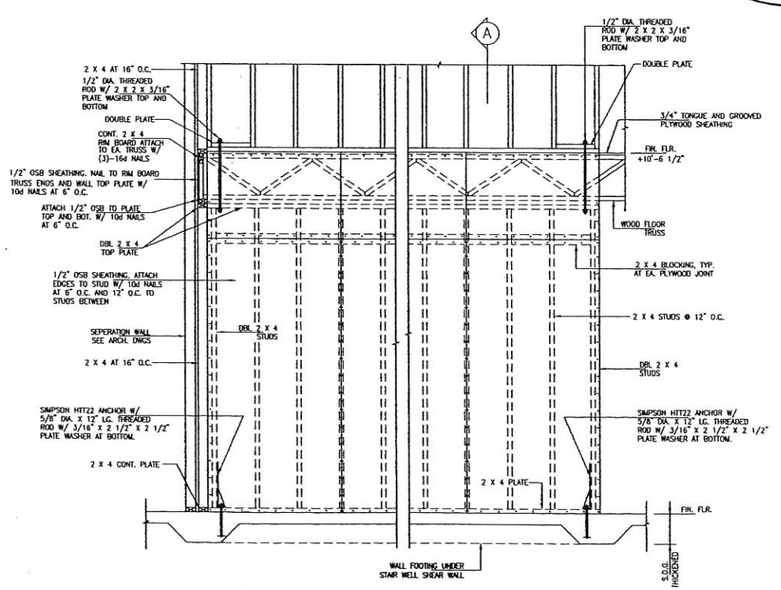


(03) DETAIL – Garage Shear Wall, Perpendicular to Truss

1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)



(02) DETAIL – Stair Wall Shear Wall



(A) DETAIL – Shear Wall Parallel to Truss

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LAKE SHORE TOWN HOMES

TEGA CAY, SC

STATE OF SOUTH CAROLINA
JOHN R. [illegible]
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6/2/06
REGISTERED ARCHITECT

DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
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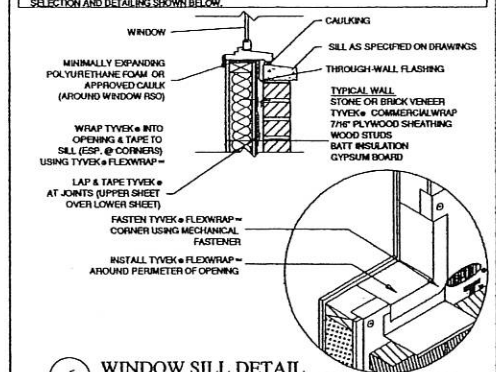
A4.6

GENERAL NOTES
*SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE)
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS. (ex. DUPONT WRAPCAPS)
*SEAL OR GASKET BRICK TIES AT FACE OF TYVEK ®
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.



6 WINDOW SILL DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ VENEER (COOLING CLIMATE)

GENERAL NOTES
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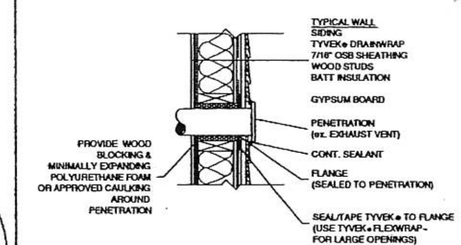
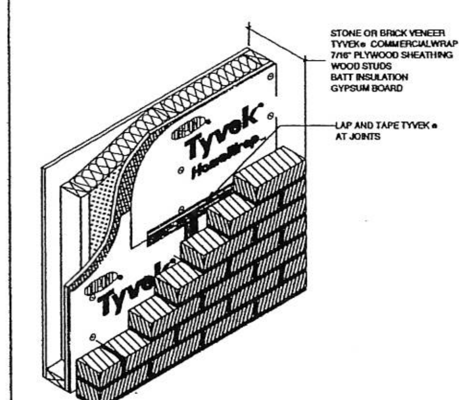
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS.(ex. DUPONT WRAPCAPS)
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.

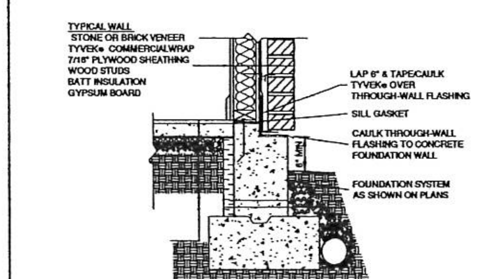


3 WALL PENETRATION DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ WOOD SIDING

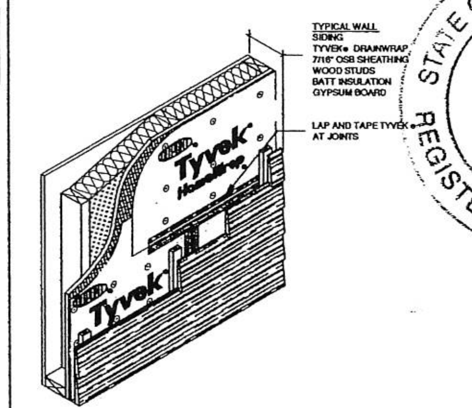


8 TYPICAL WALL ISOMETRIC
RESIDENTIAL WOOD FRAME STRUCTURE w/ MASONRY VENEER (COOLING CLIMATE)

GENERAL NOTES
*SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE)
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS. (ex. DUPONT WRAPCAPS)
*SEAL OR GASKET BRICK TIES AT FACE OF TYVEK ®
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.

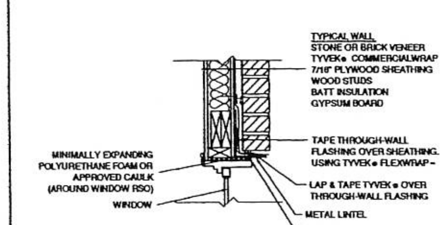


5 BASE OF WALL DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ VENEER (COOLING CLIMATE)



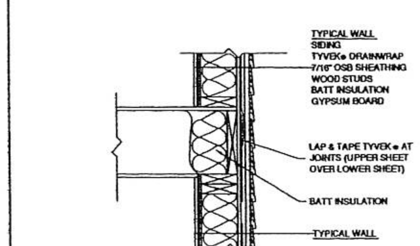
2 TYPICAL WALL ISOMETRIC
RESIDENTIAL WOOD FRAME STRUCTURE w/ WOOD SIDING (COOLING CLIMATE)

GENERAL NOTES
*SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE)
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS. (ex. DUPONT WRAPCAPS)
*SEAL OR GASKET BRICK TIES AT FACE OF TYVEK ®
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.



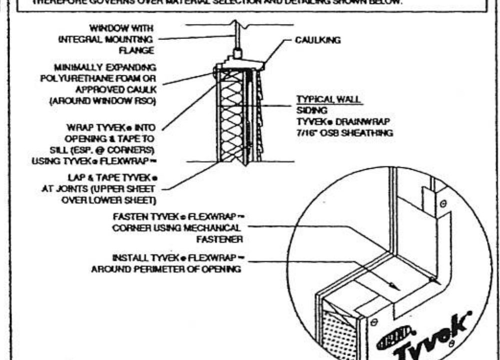
7 WINDOW HEAD DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ VENEER (COOLING CLIMATE)

GENERAL NOTES
*SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE).
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS.(ex. DUPONT WRAPCAPS)
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.



4 FLOOR/ WALL INTERFACE DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ SIDING (HEATING CLIMATE)

GENERAL NOTES
*SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE).
*FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS. (ex. DUPONT WRAPCAPS)
*LOCAL LAWS, ZONING, AND BUILDING CODES VARY AND THEREFORE GOVERNS OVER MATERIAL SELECTION AND DETAILING SHOWN BELOW.



1 WINDOW SILL DETAIL
RESIDENTIAL WOOD FRAME STRUCTURE w/ WOOD SIDING (COOLING CLIMATE)

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JOHN R. URBAN
Matthews, NC
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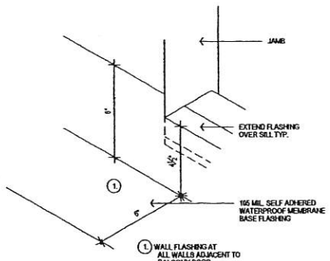
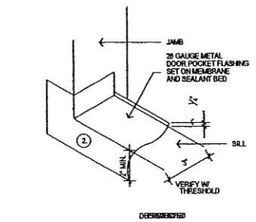
REGISTERED ARCHITECT
6/6/06

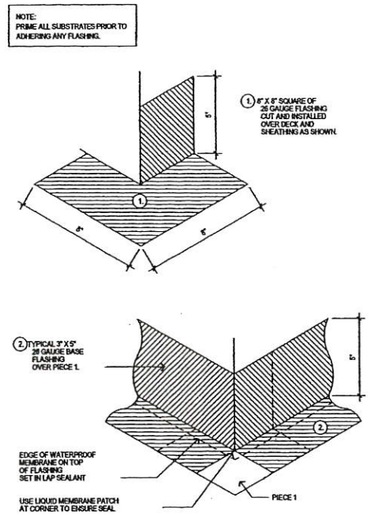
Waterproofing Details

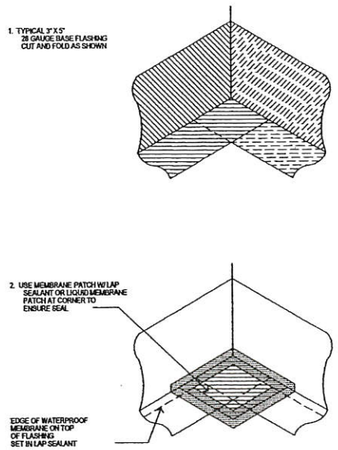
DATE DRAWN: June 05, 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

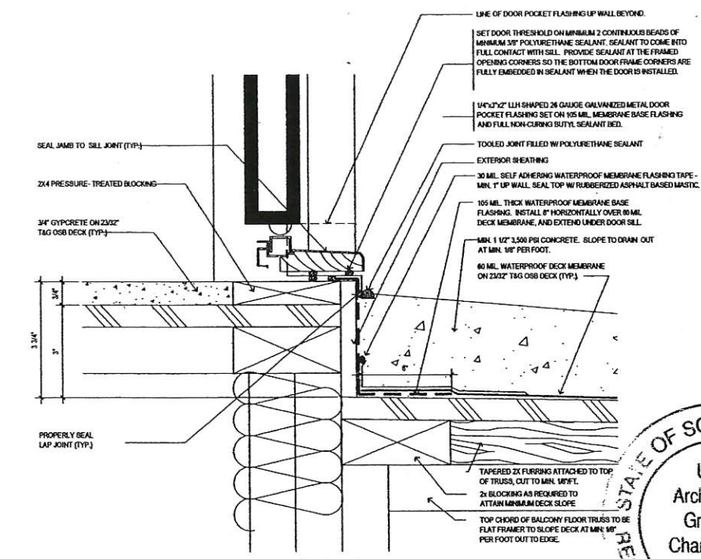
A4.7







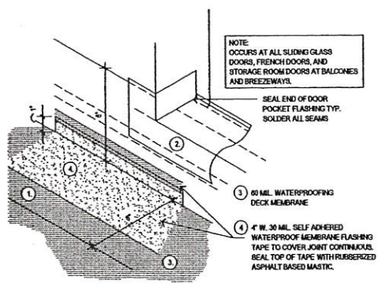




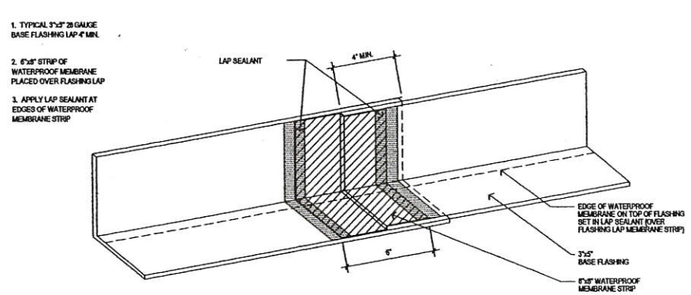
8 FLASHING DETAIL @ OUTSIDE CORNER (METAL FLASHING CONDITION) SCALE : 3" = 1'-0"

7 FLASHING DETAIL @ INSIDE CORNER (METAL FLASHING CONDITION) SCALE : 3" = 1'-0"

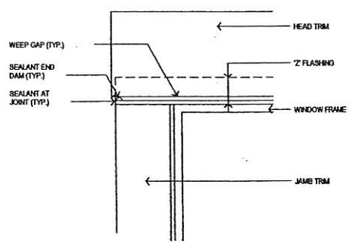
6 WALL FLASHING AT DOOR SCALE : 6" = 1'-0"



5 FLASHING @ DOOR OPENING SCALE : 3" = 1'-0"



4 FLASHING LAP (METAL FLASHING CONDITION) SCALE : 3" = 1'-0"



3 (TYP.) WINDOW ELEVATION DETAIL SCALE : 3" = 1'-0"

WALL/WINDOW/DOOR WATERPROOFING SPECIFICATIONS:

1. OWNER SHALL RETAIN THE SERVICES OF A QUALITY ASSURANCE CONSULTING FIRM, SPECIALIZING IN THE AREA OF WATERPROOFING, FOR THE SOLE PURPOSE OF INSPECTING FLASHINGS BEFORE COVERED WITH FINISHED MATERIALS. DETERMINATION OF PROPER FLASHING TECHNIQUES CAN BE UTILIZED VIA: THE BLDG. MOCK UP PANELS AS DESCRIBED ON A3.1
2. GC TO PROVIDE DETAILED SHOP DRAWINGS: INDICATING EACH FLASHING AND EDGE DETAIL AND ATTACHMENT REQUIREMENTS.
3. USE STAINLESS STEEL FASTENERS WHEN FASTENING INTO TREATED LUMBER.
4. ALUMINUN "Z" FLASHING & THRU WALL FLASHING SHALL BE: .025" FOR CONCEALED AND .032" FOR EXPOSED
5. MINIMUM 40 MIL. POLYETHYLENE, BUTYL RUBBER "PEEL AND STICK WATERPROOFING" MIN. 240 DEGREE SOFTENING POINT
6. 6" AND 9" SELF ADHERING RUBBERIZED ASPHALT FLASHING TAPE – (WINDOW WRAP) MIN. 20 MIL THICKNESS MEETING THE FOLLOWING REQMTS.: FEDERAL SPECIFICATION UU-B-790a TYPE I, GRADE A, STYLE 4. TYVEK PRODUCTS OR EQUAL
7. SEALANT FOR DISSIMILAR MATERIAL JOINTS – SONNEBORN NP1 POLYURETHANE SEALANT OR EQUAL. (EXCEPT AT WOOD.)
8. SEALANT FOR WOOD TO WOOD JOINTS AND WOOD TO DISSIMILAR MATERIAL JOINTS – SILICON ACRYLIC SEALANT.
9. SEALANT UNDER DOOR THRESHOLDS – SONNEBORN NP1 POLYURETHANE SEALANT OR EQUAL.
10. ALL SEALANT BEADS AND FILLETS TO BE CONTINUOUS.
11. ALL METAL FLASHINGS ARE TO HAVE ALL OVERLAPS SEALED WITH NON-CURING BUTYL SEALANT OR POLYURETHANE SEALANT.
12. PAINT INTERIOR GYPSUM BOARD WINDOW JAMBS WITH ENAMEL PAINT.
13. SET NAILS AT ALL DOOR TRIM.
14. EXTERIOR WOOD TRIM IS TO BE PRE-PRIMED KDAT MATERIAL.

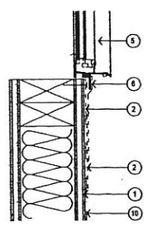
NOTE:
TYVEK COMMERCIAL BUILDING SPECIALISTS CAN BE CONTACTED FOR FREE FIELD/INSTALLATION SERVICES @ TIME OF CONSTRUCTION.
CONTACT: ANDREW ANDRETTA, CSI 704.226.2864

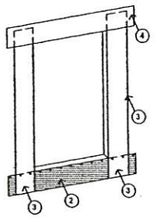
. APPLY SHEATHING TO WALL FRAMING AS HOWN ON STRUCTURAL DRAWINGS.

. ATTACH 9" WIDE SILL SELF-ADHERING RUBBERIZED ASHING WITH THE TOP EDGE EVEN WITH THE TOP DGE OF THE SILL. FLASHING TO EXTEND 12" BEYOND ACH JAMB MINIMUM. ATTACH WITH GALVANIZED OOFING NAILS TO THE TOP EDGE ONLY, LEAVING OTTOM LOOSE. DO NOT REMOVE BACKING.

. APPLY 9" SELF-ADHERING RUBBERIZED SPHALT FLASHING TAPE TO EACH JAMB, START IT THE BOTTOM OF THE SILL FLASHING AND XTEND 9" ABOVE WINDOW HEAD.

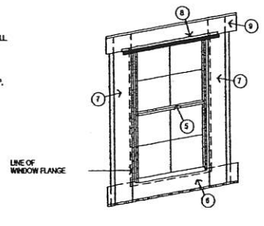
. APPLY 9" SELF-ADHERING RUBBERIZED SPHALT FLASHING TAPE OVER FLANGE AT EAD. EXTEND 12" BEYOND EACH JAMB.





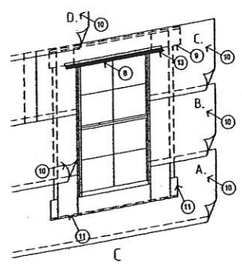
A

5. SET THE WINDOW AS PER THE WINDOW MANUFACTURER'S RECOMMENDATIONS.
6. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT SILL. EXTEND TO END OF SILL FLASHING.
7. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT JAMBS, START 6" BELOW SILL AND EXTEND UP, TO 6" ABOVE WINDOW FLANGE AT HEAD.
8. INSTALL GALVANIZED "Z" FLASHING AT WINDOW HEAD AND EXTEND TO BE THE LENGTH OF THE HEAD TRIM.



B

9. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT HEAD AND OVER "Z" FLASHING. EXTEND MIN. 12" BEYOND EACH JAMB.
10. INSTALL BUILDING PAPER STARTING FROM THE BASE OF THE BUILDING. INSTALL SHINGLE FASHION WITH MINIMUM 4" VERTICAL OVERLAPS AND 8" HORIZONTAL OVERLAPS. ATTACH BUILDING PAPER TO WOOD FRAME WITH GALVANIZED STAPLES. INSTALL BUILDING PAPER UNDER SILL FLAP SHOWN IN STEP TWO. BUILDING PAPER TO OVERLAP ALL WINDOW FLANGES AND GALVANIZED "Z" FLASHING AT ALL WINDOWS.
11. SLIP BOTTOM OF JAMB AND SILL FLASHING OUT OVER THE BUILDING PAPER.
12. TAPE OVER ANY CUTS OR HOLES IN THE BUILDING PAPER.
13. PROVIDE SEALANT END DAMS AT THE ENDS OF THE "Z" FLASHING TYPICAL "Z" FLASHING TO SLOPE AWAY FROM BUILDING.
**REFER ALSO TO DOOR AND WINDOW DETAILS.



C

2 WINDOW FLASHING WITH BUILDING PAPER ON WALL (SLIDING GLASS DOORS ARE TO BE WATERPROOFED IN THIS SAME MANNER.) NOT TO SCALE

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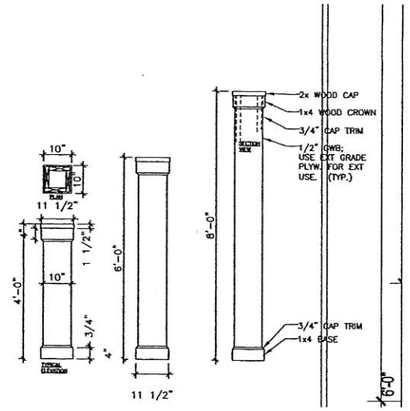
LAKE SHORE TOWN HOMES
TEGA CAY, SC

STATE OF SOUTH CAROLINA JOHN R. URBAN Matthews, NC 5409 REGISTERED ARCHITECT

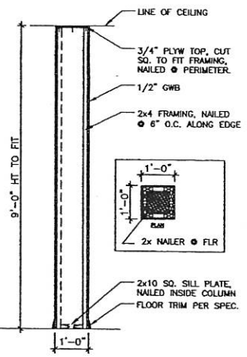
Waterproofing Details

DATE DRAWN: June 05, 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

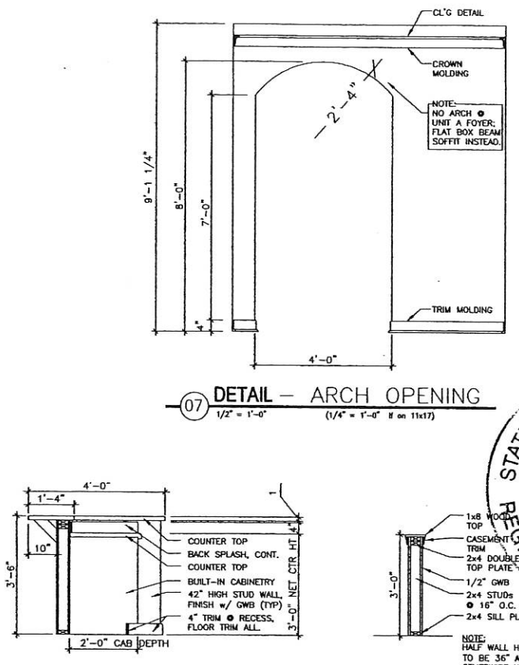
A4.8



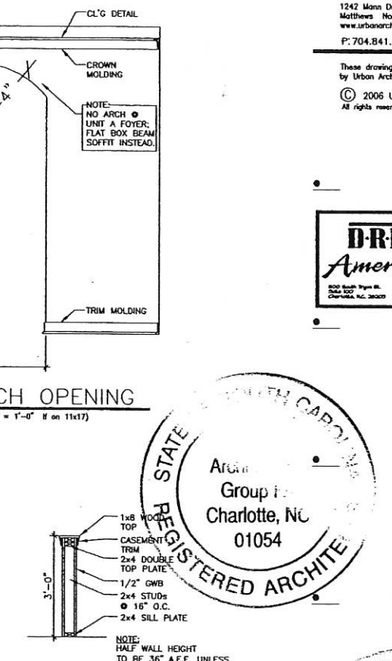
06 DETAIL – BOX COLUMN
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)



05 DETAIL – BOX COLUMN
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)

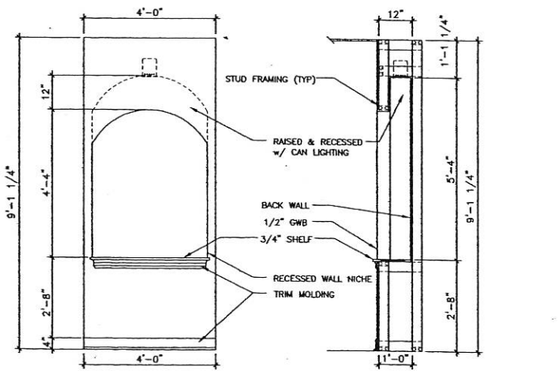


04 DETAIL – COUNTER
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)

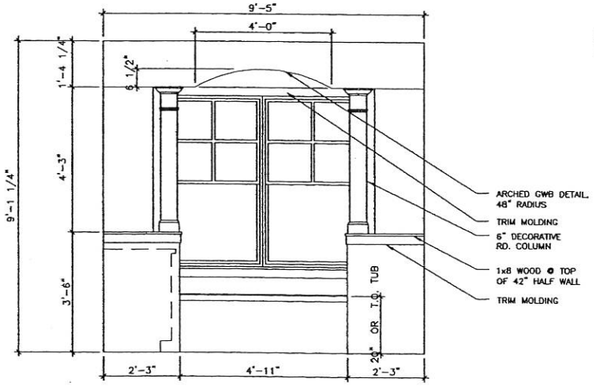


03 DETAIL – HALF WALL
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)

07 DETAIL – ARCH OPENING
1/2" = 1'-0" (1/4" = 1'-0" If on 11x17)



02 DETAIL – HALLWAY WALL NICHE @ 'C' UNIT



01 DETAIL – @ MASTER BATH UNIT B

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LAKE SHORE TOWN HOMES

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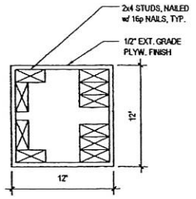
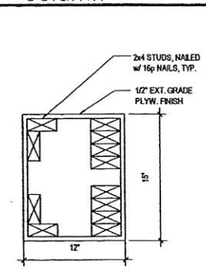
STATE OF SOUTH CAROLINA — REGISTERED ARCHITECT — 6/16/06

DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

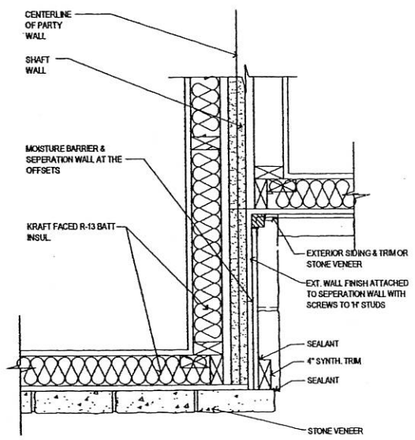
A5.1



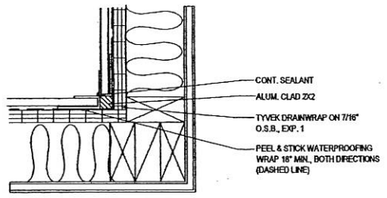
09 **DETAIL**– Column
1 1/2" = 1'-0"



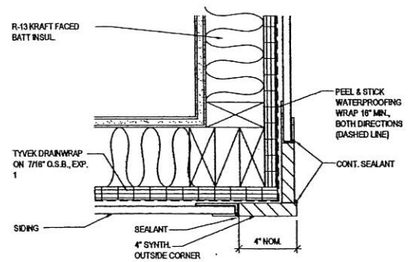
08 **DETAIL**– Column
1 1/2" = 1'-0"



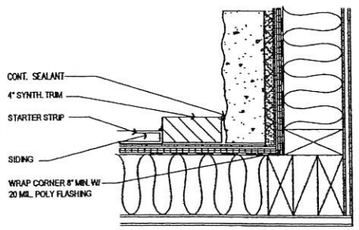
07 **DETAIL**– Party Wall @ Offset



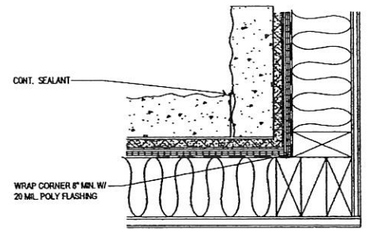
06 **DETAIL**– Siding @ Inside Corner
3" = 1'-0"



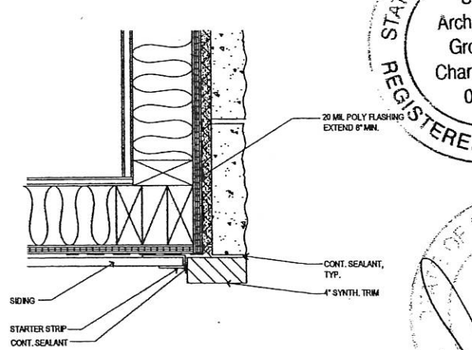
05 **DETAIL**– Siding @ Outside Corner
3" = 1'-0"



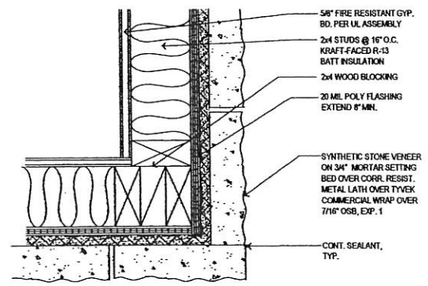
04 **DETAIL**– Stone/Siding @ Corner



03 **DETAIL**– Stone @ Inside Corner
3" = 1'-0"



02 **DETAIL**– Stone/Siding @ Corner
3" = 1'-0"



01 **DETAIL**– Stone @ Outside Corner

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LAKE SHORE TOWN HOMES

TEGA CAY, SC

Exterior Wall Details

DATE DRAWN: June 05, 2006
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A5.2

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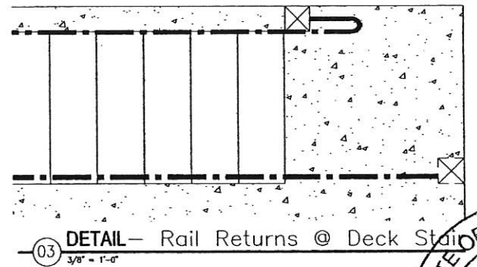
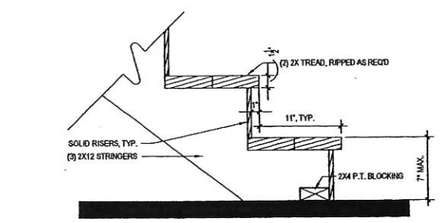
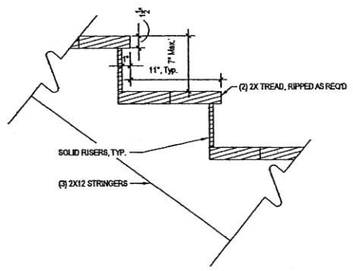


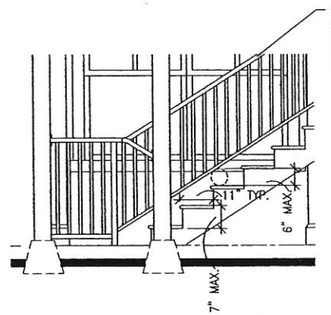
03 DETAIL— Rail Returns @ Deck Stair
3/8" = 1'-0"



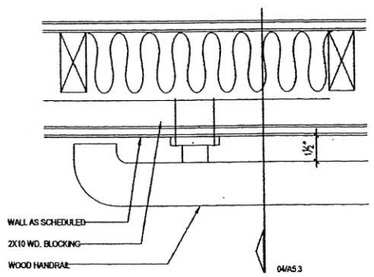
07 DETAIL— Tread @ Bottom
1-1/2" = 1'-0"



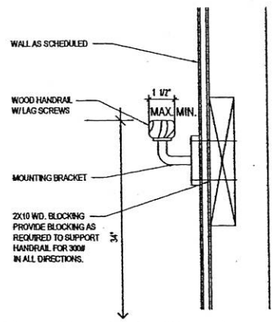
05 DETAIL— Riser/Tread Typical
1-1/2" = 1'-0"



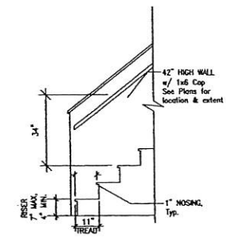
02 DETAIL— Deck Riser/Tread Typical
1/2" = 1'-0"



06 DETAIL— Handrail Blocking



04 DETAIL— Handrail Blocking



01 DETAIL- Interior Stair

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6/6/06

STAIR DETAILS

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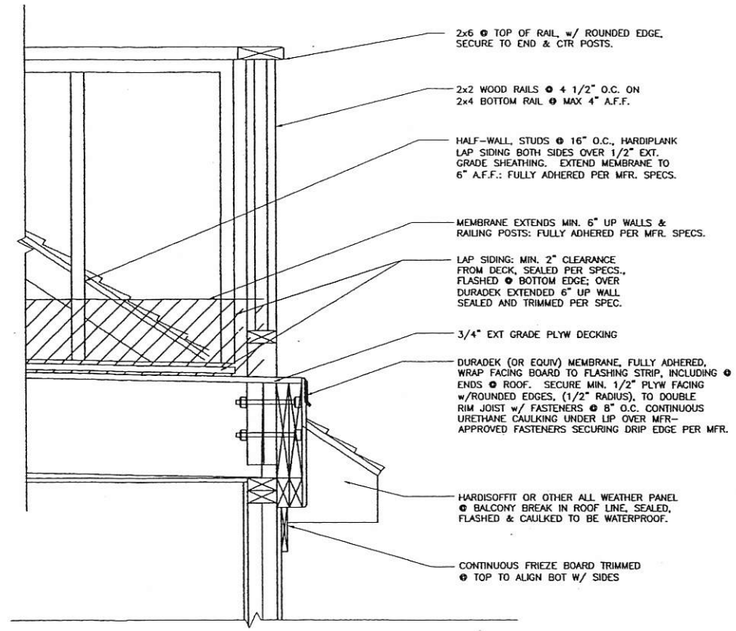
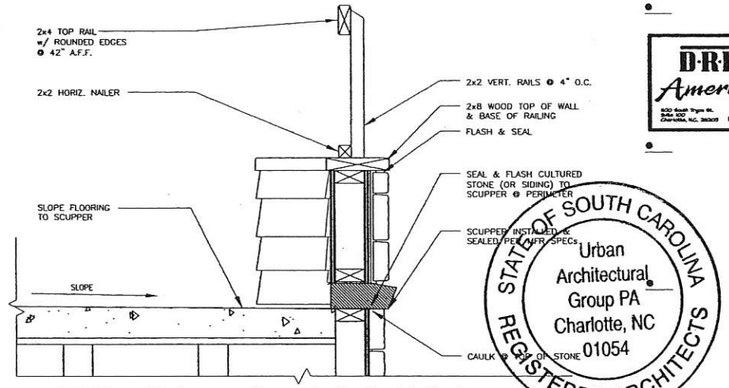
A5.3



05 **DETAIL**– Scupper @ Balcony– Unit A
1 1/2" = 1'-0"



04 **DETAIL**– Balcony Guardrail @ Unit A
1-1/2" = 1'-0"

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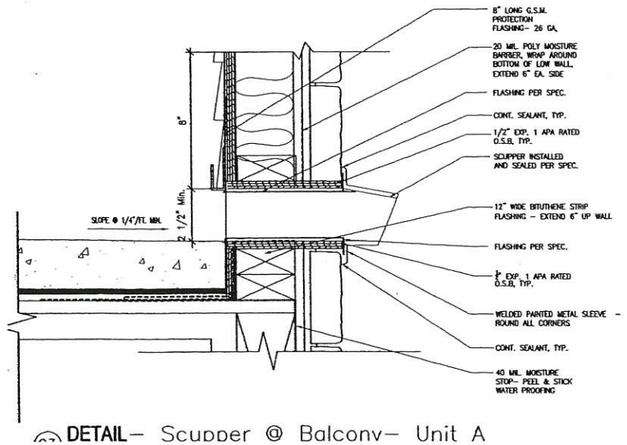
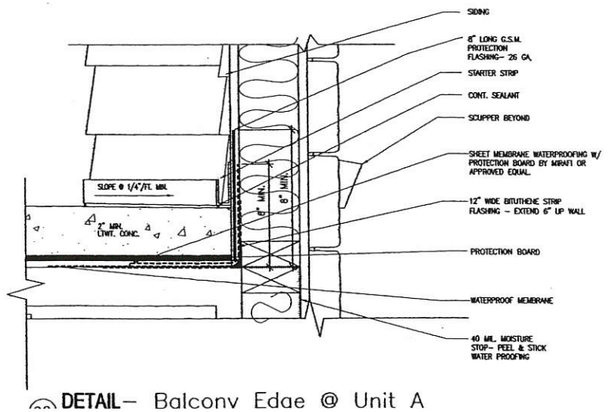
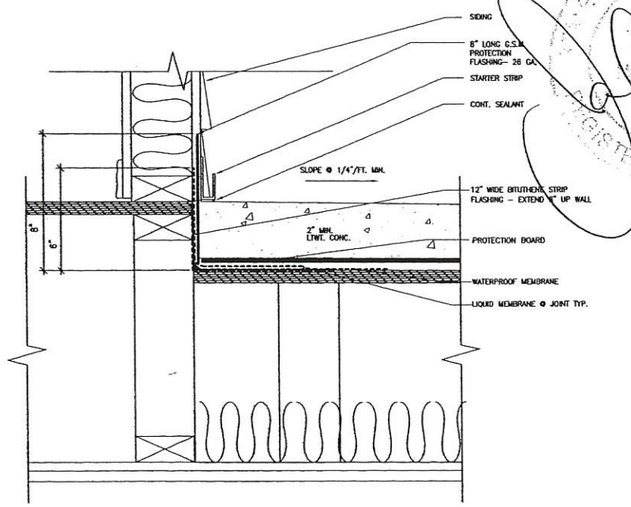


03 **DETAIL**– Scupper @ Balcony– Unit A



02 **DETAIL**– Balcony Edge @ Unit A



01 **DETAIL**– Balcony @ Unit A

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BALCONY DETAILS

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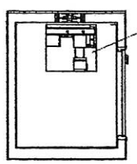
DETAILS FOR LEV ELEVATOR ONLY.

1. All other Manufacturers will have their own details and installation plans.
2. For additional details on the installation of LEV elevators in this project, refer to LEV manuals or to their website, thelev.com.

Hoistway Construction Notes:

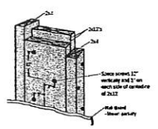
1. A load bearing wall is required to sustain rail reactions. See Detail 3 this sheet, Rail Reactions and Guide Rail Backing Construction below.
2. All points of the pit floor must be a minimum of 6" below the lower landing finished floor. (12" if optional buffer springs are used).
3. Pit floor construction should withstand a 3200 lb. impact load.
4. Hoistway sizes reflect running and access clearances only.
5. Minimum overhead clearance is 8'-6" above the top landing finished floor or 8'-0" for hydraulic drive when controller is installed in the machine room. (Optional 88" car height requires 8'-10", 94" car height requires 9'-4").
6. Due to limited clearances, it is imperative that the walls be square and plumb throughout the hoistway. The finished hoistway must be within 1/4" tolerances from top to bottom.
7. Hoistway door not provided by elevator manufacturer. 3'-0" x 6'-8" door recommended.
8. Hoistway is required to be free of all pipes, wiring and obstructions not related to the operation of the elevator.
9. Service access hatch is required in the controller / drive assembly area. See detail 4 this sheet for recommended location.
10. Building structure must provide for a means of a chain hoist for hoisting rail and elevator materials to the top of the hoistway during installation.



Attic Plan View of Service Access Hatch

1. 18" x 24" minimum hatch opening above the controller and drive assemblies.
2. This is the recommended location of the access hatch. If sufficient attic space is not available, access through a wall must be provided. Cannot be on the rail wall (contact factory for alternatives).
3. Construction of access hatch and door is not provided by mfr.
4. Door needs to be self closing and lockable.

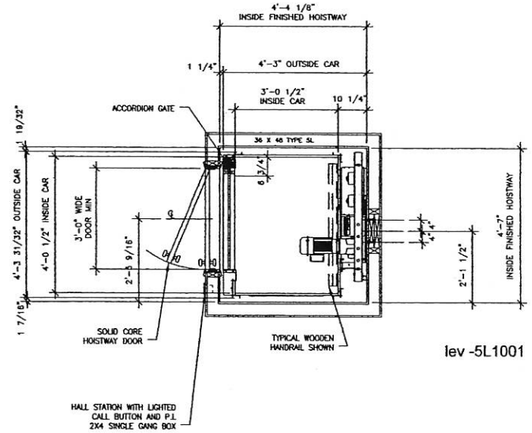
(04) DETAILS - Service Access @ Attic
NTS



Guide Rail Backing Construction Details:

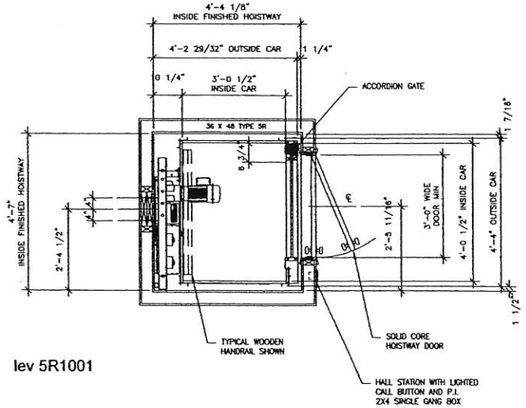
1. Wall Board (Shown partially in this view)
2. Space screws 12" vertically and 3" on each side of centerline of 2x12
3. Laminate (2) 2x12's and (2) 2x4's with glue and #8 x 21/4" wood screws (minimum).
4. Overlap joints of the lumber as necessary for structural rigidity.
5. Guide rail backing must be tied to a horizontal structural member (header or floor plate) at top, bottom and a maximum of 10' between.

(03) DETAILS - Guide Rail Backer Rail
NTS



lev -5L1001

(02) DETAIL – LEV Elevator, left hand door.
1/2" = 1'-0" (1/4" = 1'-0" if on 11x17)



lev 5R1001

(01) DETAIL – LEV Elevator, right hand door.

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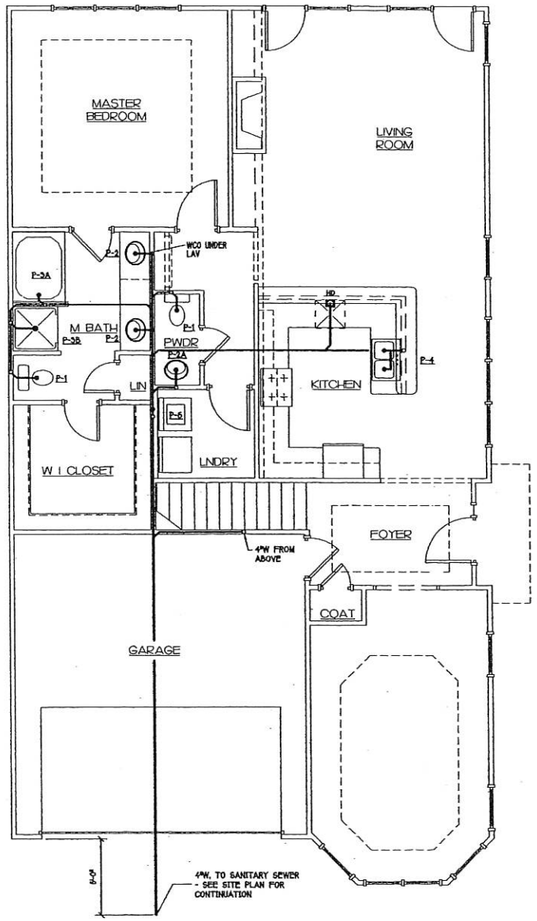
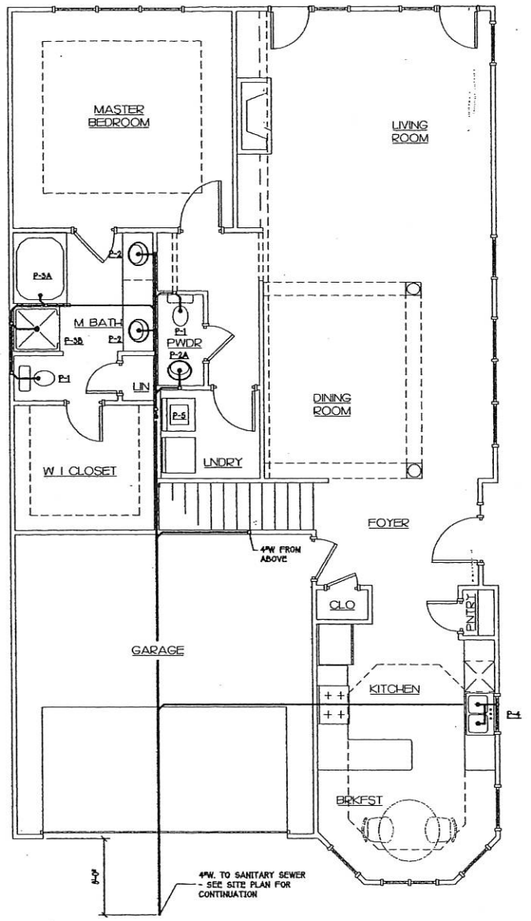
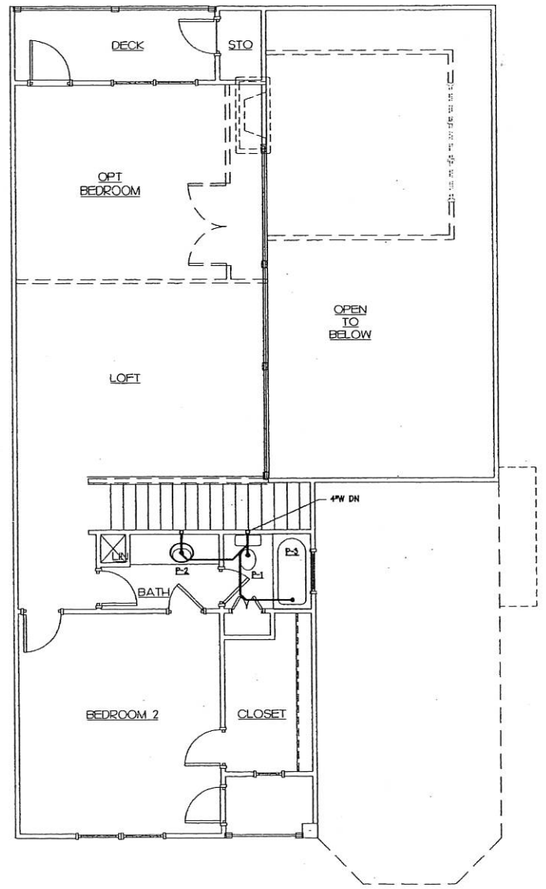
A6.1



1 P1 FIRST FLOOR 2 STORY UNIT SANITARY PLAN
1/4" = 1'-0"



2 P1 FIRST FLOOR 2 STORY UNIT (ALT) SANITARY PLAN
1/4" = 1'-0"



3 P1 SECOND FLOOR 2 STORY UNIT SANITARY PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
3. PROVIDE SHUT-OFF VALVE IN EACH UNIT IN AN ACCESSIBLE LOCATION THAT CONTROLS ALL WATER SUPPLY TO THAT UNIT.
4. ALL WATER PIPING IS ½" UNLESS OTHERWISE NOTED.
5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

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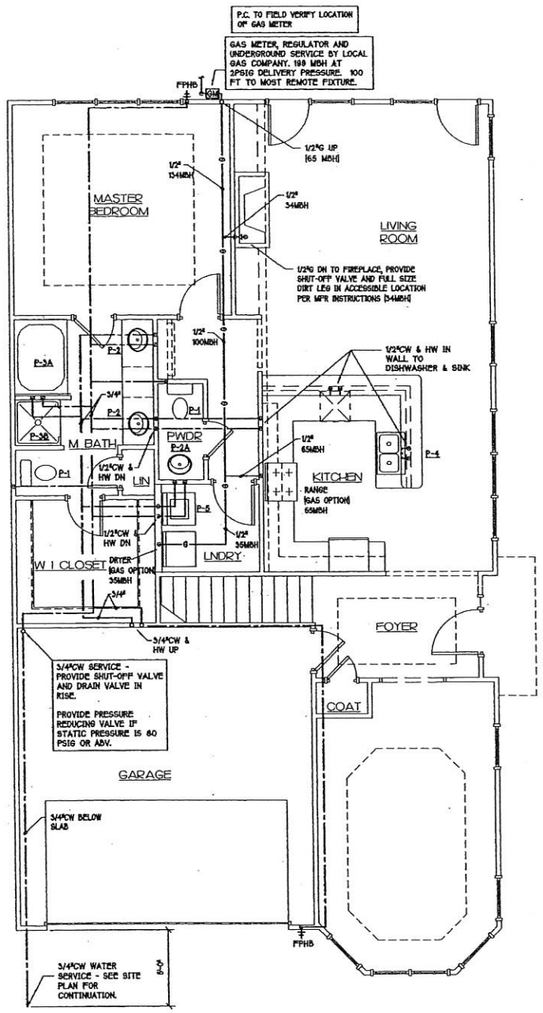
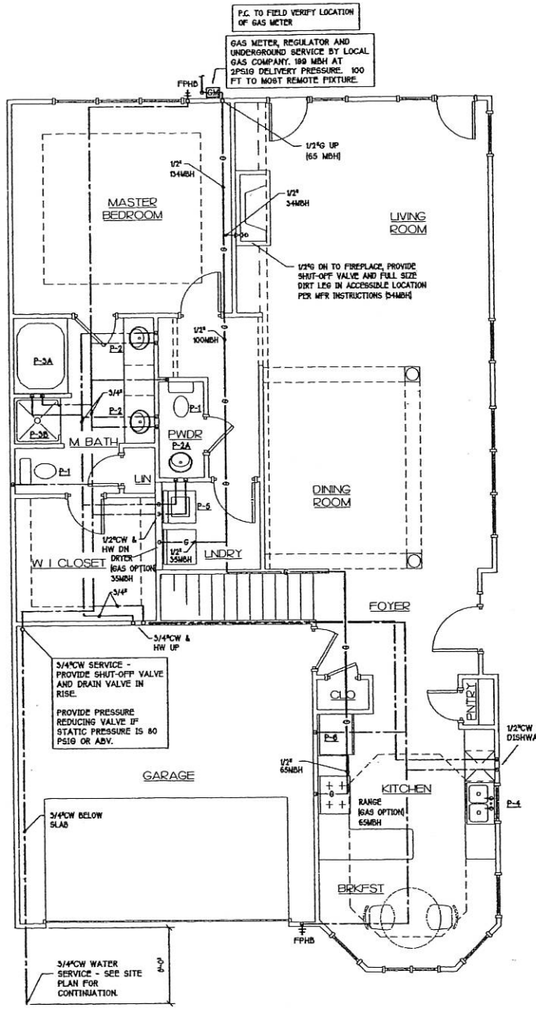
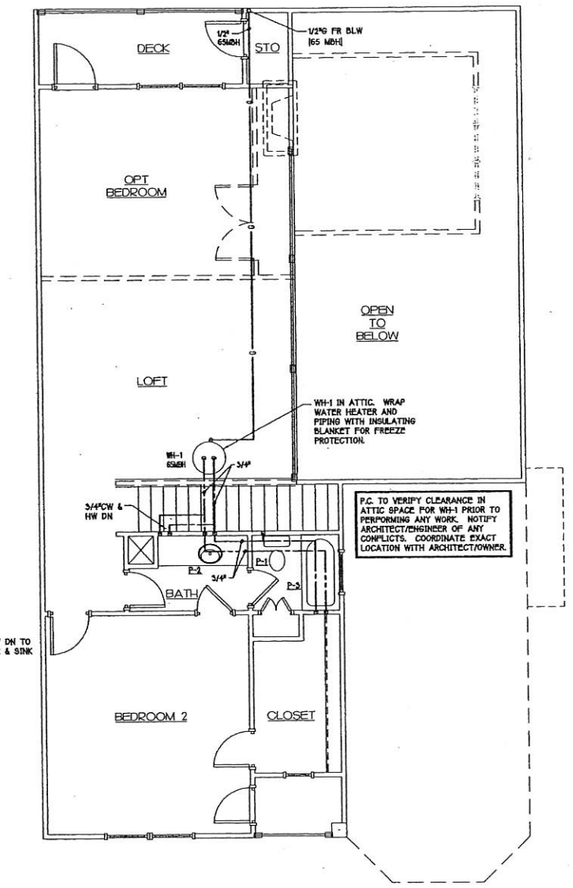
TYPICAL 2 STORY UNIT SANITARY PLANS



1 P2 FIRST FLOOR 2 STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



2 P2 FIRST FLOOR 2 STORY UNIT (ALT) WATER & GAS PLAN
1/4" = 1'-0"



3 P2 SECOND FLOOR 2 STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P9 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
3. PROVIDE SHUT-OFF VALVE IN EACH UNIT IN AN ACCESSIBLE LOCATION THAT CONTROLS ALL WATER SUPPLY TO THAT UNIT.
4. ALL WATER PIPING IS 1/2" UNLESS OTHERWISE NOTED.
5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

GAS LOAD TABLE (2 STORY UNIT)

LOW PRESSURE
PRESSURE DROP: 0.5 IN.W.C.
STEEL (SCH40, 40)
LENGTH: 100 FT
FITTINGS FACTOR: 1.2
EQUIVALENT TOTAL LENGTH: 120 FT.
CAPACITY OF PIPES IN MBH

1/2"	45
3/4"	84
1"	177
1-1/4"	363
1-1/2"	544
2"	1047
2-1/2"	1668

HIGH PRESSURE
ATMOSPHERIC PRESSURE: 14.6854 PSIA
P1: 2 PSIG
P2: 1 PSIG
STEEL (SCH40, 40)
LENGTH: 100 FT
FITTINGS FACTOR: 1.2
EQUIVALENT TOTAL LENGTH: 120 FT.
CAPACITY OF PIPES IN MBH

1/2"	414
3/4"	867
1"	1632
1-1/4"	3351

NOTE:
GAS PIPING IS SIZED FOR 2PSI. CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR LOW PRESSURE PIPING.
CONTRACTOR SHALL VERIFY THE AVAILABILITY OF 2PSI SERVICE BEFORE ANY WORK HAS BEGAN AND NOTIFY ARCHITECT IN WRITING OF AVAILABLE SERVICE.

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER DINO M. PAPPAS No. 22775 4/26/05

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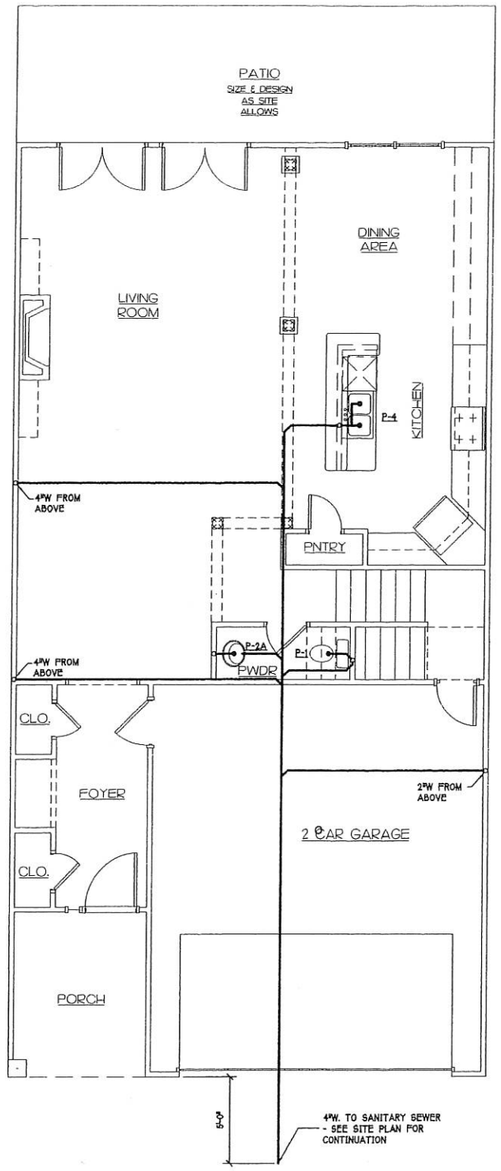
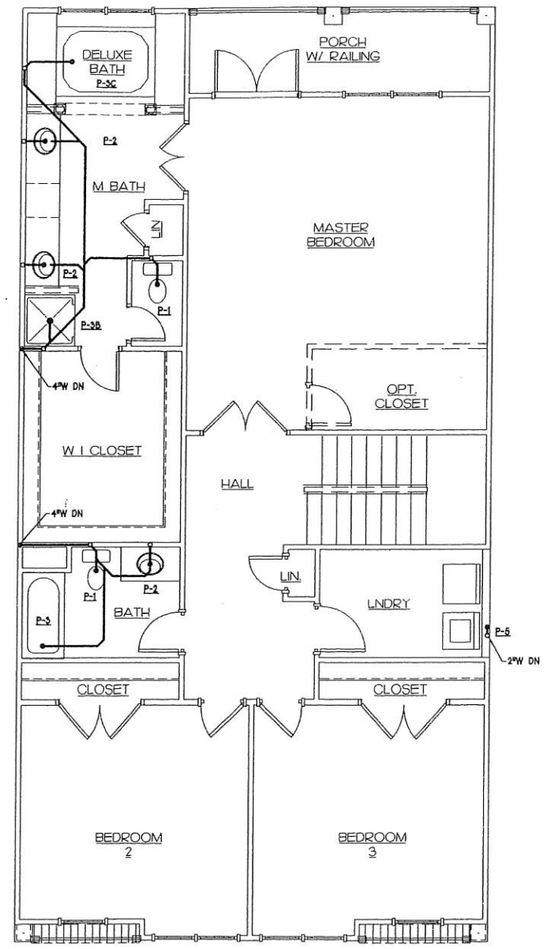
TYPICAL 2 STORY UNIT WATER & GAS PLANS

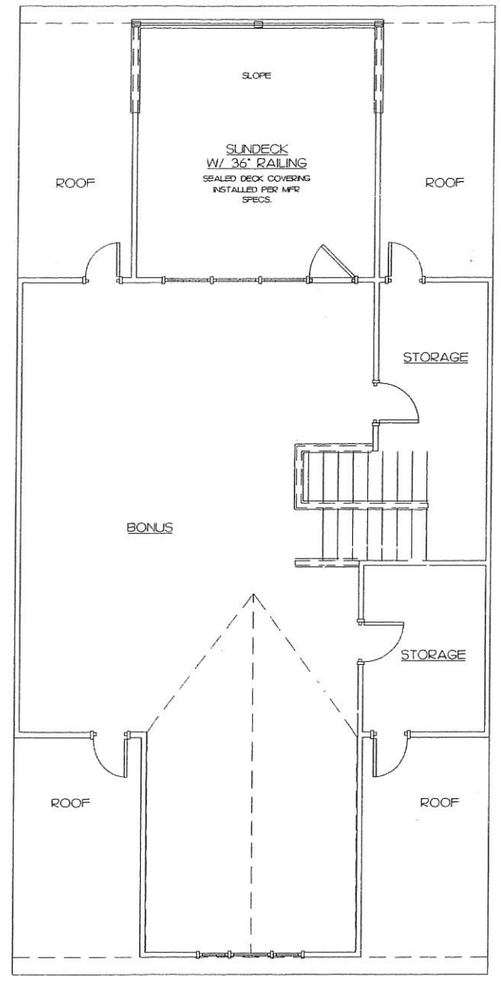
BLM-40



1 / P3 FIRST FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"



2 / P3 SECOND FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"



3 / P3 THIRD FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
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6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

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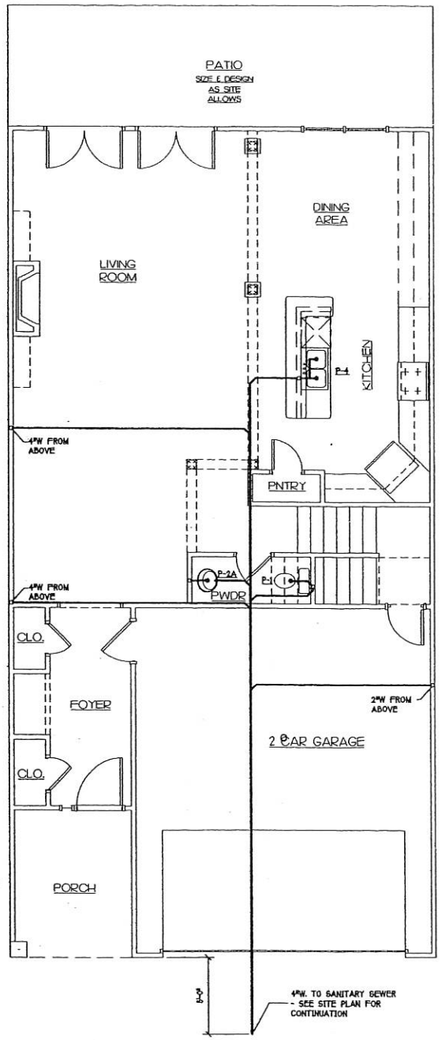
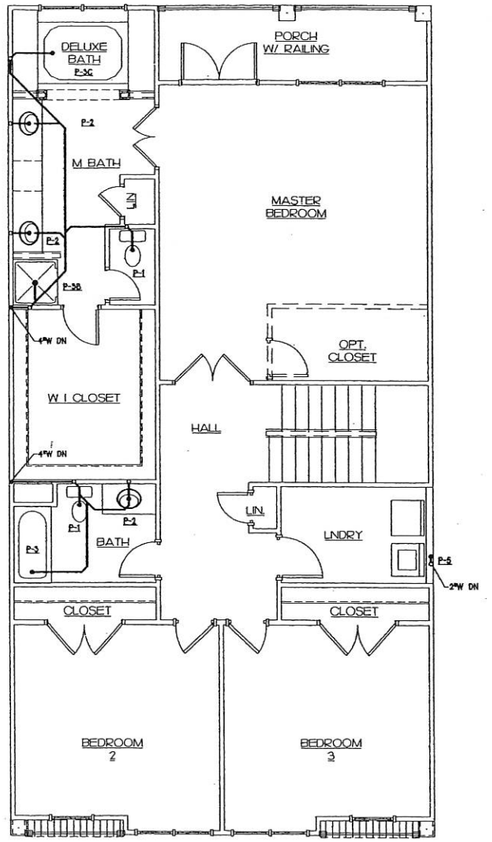
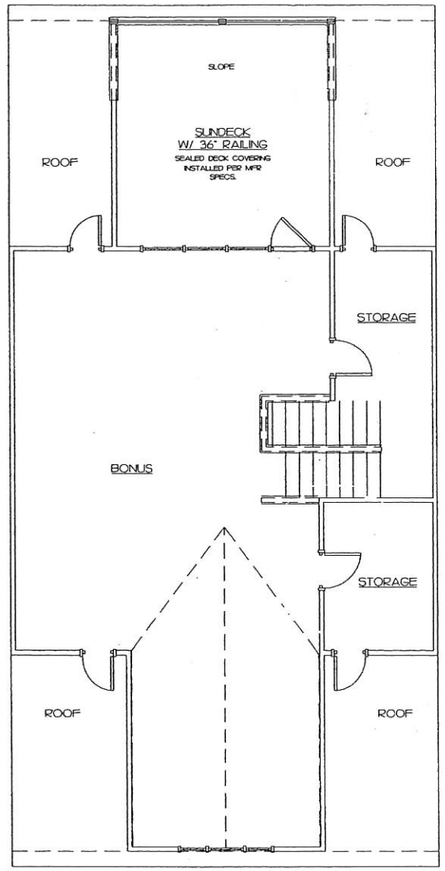
TYPICAL 3 STORY UNIT SANITARY PLANS



1/P3 FIRST FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"



2/P3 SECOND FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"



3/P3 THIRD FLOOR THREE STORY UNIT SANITARY PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
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6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

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SOUTH CAROLINA REGISTERED No. 22775 DIMO M. PAPPAS 6/9/05

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LAKE SHORE TOWN HOMES

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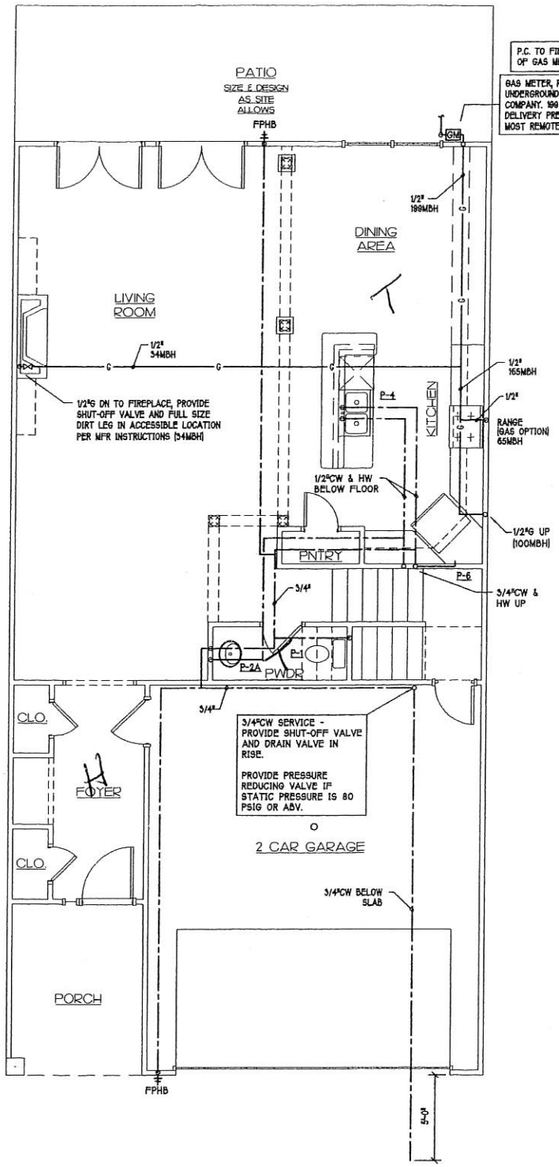
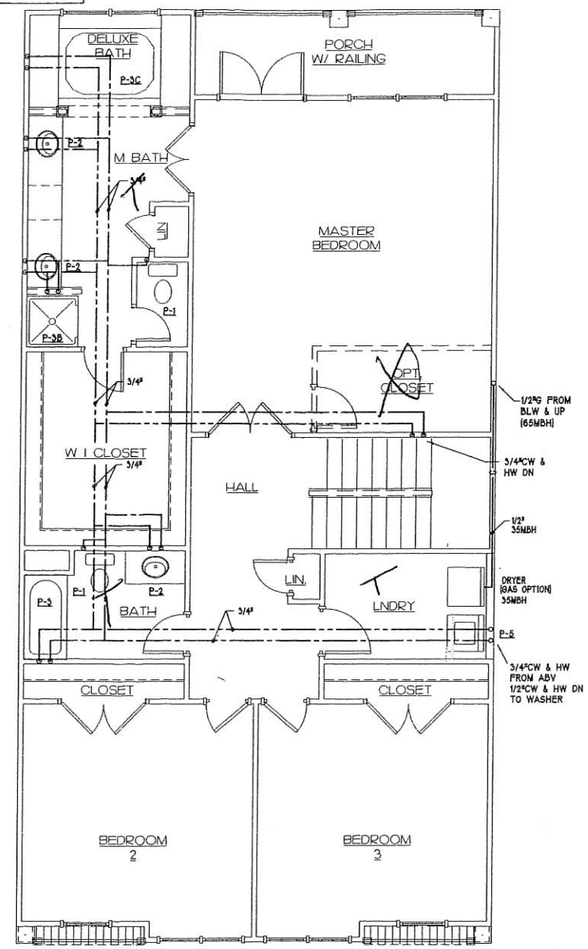
TYPICAL 3 STORY UNIT SANITARY PLANS

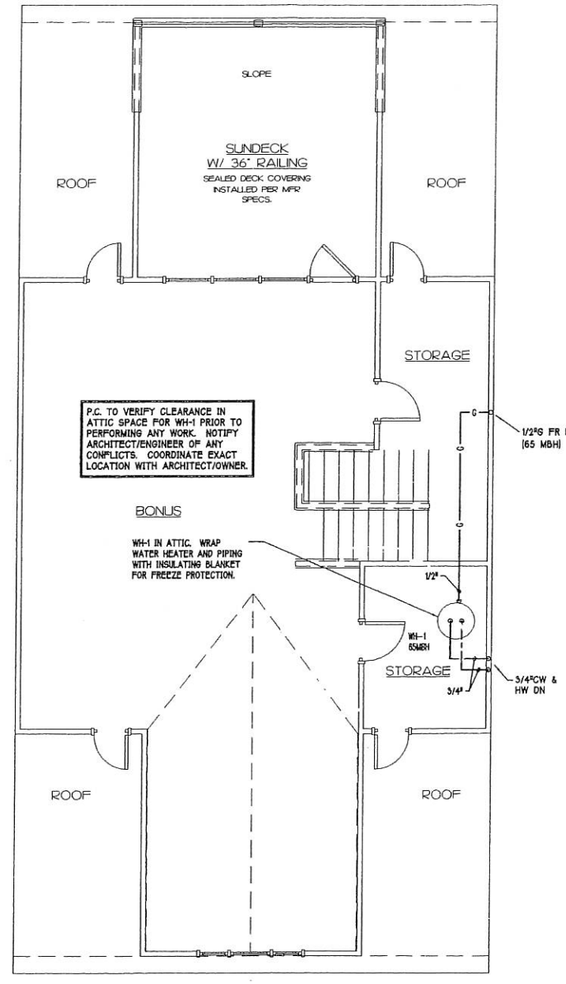
BUM -40



1 P4 FIRST FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



2 P4 SECOND FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



3 P4 THIRD FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
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5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

GAS LOAD TABLE (3 STORY UNIT)

LOW PRESSURE		HIGH PRESSURE	
PRESSURE DROP: 0.5 IN.W.C.		ATMOSPHERIC PRESSURE: 14.6954 PSIA	
STEEL (SCHD. 40)		P1: 2 PSIG	
LENGTH: 100 FT		P2: 1 PSIG	
FITTINGS FACTOR: 1.2		STEEL (SCHD. 40)	
EQUIVALENT TOTAL LENGTH: 120 FT.		LENGTH: 100 FT	
CAPACITY OF PIPES IN MBH		FITTINGS FACTOR: 1.2	
1/2"	45	EQUIVALENT TOTAL LENGTH: 120 FT.	
3/4"	94	CAPACITY OF PIPES IN MBH	
1"	177	1/2"	414
1-1/4"	365	3/4"	867
1-1/2"	544	1"	1632
2"	1047	1-1/4"	3351
2-1/2"	1669		

NOTE:
GAS PIPING IS SIZED FOR 2PSI. CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR LOW PRESSURE PIPING.
CONTRACTOR SHALL VERIFY THE AVAILABILITY OF 2PSI SERVICE BEFORE ANY WORK HAS BEGAN AND NOTIFY ARCHITECT IN WRITING OF AVAILABLE SERVICE.

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22725 JOHN M. PAPPAS 6/13/06

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. C02750 CERTIFICATE OF AUTHORIZATION

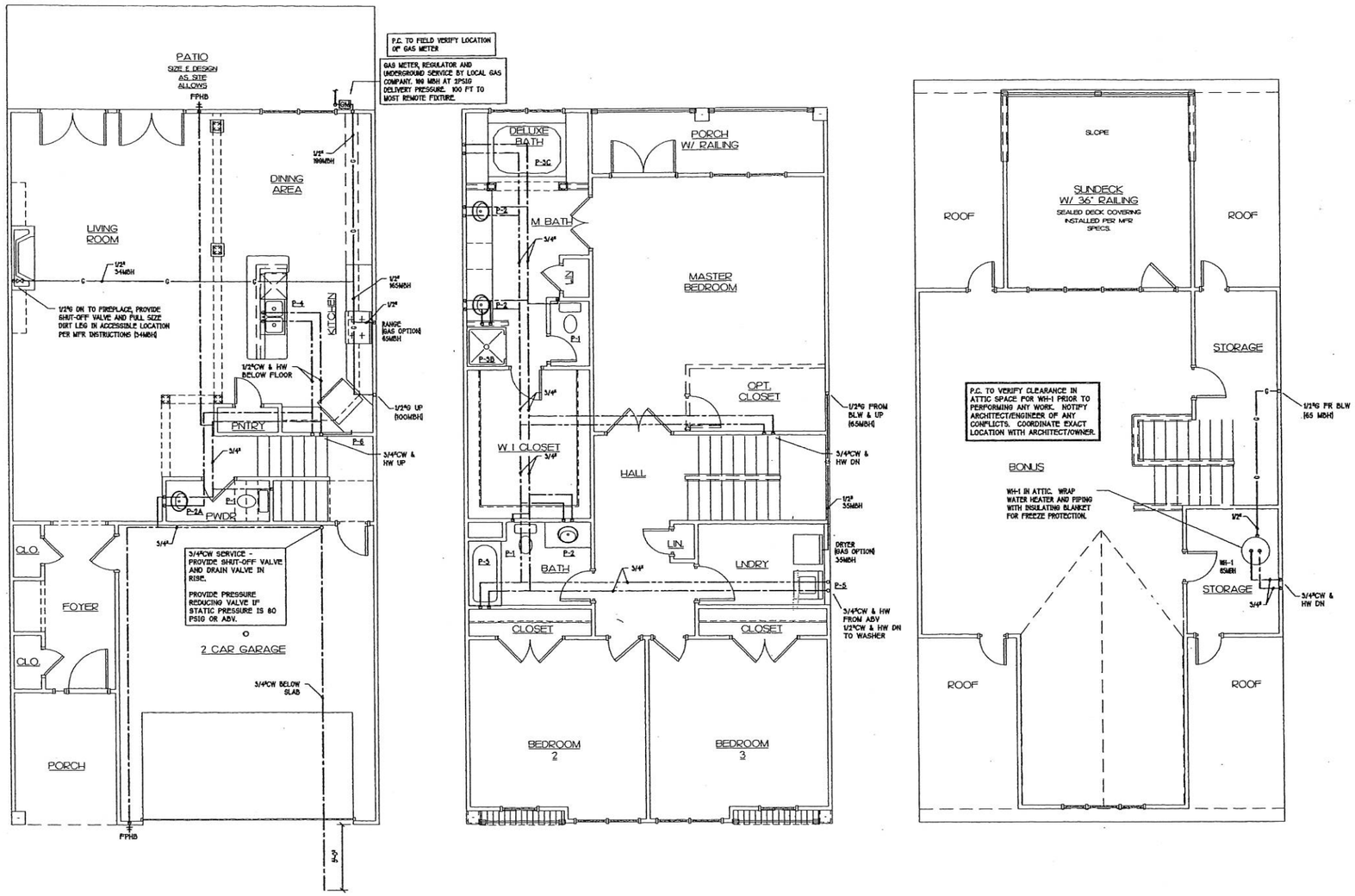
LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DATE ISSUED: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

P4

TYPICAL 3 STORY UNIT WATER & GAS PLANS



1/P4 FIRST FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

2/P4 SECOND FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

3/P4 THIRD FLOOR THREE STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P9 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
3. PROVIDE SHUT-OFF VALVE IN EACH UNIT IN AN ACCESSIBLE LOCATION THAT CONTROLS ALL WATER SUPPLY TO THAT UNIT.
4. ALL WATER PIPING IS 1/2" UNLESS OTHERWISE NOTED.
5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

GAS LOAD TABLE (3 STORY UNIT)

LOW PRESSURE		HIGH PRESSURE	
PRESSURE DROP: 0.5 INW.C.		ATMOSPHERIC PRESSURE: 14.6954 PSIA	
STEEL (SCHD. 40)		P1: 2 PSIG	
LENGTH: 100 FT		P2: 1 PSIG	
FITTINGS FACTOR: 1.2		STEEL (SCHD. 40)	
EQUIVALENT TOTAL LENGTH: 120 FT.		LENGTH: 100 FT	
CAPACITY OF PIPES IN MBH		FITTINGS FACTOR: 1.2	
1/2"	45	EQUIVALENT TOTAL LENGTH: 120 FT.	
3/4"	84	CAPACITY OF PIPES IN MBH	
1"	177	1/2"	414
1-1/4"	363	3/4"	867
1-1/2"	544	1"	1632
2"	1047	1-1/4"	3351
2-1/2"	1668		

NOTE:
GAS PIPING IS SIZED FOR 2PSI CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR LOW PRESSURE PIPING.
CONTRACTOR SHALL VERIFY THE AVAILABILITY OF 2PSI SERVICE BEFORE ANY WORK HAS BEGAN AND NOTIFY ARCHITECT IN WRITING OF AVAILABLE SERVICE.

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 22725 DAVID M. PAPPAS 12/5/05

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. C02750 CERTIFICATE OF AUTHORIZATION

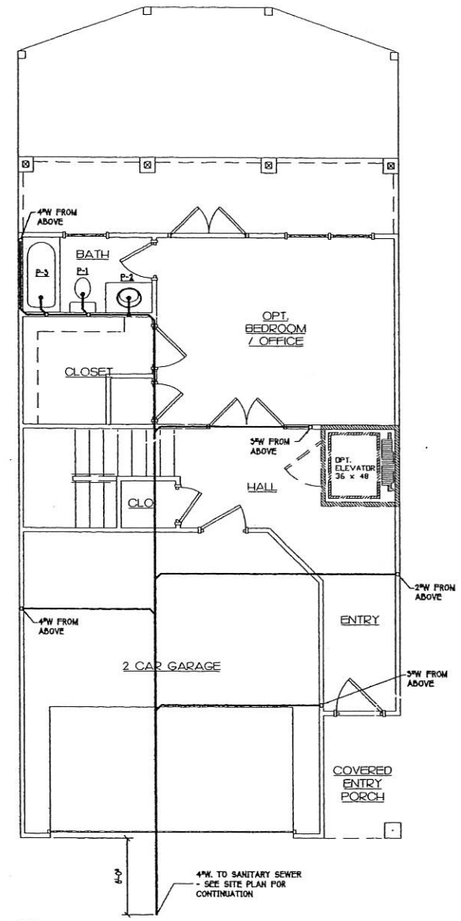
LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

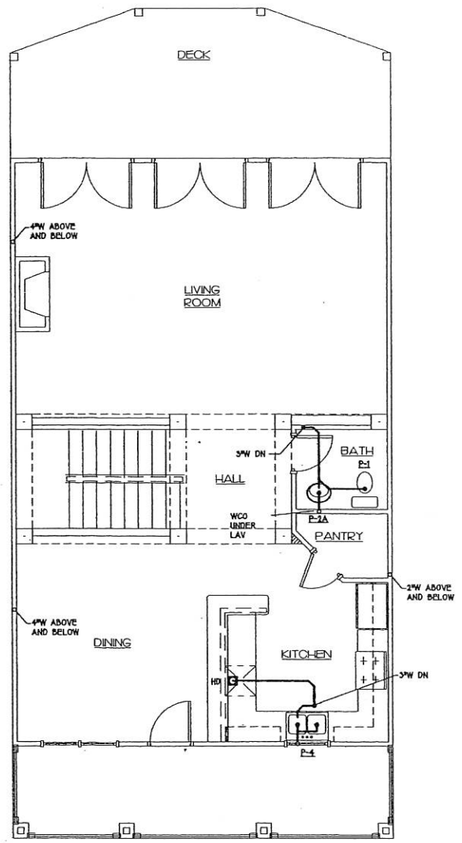
BASE DRAWING: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

P4

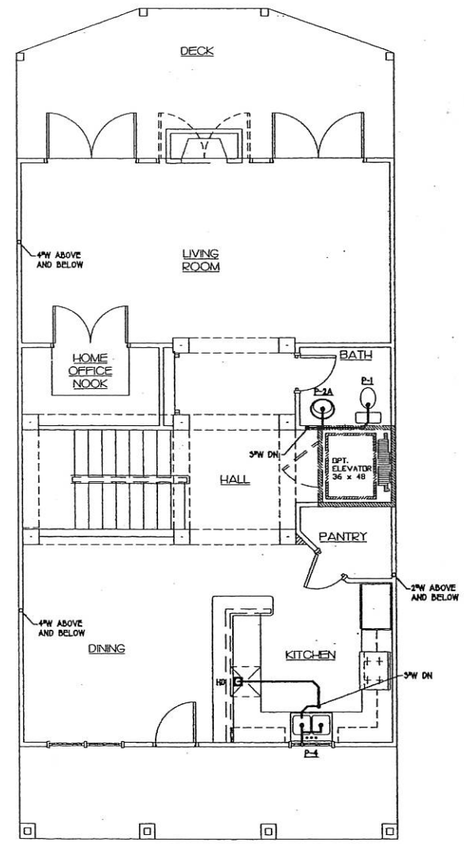
TYPICAL 3 STORY UNIT WATER & GAS PLANS



1 / P5 FIRST FLOOR FOUR STORY UNIT SANITARY PLAN
1/4" = 1'-0"



2 / P5 SECOND FLOOR FOUR STORY UNIT SANITARY PLAN
1/4" = 1'-0"



3 / P5 SECOND FLOOR FOUR STORY UNIT (ALT) SANITARY PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
3. PROVIDE SHUT-OFF VALVE IN EACH UNIT IN AN ACCESSIBLE LOCATION THAT CONTROLS ALL WATER SUPPLY TO THAT UNIT.
4. ALL WATER PIPING IS 1/2" UNLESS OTHERWISE NOTED.
5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

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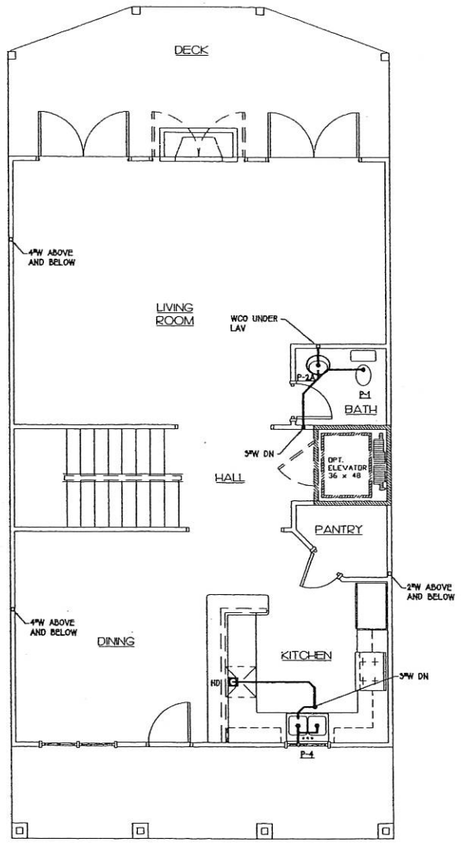
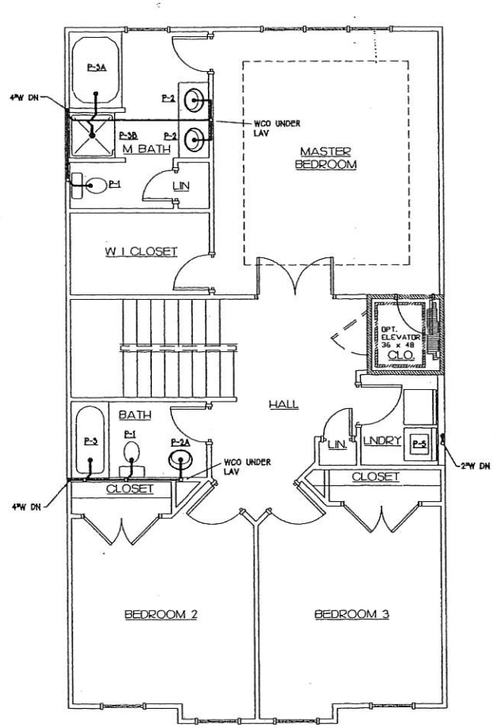
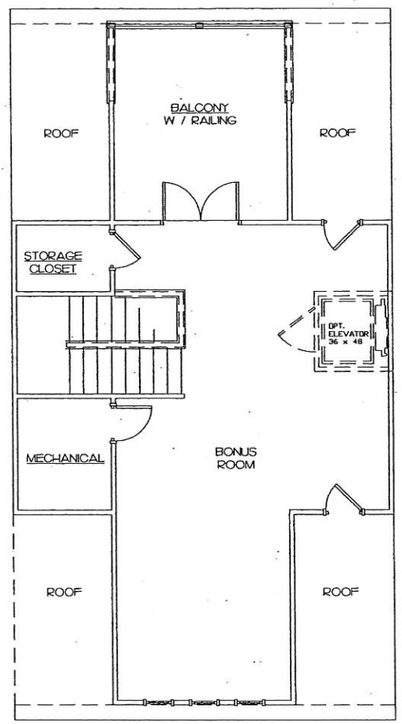
TYPICAL 4 STORY UNIT SANITARY PLANS



1 P6 SECOND FLOOR FOUR STORY UNIT (ELEV) SANITARY PLAN
1/4" = 1'-0"



2 P6 THIRD FLOOR FOUR STORY UNIT SANITARY PLAN
1/4" = 1'-0"



3 P6 FOURTH FLOOR FOUR STORY UNIT SANITARY PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
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SOUTH CAROLINA PROFESSIONAL ENGINEER DINO M. PAPPAS No. 22775 12/13/05

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. 002750 CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DATE ISSUED: 06/09/05
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ISSUED FOR: Permit & Construction:

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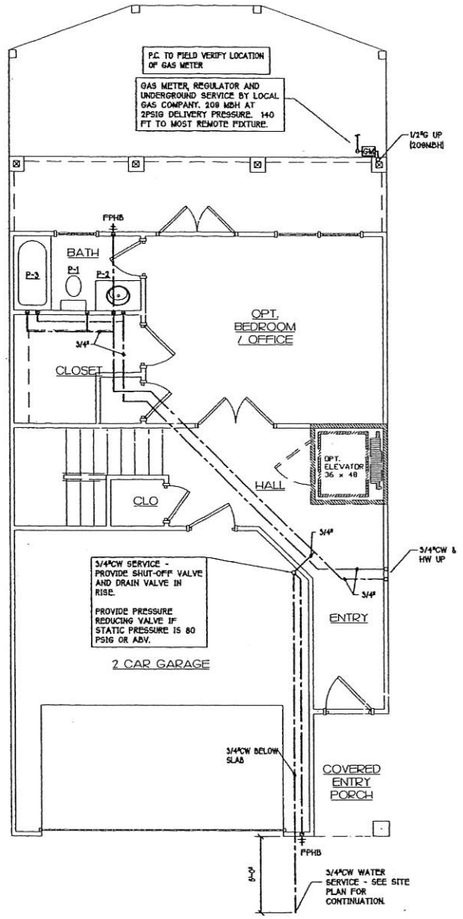
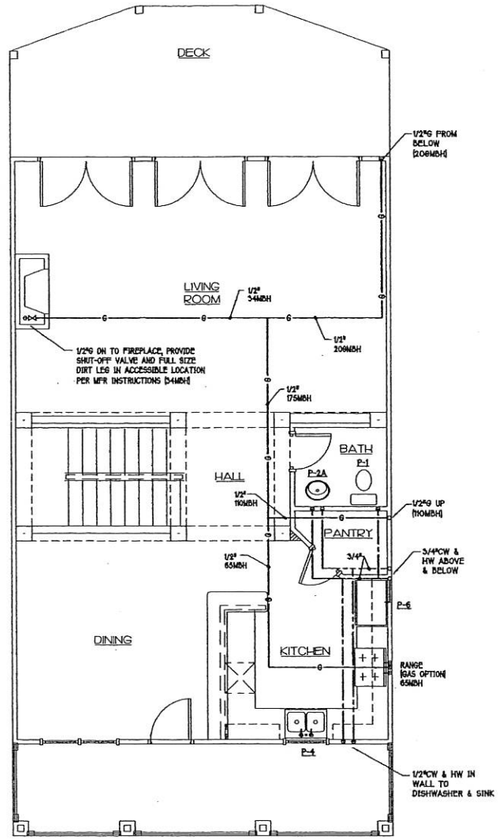
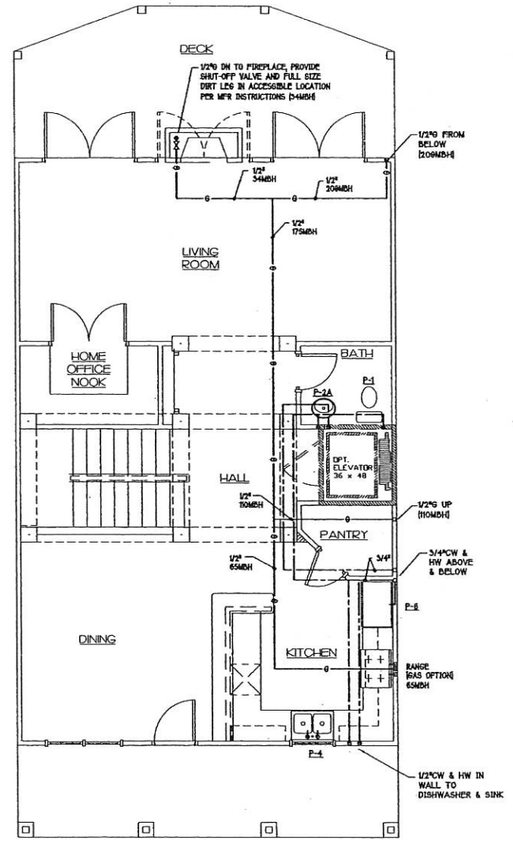
TYPICAL 4 STORY UNIT SANITARY PLANS



1 P7 FIRST FLOOR FOUR STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



2 P7 SECOND FLOOR FOUR STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



3 P7 SECOND FLOOR FOUR STORY UNIT (ALT) WATER & GAS PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
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5. PROVIDE ALL REQUIRED PLUMBING CONNECTIONS FOR DISHWASHER AND DISPOSAL IN EACH UNIT PER MFR RECOMMENDATIONS.
6. PROVIDE CLEANOUT AT THE BASE OF ALL WASTE STACKS.

GAS LOAD TABLE (4 STORY UNIT)

LOW PRESSURE		HIGH PRESSURE	
PRESSURE DROP: 0.5 IN.W.C.		ATMOSPHERIC PRESSURE: 14.6854 PSIA	
STEEL (SCHD. 40)		P1: 2 PSIG	
LENGTH: 140 FT		P2: 1 PSIG	
FITTINGS FACTOR: 1.2		STEEL (SCHD. 40)	
EQUIVALENT TOTAL LENGTH: 168 FT.		LENGTH: 140 FT	
CAPACITY OF PIPES IN MBH		FITTINGS FACTOR: 1.2	
1/2"	37	EQUIVALENT TOTAL LENGTH: 168 FT.	
3/4"	78	CAPACITY OF PIPES IN MBH	
1"	147	1/2"	345
1-1/4"	302	3/4"	722
1-1/2"	453	1"	1361
2"	873	1-1/4"	2784
2-1/2"	1381		

NOTE:
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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 12775 BRAD M. PAPPAS 6/9/05

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. 002750 CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DRC ISSUED: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

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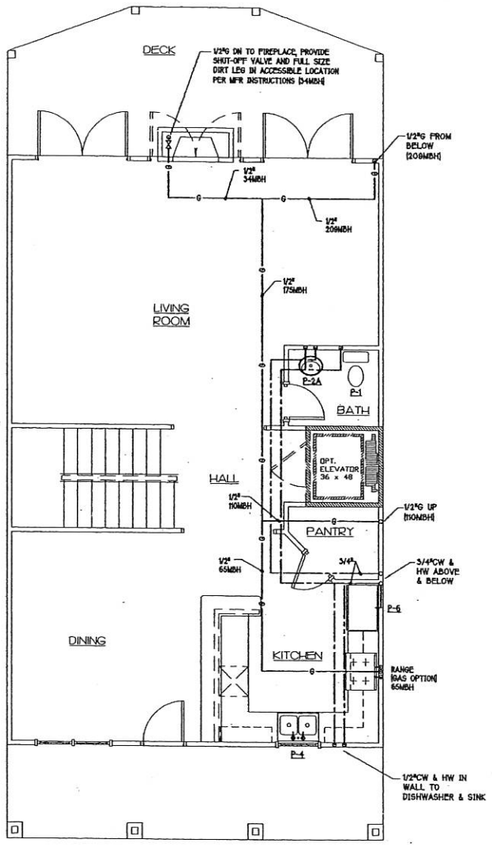
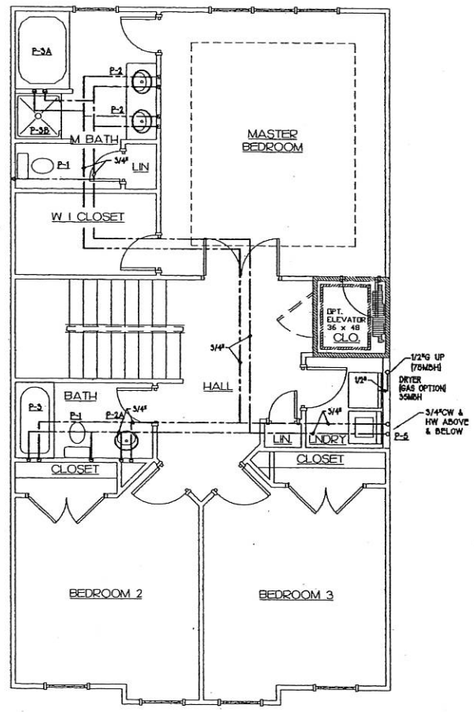
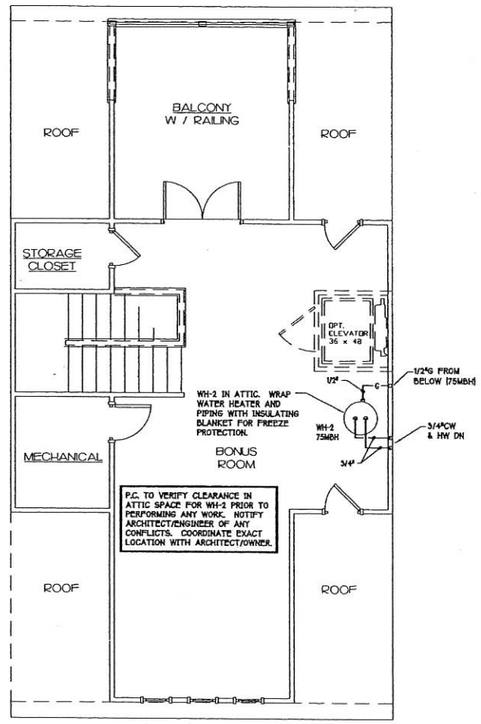
TYPICAL 4 STORY UNIT WATER & GAS PLANS



1 P8 SECOND FLOOR FOUR STORY UNIT (ELEV) WATER & GAS PLAN
1/4" = 1'-0"



2 P8 THIRD FLOOR FOUR STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"



3 P8 FOURTH FLOOR FOUR STORY UNIT WATER & GAS PLAN
1/4" = 1'-0"

PLUMBING NOTES FOR UNIT PLANS:

1. SEE SHEET P8 FOR FIXTURE SCHEDULE & CONNECTION SIZES.
2. ALL WATER SUPPLY LINES IN AN EXTERIOR WALL SHALL BE RUN ON INTERIOR SIDE OF WALL INSULATION.
3. PROVIDE SHUT-OFF VALVE IN EACH UNIT IN AN ACCESSIBLE LOCATION THAT CONTROLS ALL WATER SUPPLY TO THAT UNIT.
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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22725 DIMO M. PAPPAS 6/9/05

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DATE DRAWN: 06/09/05
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ISSUED FOR: Permit & Construction:

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TYPICAL 4 STORY UNIT WATER & GAS PLANS

PLUMBING GENERAL NOTES

1. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.
2. FURNISH AND INSTALL COMPLETE SYSTEMS OF SOIL, WASTE, AND VENT PIPING FROM ALL PLUMBING FIXTURES, AND/OR OTHER EQUIPMENT.
3. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS AT EACH CHANGE IN DIRECTION. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS.
4. ALL SOIL, WASTE AND VENT LINES SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION.
5. FURNISH AND INSTALL A COMPLETE SYSTEM OF HOT AND COLD WATER, AND WASTE PIPING FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING THIS SERVICE. VERIFY LOCATION OF BEGINNING POINTS.
6. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST CONTACT WITH OTHER METALS.
7. WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY, CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY WITH ASPHALTIC ENAMEL AND PROVIDING 15# ASPHALT SATURATED FELT BETWEEN THE PIPE AND MASONRY.
8. THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY WITH THE MECHANICAL AND THE ELECTRICAL CONTRACTORS TO AVOID CONFLICT WITH OTHER TRADES.
9. CEILING AREA HAS LIMITED SPACE. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED.
10. INSULATION IS REQUIRED ON ALL WATER SUPPLY PIPING IN EXTERIOR WALLS, WATER HEATER CLOSET, AND SPRINKLER RISER ROOM AT LEAST 1/2" THICK AS PER SECTION 404.2, VOL. X, NCSBC AND AS APPROVED BY OWNER/G.C.
11. COORDINATE INSTALLATION OF ALL PLUMBING LINES AT CMU WALLS SO THAT PLUMBING LINES ARE PLACED IN WALL DURING CMU WALL CONSTRUCTION. CUTTING AND PATCHING OF CMU WALLS IN PLACE WILL NOT BE PERMITTED.
12. WASTE AND VENT PIPING SHALL BE AS FOLLOWS:
    BELOW SLAB: SCHEDULE 40 PVC
    ABOVE GROUND: SCHEDULE 40 PVC
13. DOMESTIC WATER PIPING SHALL BE AS FOLLOWS:
    BELOW SLAB: PLUMBING PEX PIPING
    ABOVE GROUND: PLUMBING PEX PIPING
    FOLLOW MFG INSTRUCTIONS FOR INSTALLATION AND AQUIRE APPROVAL FROM LOCAL JURISDICTION PRIOR TO INSTALLATION.
14. ALL COLD AND HOT WATER PIPING INDICATED TO BE RUN ABOVE FINISHED CEILING OR IN EXTERIOR WALL SHALL BE INSTALLED ON THE CONDITIONED SIDE OF THE BUILDING INSULATION.
15. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE WASTE PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
16. VERIFY BACKFLOW PREVENTOR REQUIREMENTS OF LOCAL AUTHORITY AND PROVIDE BACKFLOW PREVENTOR AS REQUIRED. COORDINATE LOCATION WITH OTHER TRADES.
17. VERIFY DOMESTIC WATER METER REQUIREMENTS OF LOCAL AUTHORITY AND PROVIDE DOMESTIC WATER METER AS REQUIRED. COORDINATE LOCATION WITH OTHER TRADES.
18. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS AND PARTITIONS. PROVIDE A DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814

PLUMBING LEGEND

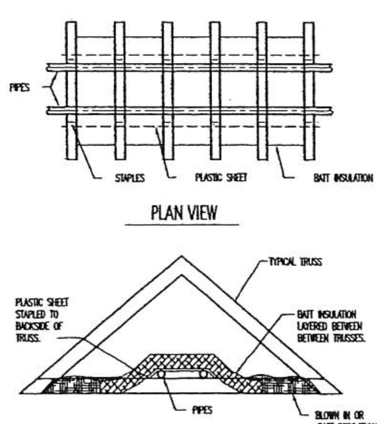
Symbol	Description
(solid line)	DOMESTIC COLD WATER PIPING
(dashed line)	105F DOMESTIC HOT WATER PIPING
(line)	VENT PIPING
(heavy line)	WASTE (SANITARY SEWER)
—G—	GAS PIPING
(symbol)	GATE VALVE
(symbol)	BALANCING VALVE
(symbol)	CHECK VALVE
(symbol)	PIPE UP
(symbol)	PIPE DOWN
P-1	FIXTURE DESIGNATION
A.F.F.	ABOVE FINISHED FLOOR
P.C.	PLUMBING SUB-CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL SUB-CONTRACTOR
E.C.	ELECTRICAL SUB-CONTRACTOR
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
YCO	YARD CLEAN OUT
FPHB	FREEZE PROOF HOSE BIBB
F.D.	FLOOR DRAIN
CW	COLD WATER
HW	HOT WATER
HD	HUB DRAIN

GAS PIPING NOTES

1. WORK TO INCLUDE PIPING FROM GAS METERS TO ALL GAS FIRED EQUIPMENT AND THE FINAL CONNECTION.
2. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODE REQUIREMENTS, AND THE PROVISIONS OF NFPA-54 AND NFPA-58.
3. THE CONTRACTOR SHALL SUPPLY ALL PERMITS AND LICENSES REQUIRED FOR THE WORK, AND FOR ALL INSPECTIONS REQUIRED.
4. PIPE 2" AND SMALLER SHALL BE TRACPIPE AS MFG BY OMEGAFLEX OR EQUAL.
5. VALVES SHALL BE GAS COCKS MANUFACTURED BY NIBCO.
6. ALL GAS PIPING LOCATED UNDER THE FLOOR SLABS SHALL BE INSTALLED IN CONDUIT OR AS REQUIRED BY CODE.
7. PROVIDE DIRT TRAPS AND SHUT-OFF VALVES WITH UNIONS AT EACH CONNECTION TO GAS FIRED EQUIPMENT.
8. ALL PIPING EXPOSED TO THE OUTDOORS OR RUN IN UNCONDITIONED SPACES SHALL BE PAINTED WITH TWO COATS OF RUST RESISTANT ENAMEL.

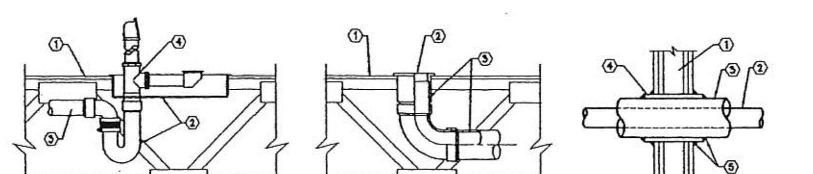
PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE

MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	FAUCET/VALVE				DRAIN		SUPPLIES AND STOPS	PIPE SIZES				MOUNTING	REMARKS
							MANUFACTURER MODEL NO.	SPOUT	HANDLES	CENTERS	TYPE	SIZE		WASTE	VENT	CW	HW		
P-1	WATER CLOSET	FLUSH TANK	STERLING	402215	VITREOUS CHINA	STANDARD ELONGATED	—	—	—	—	—	—	McGUIRE 166LK	4"	2"	1/2"	—	FLOOR	PROVIDE WITH KOHLER #K-4664-0 ELONGATED CLOSED FRONT SEAT (NO FLIMSY PLASTIC SEATS ALLOWED)
P-2	LAVATORY	COUNTER TOP	STERLING	75020140	VIKRELL	COUNTER TOP	KOHLER K-15182-F	STANDARD	SINGLE LEVER	4"	POP-UP	1-1/2"	McGUIRE 165	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER TOP	
P-2A	LAVATORY	PEDESTAL SINK	STERLING	442428	VITREOUS CHINA	PEDESTAL	KOHLER K-15261-4	STANDARD	TWO LEVER	4"	POP-UP	1-1/2"	McGUIRE 165	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER TOP	
P-3	TUB AND SHOWER	GARDEN TYPE	STERLING	ENSEMBLE 36x60	VIKRELL	GARDEN TUB	KOHLER K-T15601-4S	—	SINGLE LEVER	—	CAST INTEGRAL	2"	—	2"	1-1/2"	1/2"	1/2"	FLOOR	FRONT APRON EXTENDED SPOUT: DELTA RP18306 TUB SPOUTS MUST REACH OUT OVER EDGE OF TUB.
P-3A	TUB	GARDEN TYPE	STERLING	ENSEMBLE 42x60	VIKRELL	GARDEN TUB	KOHLER K-T388-4	—	SINGLE LEVER	—	CAST INTEGRAL	2"	—	2"	1-1/2"	1/2"	1/2"	FLOOR	FRONT APRON EXTENDED SPOUT: DELTA RP18306 TUB SPOUTS MUST REACH OUT OVER EDGE OF TUB.
P-3B	SHOWER	BUILT-IN TYPE	STERLING	ENSEMBLE 36x36	VIKRELL	STANDARD SHOWER	KOHLER K-T14641-4	—	SINGLE LEVER	—	CAST INTEGRAL	2"	—	2"	1-1/2"	1/2"	1/2"	FLOOR	FRONT APRON EXTENDED SPOUT: DELTA RP18306
P-3C	TUB	GARDEN TYPE	ELJER (OR EQUAL)	DAKOTA 48x72	HIGH-GLOSS ACRYLIC	GARDEN TUB		—		—	CAST INTEGRAL	2"	—	2"	1-1/2"	1/2"	1/2"	FLOOR	
P-4	SINK	DOUBLE COMPT	KOHLER	K-3198-4	STAINLESS STEEL	8" DEEP	KOHLER K-12172	10" SWING	SINGLE LEVER	8"	CRUMB CUP	1-1/2"	McGUIRE 165LK	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER TOP	PROVIDE W/ STRAINER AND SPRAY
P-5	WASHER BOX	BOTTOM SUPPLY	PLASTIC ODDITIES	WMB-2VP	—	RECESSED BOX	—	—	—	—	—	2"	—	2"	1-1/2"	1/2"	1/2"	RECESSED WALL	
P-6	VALVE BOX	WALL MOUNTED	PLASTIC ODDITIES	IB-20	PVC	RECESSED BOX	—	—	—	—	—	—	—	–	–	1/2"	–	WALL MOUNTED	
FPHB	WALL HYDRANT	FREEZE PROOF	WOODFORD	B67	CAST BRASS	BOX FAUCET	—	—	LOOSE KEY	—	—	—	—	–	–	1/2"	–	WALL	
YCO	YARD CLEAN-OUT	ROUND TOP	JOSAM	56040	CAST IRON	BRONZE PLUG	—	—	—	—	—	—	—	–	–	–	–	GRADE	PROVIDE WITH 24"x24"x4"THK CONCRETE PAD AT GRADE
FCO	FLOOR CLEAN-OUT	SQUARE TOP	JOSAM	56030	CAST IRON	BRONZE PLUG	—	—	—	—	—	—	—	–	–	–	–	FLOOR	
WCO	WALL CLEAN-OUT	ROUND TOP	JOSAM	58890	STAINLESS STEEL	BRONZE PLUG	—	—	—	—	—	—	—	–	–	–	–	WALL	
FDA	FLOOR DRAIN	SQUARE TOP	JOSAM	30000-S	CAST IRON	NIKALOY TOP	—	—	—	—	CAST IRON	SEE PLAN	—	–	–	–	–	FLOOR	
WH-1	WATER HEATER	GAS FIRED	STATE	GS6 65 XRRS	GLASS LINED	RESIDENTIAL GAS	—	—	—	—	—	—	—	–	–	SEE PLAN	SEE PLAN	SEE DETAIL	65 GAL. STORAGE; 65MBH INPUT, 67MBH RECOVERY AT 100 DEG F
WH-2	WATER HEATER	GAS FIRED	STATE	GS6 75 XRRS	GLASS LINED	RESIDENTIAL GAS	—	—	—	—	—	—	—	–	–	SEE PLAN	SEE PLAN	SEE DETAIL	74 GAL. STORAGE; 75MBH INPUT, 81MBH RECOVERY AT 100 DEG F



NOTE: THIS DETAIL APPLIES TO ALL PIPING IN ATTIC.

1 / P9 FREEZE PROTECTION OF PIPING
NOT TO SCALE



① 1 HR. FLOOR/CEILING ASSEMBLY
② FIRESTOP DEVICE - TUB BOX ASSEMBLY PROSET SYSTEMS INC. - PART NO. S15620-J
③ DRAIN PIPING - NOM. 1-1/2" SCH. 40 PVC
④ WASTE/OVERFLOW FITTING - BRASS OR PVC

FOR ADDITIONAL INFORMATION SEE UL SYSTEM NO. F-C-2013

NOTE: DETAIL BASED ON PROSET OTHER UL APPROVED SYSTEMS ARE ACCEPTABLE

① 1 HR. FLOOR/CEILING ASSEMBLY
② FIRESTOP DEVICE - TUB BOX ASSEMBLY PROSET SYSTEMS INC. - PART NO. A35340 OR A45340
③ DRAIN PIPING - NOM. 3" OR 4" SCH. 40 PVC

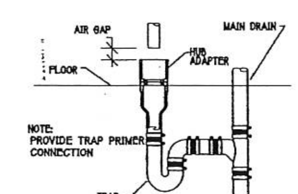
FOR ADDITIONAL INFORMATION SEE UL SYSTEM NO. F-C-2012

NOTE: DETAIL BASED ON PROSET OTHER UL APPROVED SYSTEMS ARE ACCEPTABLE

① WALL ASSEMBLY (1 HR. OR 2 HR.)
② PIPE (4" TYPE L COPPER OR SMALLER)
③ PIPE INSULATION
④ NOMINAL 1/4" THK. INTUMESCENT MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL.
⑤ MIN. 1/4" BEAD APPLIED TO THE WRAP STRIP/WALL INTERFACE AND THE EXPOSED EDGE OF WRAP.

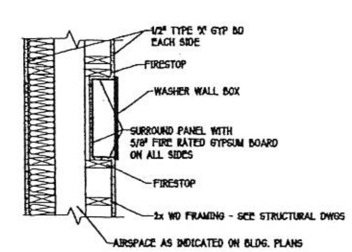
FOR ADDITIONAL INFORMATION SEE UL SYSTEM NO. WL5001

2 / P9 PIPE PENETRATION DETAIL
NOT TO SCALE

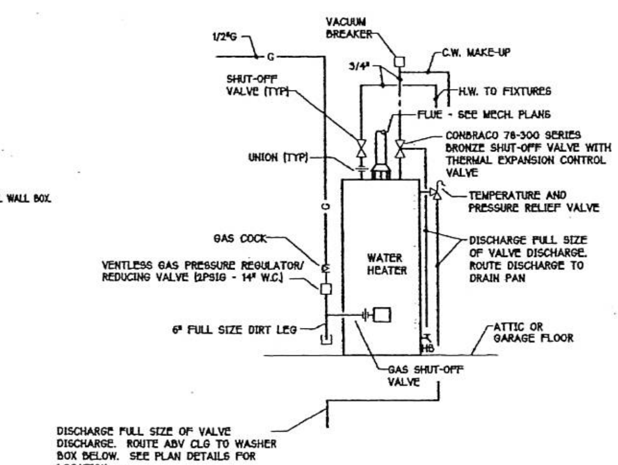


3 / P9 HUB DRAIN DETAIL
NOT TO SCALE

4 / P9 WASHER WALL BOX DETAIL
NOT TO SCALE
ICE MAKER BOX SIMILAR



5 / P9 WASHER WALL BOX DETAIL
NOT TO SCALE



6 / P9 WATER HEATER DETAIL
NOT TO SCALE

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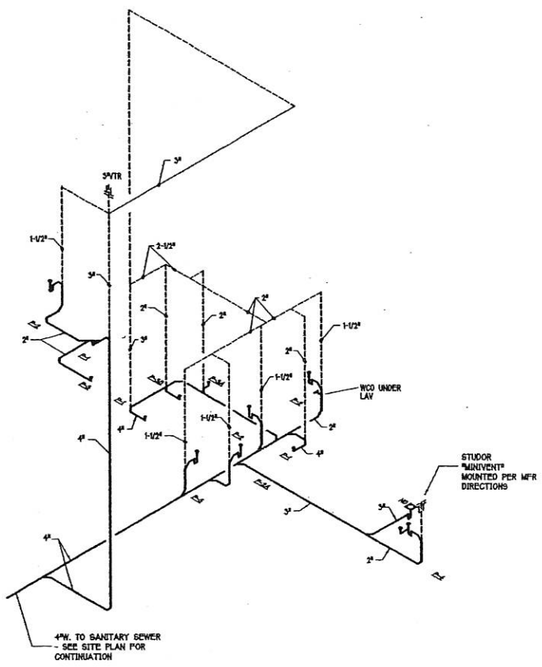
LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

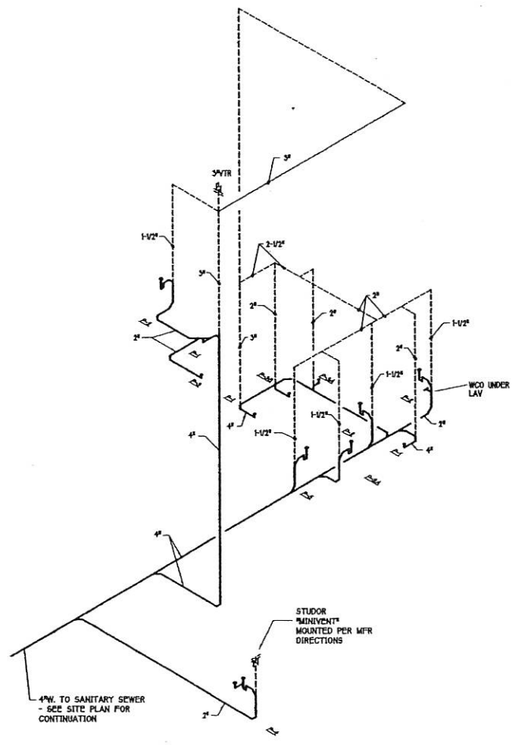
DATE ISSUED: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

P9

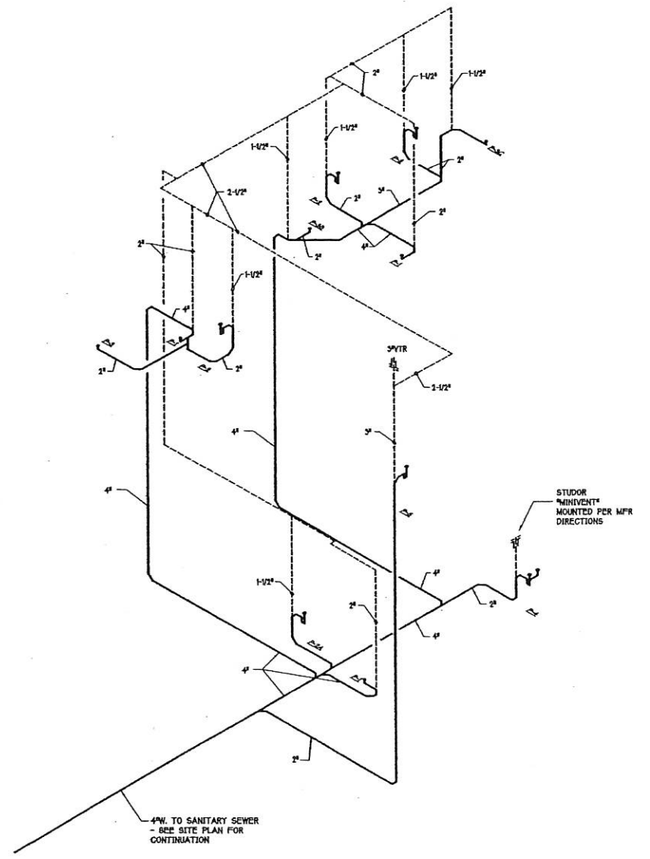
PLUMBING SCHEDULE, DETAILS, & NOTES



1 P10 2 STORY UNIT SANITARY RISER
1/4" = 1'-0"



2 P10 2 STORY UNIT (ALT) SANITARY RISER
1/4" = 1'-0"



3 P10 3 STORY UNIT SANITARY RISER
1/4" = 1'-0"

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SOUTH CAROLINA
No. 22725
9/12/05

SOUTH CAROLINA
VRETTOS PAPPAS CONSULTING ENGINEERS, PA
No. 002750
CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay,
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ISSUED FOR:
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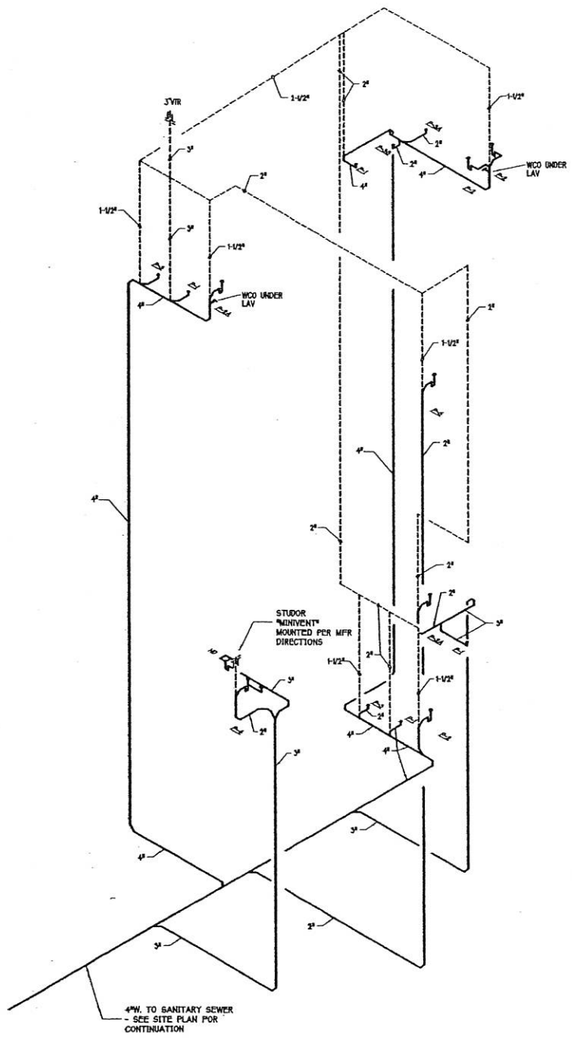
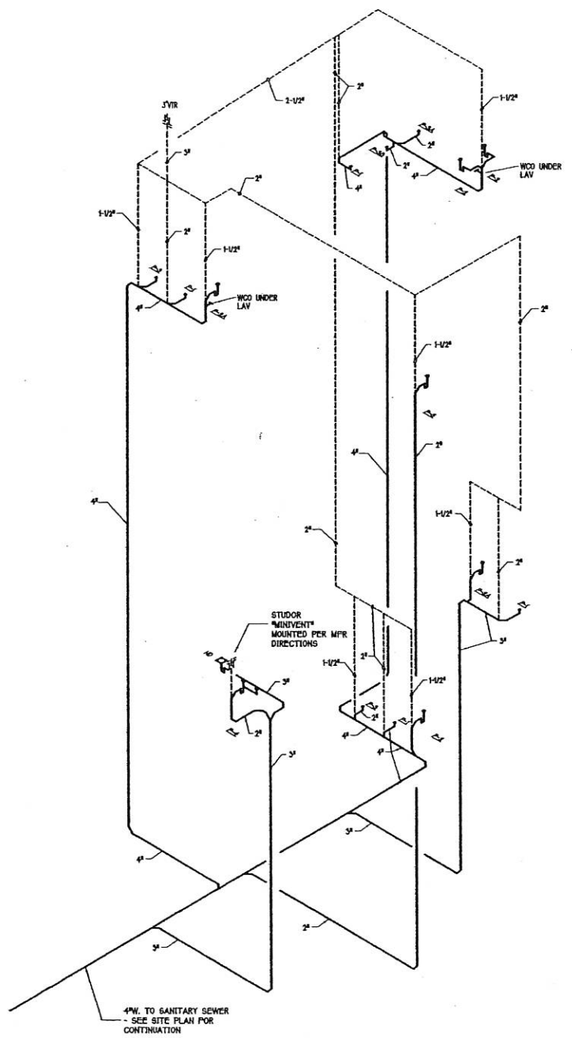
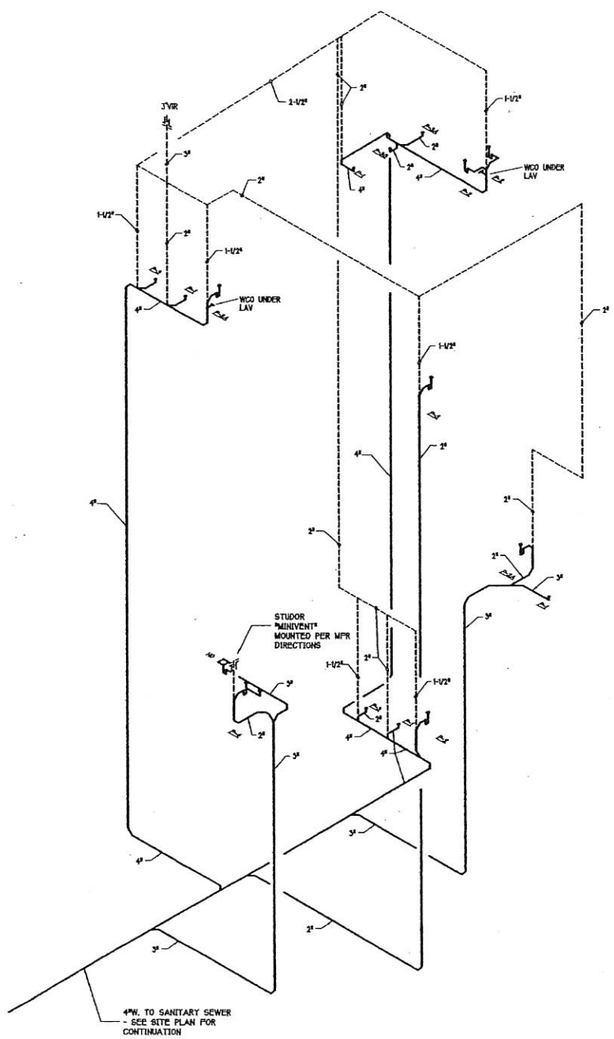
SANITARY WASTE RISERS
2 & 3 STORY UNITS



1 P11 4 STORY UNIT SANITARY RISER
1/4" = 1'-0"



2 P11 4 STORY UNIT (ALT) SANITARY RISER
1/4" = 1'-0"



3 P11 4 STORY UNIT (ELEV) SANITARY RISER
1/4" = 1'-0"

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LAKE SHORE TOWN HOMES

Tega Cay,
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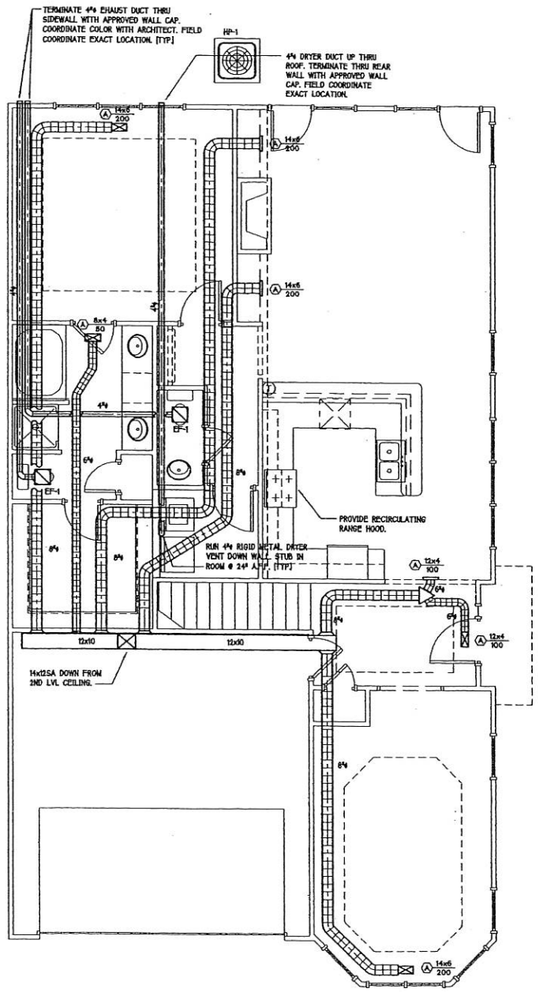
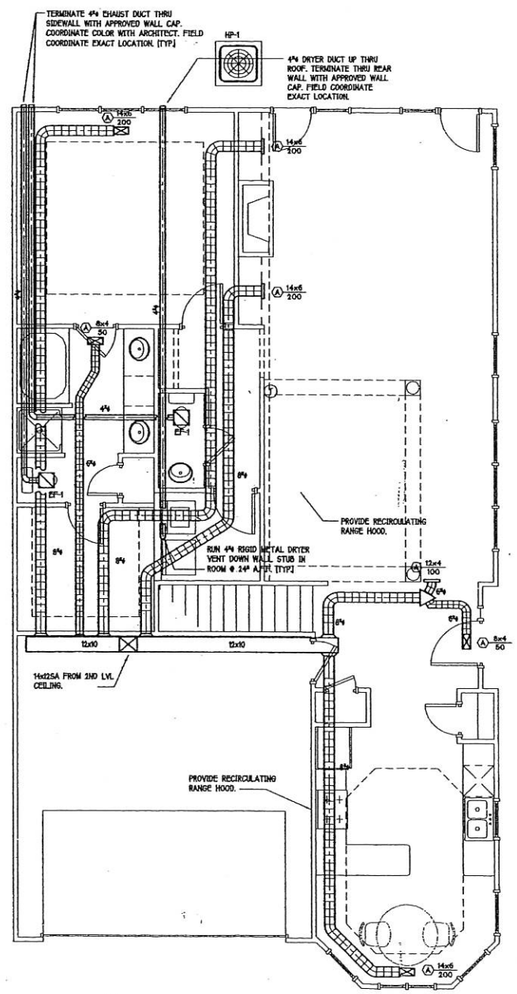
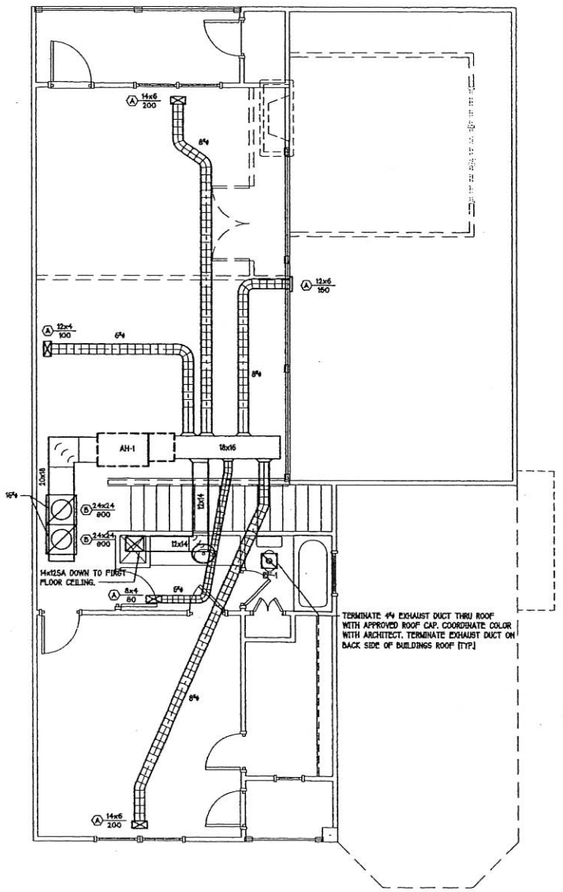
SANITARY WASTE RISERS
4 STORY UNITS



1 M1 FIRST FLOOR TWO STORY UNIT
1/4" = 1'-0"



2 M1 FIRST FLOOR TWO STORY UNIT (ALT)
1/4" = 1'-0"



3 M1 SECOND FLOOR TWO STORY UNIT
1/4" = 1'-0"

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LAKE SHORE TOWN HOMES

Tega Cay,
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BASE DRAWING
06/09/05
PROJECT NO.
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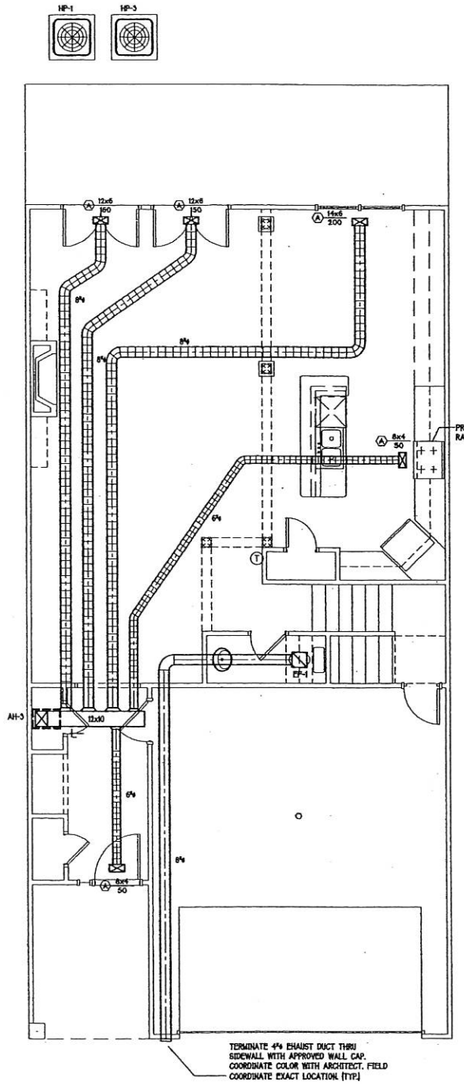
M1

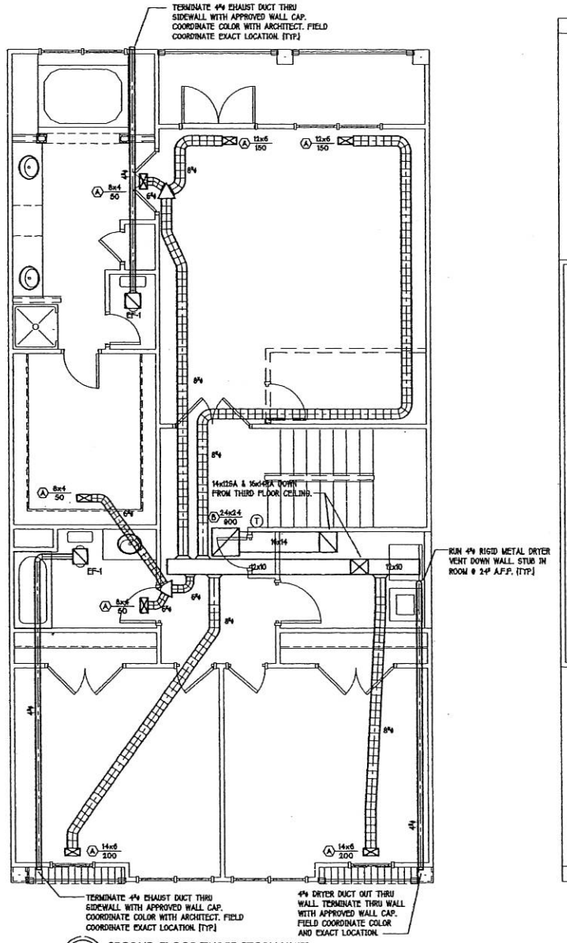
TWO STORY UNIT MECH PLANS AND NOTES

MECHANICAL LEGEND

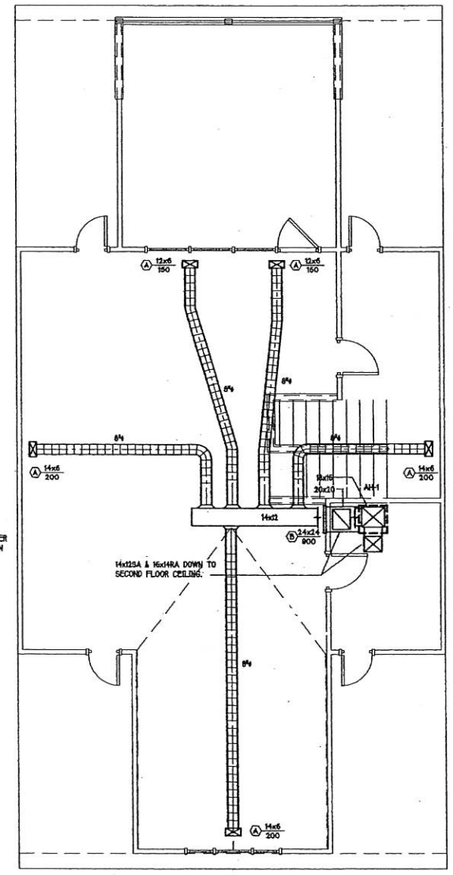
- CEILING DIFFUSER
- EXHAUST/RETURN GRILLE
- SIDEWALL DIFFUSER
- ROUND RIGID DUCT
- FLEXIBLE DUCT
- CONDENSATE DRAIN LINE
- (T) THERMOSTAT/CONTROL
- B.D.D. BACKDRAFT DAMPER
- AH AIR HANDLER
- CU CONDENSING UNIT
- AC AIR CONDITIONING UNIT
- CFM CUBIC FEET PER MINUTE
- AFF ABOVE FINISHED FLOOR
- EER ENERGY EFFICIENCY RATIO
- SP STATIC PRESSURE
- FD FIRE DAMPER
- RD CEILING RADIATION DAMPER
- DOOR UNDER CUT 3/4"
- LOUVER DOOR



1 M2 FIRST FLOOR THREE STORY UNIT
1/4" = 1'-0"



2 M2 SECOND FLOOR THREE STORY UNIT
1/4" = 1'-0"



3 M2 THIRD FLOOR THREE STORY UNIT
1/4" = 1'-0"

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 22725 DINO M. PAPPAS

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

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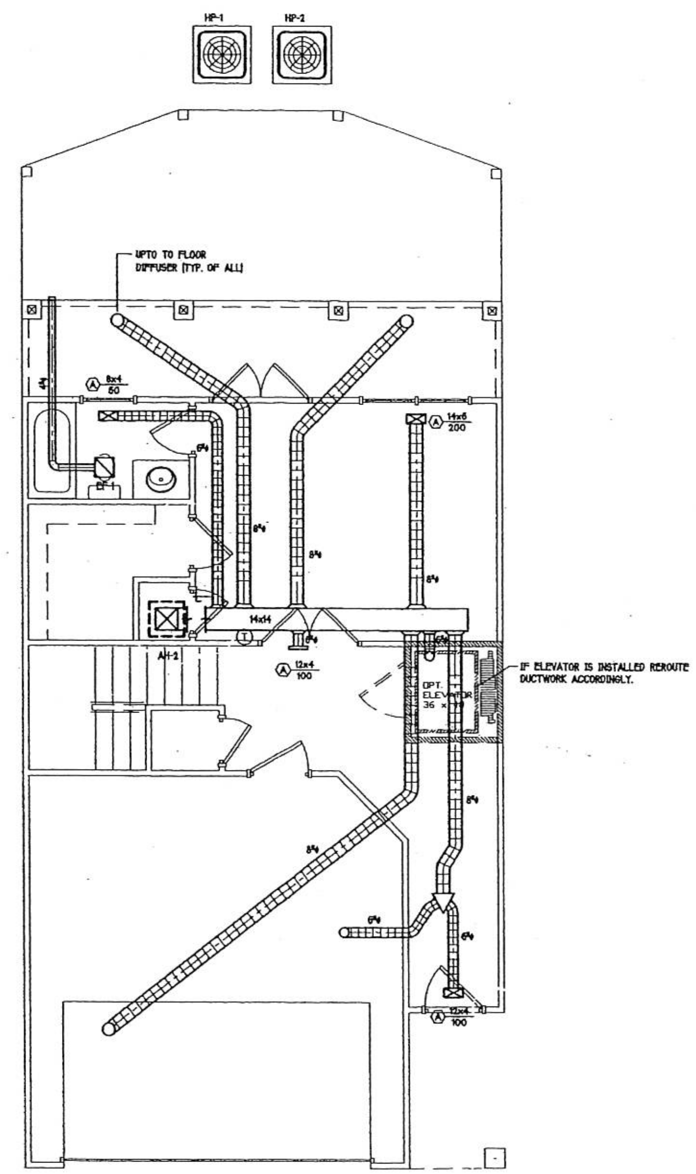
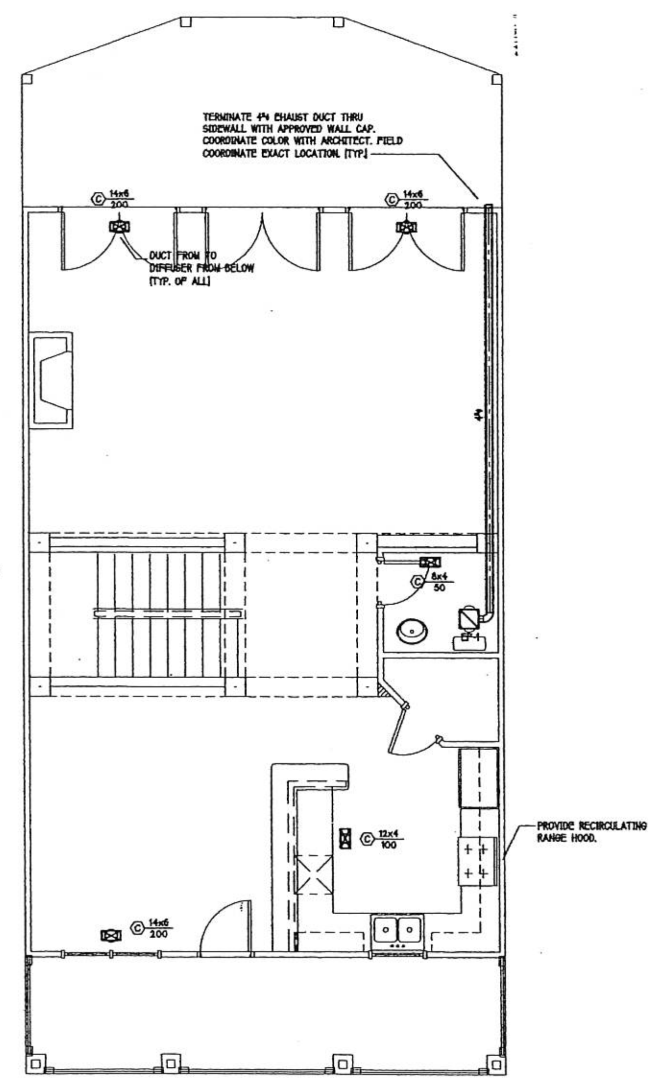
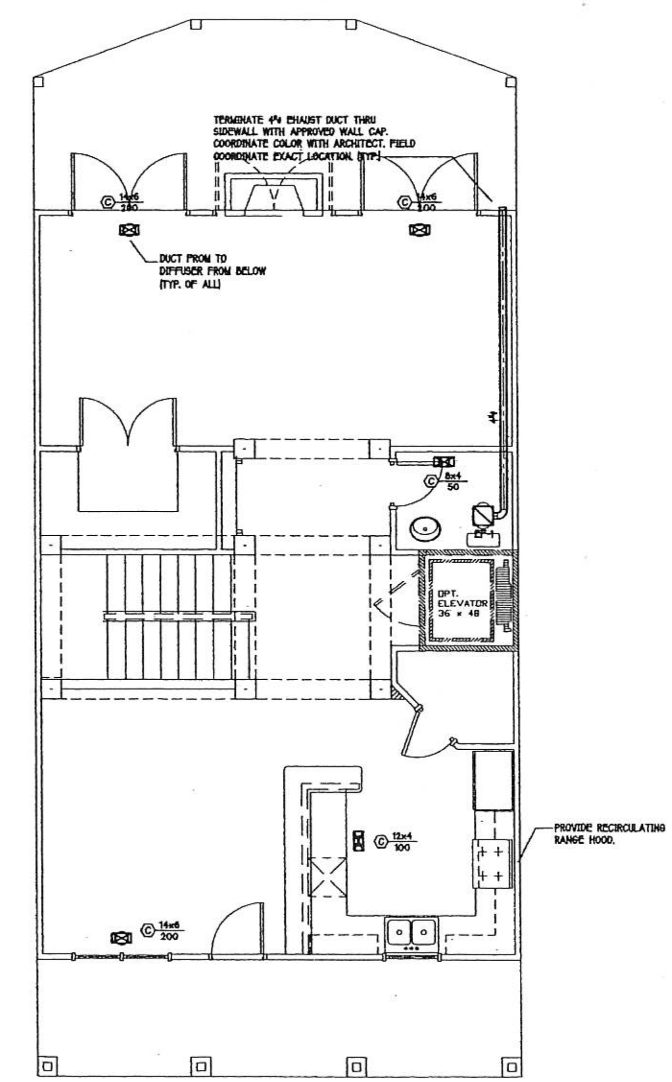
THREE STORY UNIT MECH PLANS AND NOTES



1 M3 FIRST FLOOR FOUR STORY UNIT
1/4" = 1'-0"



2 M3 SECOND FLOOR FOUR STORY UNIT
1/4" = 1'-0"



3 M3 THIRD FLOOR FOUR STORY UNIT (ALT)
1/4" = 1'-0"

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

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PROJECT NO.: 2530
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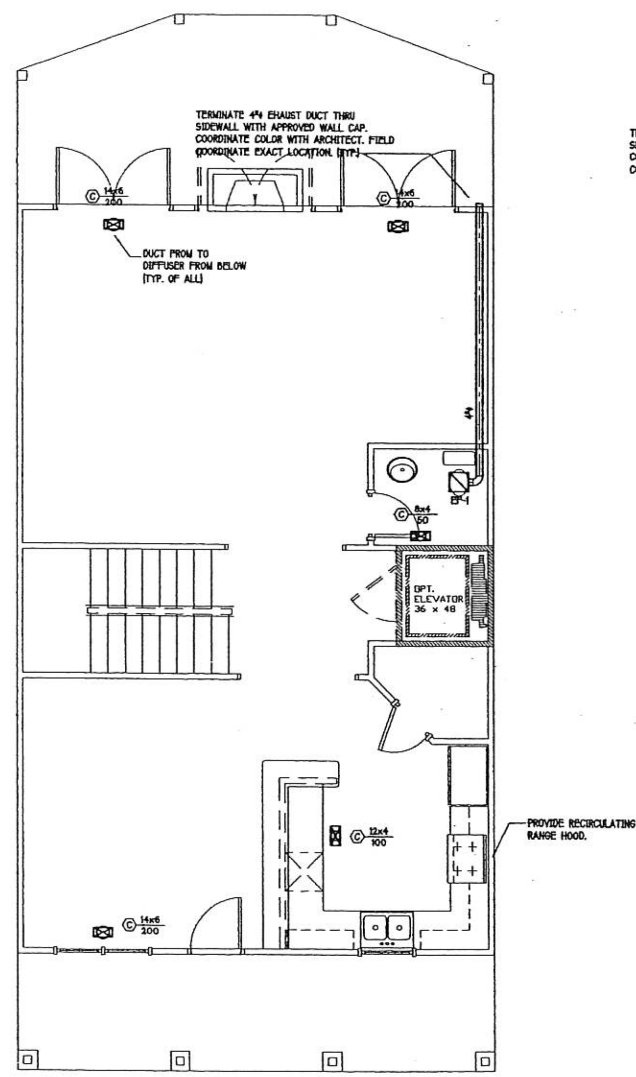
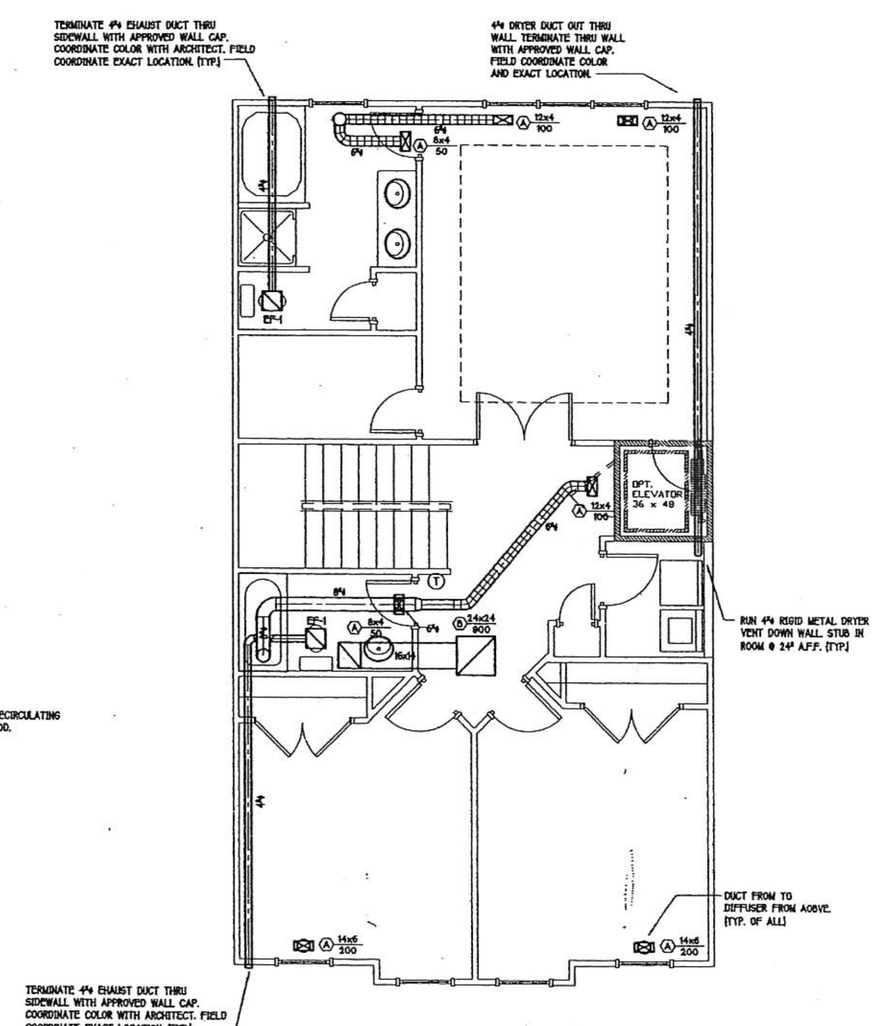
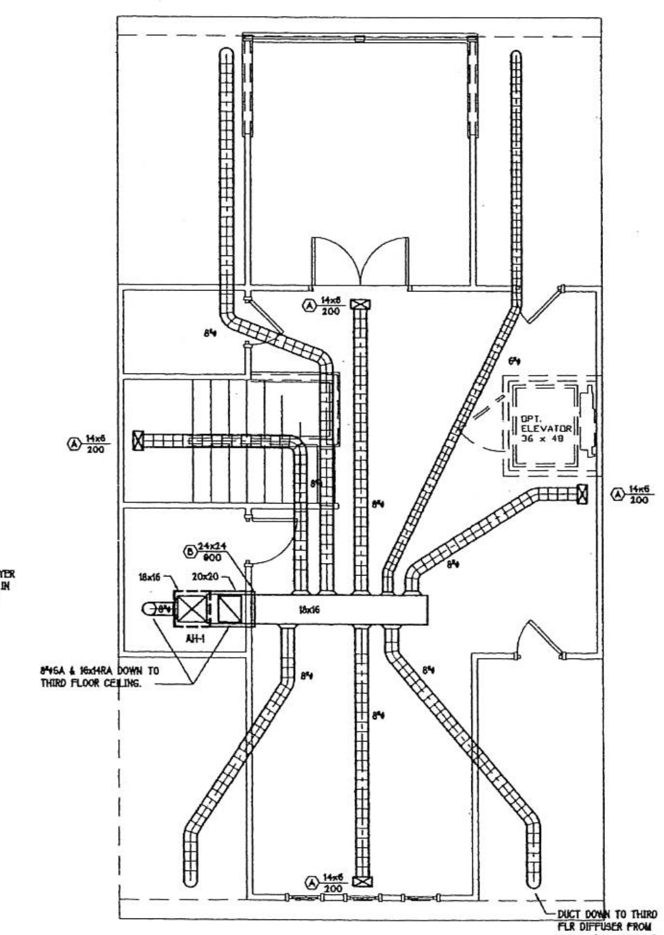
FOUR STORY UNIT MECH PLANS AND NOTES



1 M4 SECOND FLOOR FOUR STORY UNIT (ELEV)
1/4" = 1'-0"



2 M4 THIRD FLOOR FOUR STORY UNIT
1/4" = 1'-0"



3 M4 FOURTH FLOOR FOUR STORY UNIT
1/4" = 1'-0"

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

06/09/05
2530
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FOUR STORY UNIT MECH PLANS AND NOTES

SPLIT SYSTEM HEAT PUMP SCHEDULE

UNIT DESIG. AH/CU	AIR HANDLING UNIT DATA									CONDENSING UNIT				COOLING CAPACITY			HEATING CAPACITY	AUX. HEATER				NOTES	NOM. TONS
	MANUFACTURER & MODEL #	NOM. TOTAL CFM	MIN. OA CFM	MIN. E.S.P. (IN.WG)	FAN RPM	ELECTRICAL DATA				MANUFACTURER & MODEL #	ELECTRICAL DATA			TOTAL MBH	SENS. MBH	SEER	TOTAL MBH AT 47F	KW	VOLTAGE	COND. DRAIN		
						FAN HP	MCA	MOCP	FAN VOLT/PH		VOLT/PH	MCA	MAX FUSE										
AH-1 HP-1	CARRIER FB4ANO60	2000	-	0.4	BY MFG	3/4	53.2	60	208V/1	CARRIER 38TCCO60	208/1	38.8	60	56.0	42.0	10.1	58.0	7.5/10KW	208/1	F	1-6	5.0
AH-2 HP-2	CARRIER FB4ANO36	1200	-	0.4	BY MFG	1/3	44.7	45	208V/1	CARRIER 38TCCO36	208/1	23.8	35	33.3	24.5	10.0	35.0	6/8 KW	208/1	F	1-6	3.0
AH-3 HP-3	CARRIER FB4ANO18	600	-	0.4	BY MFG	1/5	26.0	30	208V/1	CARRIER 38TCCO18	208/1	12.8	20	17.0	12.8	10.0	17.5	5/3.8 KW	208/1	F	1-6	1.5

NOTES:

1. PROVIDE NEW FILTER FOR ALL UNITS UPON ACCEPTANCE OF PROJECT
2. PROVIDE UNIT DISCONNECT FOR ALL UNITS-MOUNTED ON UNIT
3. PROVIDE 7-DAY PROGRAMMABLE TIME CLOCK AND AUTOMATIC CHANGEOVER HEAT/COOL THERMOSTAT/SUBBASE FOR EACH HVAC UNIT.
4. OUTDOOR UNITS SHALL HAVE A MINIMUM 10.0 EER RATING
5. REFRIG. PIPING TO BE SIZED PER TOTAL INSTALL. EQUIV. LENGTH. LONG-LINE APP.TO BE PROVIDED WHENEVER MFG. RECOMM. LENGTHS ARE EXCEEDED, INCL. LIQ. LINE SOLENOID VALVES, ACCUMULATOR, ETC. MAX T.E.L. IS 100'
6. SINGLE POINT ELEC. POWER CONNECTION

DIFFUSER SCHEDULE

SYMBOL	CFM	NECK SIZE	MODULE SIZE	FRAME TYPE	PATTERN	DAMPER	MATERIAL	SERVICE	FINISH	MANUFACTURER & MODEL No.	NOTES
(A)	AS NOTED	AS NOTED	AS NOTED	SURFACE	3-WAY	YES	STEEL	SUPPLY	NOTE 2	HART & COOLEY 681	1
(B)	AS NOTED	AS NOTED	24x24	SURFACE	200EG DEFL.	YES	STEEL	RETURN	NOTE 2	HART & COOLEY 659	1
(C)	AS NOTED	AS NOTED	12x12 24x24	SURFACE	4-WAY	YES	STEEL	SUPPLY	NOTE 2	TITUS TDC	1
(D)	AS NOTED	AS NOTED	4' LONG	SURFACE	IN 3/4" SLOTS 4FT DIFFUSER	YES	STEEL	SUPPLY	NOTE 2	TITUS ML-5A	1
(E)	AS NOTED	AS NOTED	24x24	SURFACE	-	YES	STEEL	RETURN	NOTE 2	TITUS PAR	1
(F)	AS NOTED	AS NOTED	-	SURFACE	DBLE DEFL	YES	STEEL	SUPPLY	NOTE 2	TITUS 300RS	1

NOTES:

1. DIFFUSER DESIGNATIONS ON PLANS AS FOLLOWS: DIFFUSER OR NECK SIZE. 8x4 / 75 (A) — DIFFUSER TYPE AS NOTED ABOVE; AIR QUANTITY
2. FINISH TO MATCH/BE ABLE MATCH CEILING OR WALL OR DOOR

FAN SCHEDULE

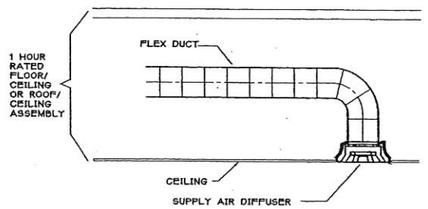
UNIT NO.	SERVICE	AREA SERVED	CFM	S.P.	RPM	TYPE & ARRANGEMENT	MIN. MOTOR HP/W/A & VOLTAGE	MANUFACTURER & MODEL No.	DRIVE	CONTROL SCHEME	REMARKS
EF-1	EXHAUST	UNIT BATHROOMS	50	0.250	- -	WALL	0.50A 120/1	BROAN MODEL 688	DIRECT	A	1 2 3 4

NOTES:

1. SCREEN
2. BACKDRAFT DAMPER
3. COLOR BY ARCHITECT
4. INTEGRAL DISCONNECT SWITCH

CONTROL OPTIONS:

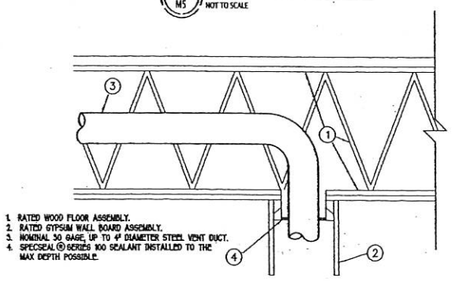
A. CONTROL W/ SWITCH



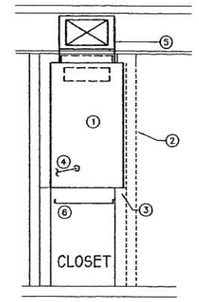
NOTE:

1. SEE FLOOR PLANS AND SPECIFICATIONS FOR DUCT INSULATION REQUIREMENTS.
2. PROVIDE UL RADIATION DAMPER/BLANKET ASSY.

1 / M5 SUUPLY AIR DIFFUSER DETAIL — NOT TO SCALE



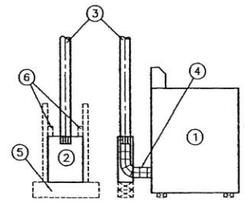
2 / M5 FIRESTOP FOR DRYER AND BATH VENT DUCTS — NOT TO SCALE



NOTES:

1. AIR HANDLER (AH) IN CLOSET, FRONT RETURN.
2. LOUVERED DOOR FOR RETURN AIR
3. FILTER RACK FOR 1" THROW-A-WAY FILTERS WITH UNIT STAND
4. 3/4" DRAIN FROM AH CONDENSATE TO HUB DRAIN.
5. SUPPLY DUCT IN CEILING SPACE.
6. 1" DEEP AUXILIARY DRAIN PAN W/ MICROFLOAT SWITCH. INTERLOCK FLOAT SWITCH W/ A/H. INSTALL FLOAT SWITCH IN ONE CORNER OF PAN AND TILT PAN TO THAT CORNER.

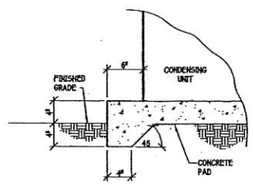
3 / M5 UNIT AIR HANDLER DETAIL — NOT TO SCALE



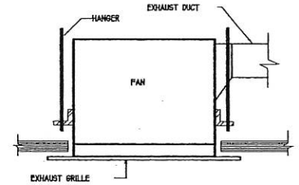
4 / M5 RECESSED METAL BOX FOR DRYER EXHAUST — NOT TO SCALE

HVAC GENERAL NOTES

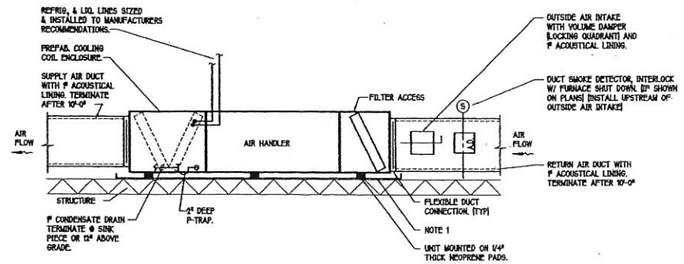
1. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES. MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
2. GC TO PROVIDE FRAMED OPENINGS THRU WALLS, ABOVE CEILINGS, COVERING METAL STUDS, FOR FULL RETURN AIR TRANSFER ABOVE THE FURRED-DOWN CEILINGS. SEE SCHEDULE, SHEET M0, FOR SIZES.
3. ALL MATERIAL AND EQUIPMENT IS TO BE INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS & REFLECTED CEILING PLANS FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
5. ALL PIPING, DUCTS, VENTS, ETC. EXTENDING THROUGH WALLS & ROOF SHALL BE FLASHED & COUNTERFLASHED IN A WATERPROOF MANNER. SEAL ALL PENETRATIONS OF THE FLOOR/CEILING ASSEMBLY AND RATED WALLS WITH FIRE DAMPER, SEALANT MATERIAL APPROVED BY LOCAL CODE. (COLOR TO MATCH EXTERIOR).
6. EXTEND ALL CONDENSATE DRAIN LINES AS INDICATED, ROUTED TO AVOID INTERFERENCE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR HANDLING UNITS SHALL BE TRAPPED. COORDINATE WITH P.C.
7. ALL DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS AND PARTITIONS.
8. ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED W/ WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, TO AVOID INTERFERENCE.
9. LOCATE ALL THERMOSTATS AND SWITCHES 4'-0" ABOVE FINISHED FLOOR. ANY DEVICE REQUIRING A THERMOSTAT FOR CONTROL SHALL BE FURNISHED WITH A THERMOSTAT WHETHER INDICATED ON THE DRAWINGS OR NOT.
10. DUCT TO BE INSULATED ROUND RIGID OR PROPERLY INSTALLED F FIBERBOARD. ALL DUCT SYSTEMS ARE TO BE PER SMACNA AND UL STANDARDS. THERE IS NO EXPOSED DUCTWORK.
11. ALL EQUIPMENT SHALL BE UL LISTED.
12. FLEX DUCT IS TO BE INSTALLED WITHOUT SHARP BENDS OR CRIMPS. FLEX IS TO BE PERMANENTLY FASTENED TO ANY SHEETMETAL FITTINGS. NO FLEX DUCT IS TO BE EXPOSED.
13. PROVIDE SHEET METAL COLLARS OR EQUAL UNDER DRYWALL WHENEVER GRILLE REGISTERS ARE TO BE INSTALLED.
14. THE MECHANICAL CONTRACTOR SHALL PROVIDE REFRIGERANT AND LOW VOLTAGE CONTROL LINES FROM THE CONDENSER TO THE AIR HANDLING UNIT. COORDINATE ROUTING AND INSTALLATION WITH THE GENERAL CONTRACTOR. SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.
15. PIPING INSULATED: REFRIGERANT - SEAMLESS COPPER ACR TUBING WITH SILVER SOLDERED JOINTS. CONDENSATE - SEAMLESS COPPER ACR TUBING WITH SILVER SOLDERED JOINTS.
16. MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNERS REPRESENTATIVE WITH COMPLETE BALANCE REPORT. PROVIDE NEW AIR FILTERS FOR EACH UNIT.
17. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DUCT DIMENSIONS.
18. DUCTWORK, DIFFUSERS, REGISTERS, GRILLS AND OTHER ITEMS OF THE AIR HANDLING SYSTEM SHALL NOT BE SUPPORTED BY THE CEILING OR CEILING SUSPENSION SYSTEM. COORDINATE LOCATION OF GRILLES, DIFFUSERS AND LOUVERS WITH ELECTRICAL, ARCHITECTURAL AND PLUMBING WORK.
19. THE DRYER VENT MATERIAL IS TO BE ROUND RIGID SHEETMETAL BGN 30 GAGE. THE LENGTH SHALL NOT EXCEED MAXIMUM ALLOWED BY CODE OR MFG. IF MFG. RECOMMENDATIONS ARE FOLLOWED, DRYER MUST BE PROVIDED AT FINAL INSPECTION. NO SCREWS PROTRUDING INTO DUCT, ETC. PER CODE.
20. ALL MECHANICAL EQUIPMENT SHALL OPERATE FREE OF ANY OBJECTIONABLE NOISE OR VIBRATION
21. AS REQUIRED BY LOCAL CODES, MECHANICAL CONTRACTOR SHALL PROVIDE UL LISTED FIRE DAMPERS WHERE REQUIRED FOR FIRE PROTECTION REQUIREMENTS OF THE HVAC SYSTEM & THE UL ASSEMBLY.
22. ON MAKING PIPE CONNECTIONS TO EQUIPMENT, CARE SHOULD BE TAKEN TO ARRANGE PIPES SO AS NOT TO INTERFERE WITH OPENING OF ACCESS DOORS.
23. ALL GAS LOADS, PIPING, METERS, ETC. TO BE FOUND ON PLUMBING PLANS.
24. REFRIGERANT PIPING, NOT SHOWN ON PLANS, SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS & INSTALLATION INSTRUCTIONS & PER THE T.E.L.
25. ELECTRICAL CONTRACTOR TO PROVIDE ALL HIGH VOLTAGE ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ECT. TO CONDENSING UNITS AND AIR HANDLERS. ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR.
26. PROVIDE 5 YEAR WARRANTY ON COMPRESSORS AND 1 YEAR ON ALL OTHER EQUIPMENT FROM DATE OF INITIAL OPERATION
27. VERIFY CLEARANCES BEFORE FABRICATING DUCTWORK AND ORDERING EQUIPMENT.
28. MINIMUM E.E.R. FOR UNITS SHALL BE 10.0
29. CONDENSING UNITS SHALL BE MOUNTED ON 4x4 PRESSURE TREATED TIMBERS. SEE DETAIL 6/M5.
30. DRAWINGS ARE DIAGRAMATIC AND DO NOT RELEASE THE CONTRACTOR FROM THE RESPONSIBILITY OF INSTALLING THE HVAC SYSTEM PER LOCAL CODE, AND IN EXCELLENT WORKING CONDITION.
31. KITCHEN EXHAUST DUCT SHALL BE CONTINUOUSLY WELDED AND CONSTRUCTED OF MINIMUM 0.0598" THICK STEEL.



6 / M5 CONDENSING UNIT PAD DETAIL — NOT TO SCALE



7 / M5 CEILING EXHAUST FAN DETAIL — NOT TO SCALE



NOTES:

1. AUXILIARY DRAIN PAN WITH MICROFLOAT SWITCH. INTERLOCK FLOAT SWITCH W/ AIR HANDLER. INSTALL FLOAT SWITCH IN ONE CORNER OF PAN AND TILT PAN TO THAT CORNER.

5 / M5 HORIZONTAL AIR HANDLING UNIT DETAIL — NOT TO SCALE

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LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DATE ISSUED: 06/09/05
PROJECT NO.: XXXX
ISSUED FOR: Permit & Construction:

M5

MECHANICAL SCHEDULES, DETAILS AND NOTES

LIGHTING FIXTURE SCHEDULE

SYMBOL OR TAG LETTER	MANUF.	CATALOG NUMBER	LAMP DATA NO.	LAMP DATA TYPE	WATTS	MOUNTING	DESCRIPTION
A	SEL BY OWNER PROV BY EC				60W MAX	WALL	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR PORCH LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
B	ANY		1	100W MAX	100	SURFACE	PORCELAIN BASE INCANDESCENT LAMP HOLDER INCLUDED WITH LAMP.
C	SEL BY OWNER PROV BY EC				60W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR COVERED ENTRY LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
D	SEL BY OWNER PROV BY EC				100W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR FOYER/HALLWAY LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
E	STONCO	VWXL-11-GC	1	100W A-19	100	WALL	ELEVATOR PIT LIGHT, PROVIDE WIRE GUARD.
G	SEL BY OWNER PROV BY EC				100W MAX	WALL	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR VANITY LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
H	SEL BY OWNER PROV BY EC				140W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR KITCHEN LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
K	SEL BY OWNER PROV BY EC				60W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR BATHROOM LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE
L	SEL BY OWNER PROV BY EC				60W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR BATHROOM LIGHT (WET LOCATION), PROVIDE A $150 ALLOWANCE PER FIXTURE
M	SEL BY OWNER PROV BY EC				100W MAX	SURFACE	SELECTED BY OWNER AND PROVIDED BY THE ELECTRICAL CONTRACTOR DINING RM LIGHT, PROVIDE A $150 ALLOWANCE PER FIXTURE

FIXTURE SCHEDULE NOTES:

LF1: LIGHTING FIXTURE CATALOG NUMBERS ARE INDICATIVE OF THE STYLE OF FIXTURE REQUIRED. CONTRACTOR SHALL COORDINATE WITH FIELD CONDITIONS & ARCHITECT'S FINISH SCHEDULE TO PROVIDE FIXTURES WITH THE PROPER TRIM, VOLTAGE AND OPTIONS NECESSARY FOR A COMPLETE INSTALLATION.

LF2: DOUBLE-FACED EXIT FIXTURES SHALL BE OF THE SAME MANUFACTURER AND SERIES AS THE CORRESPONDING SINGLE FACED FIXTURES SCHEDULED.

LF3: FLUORESCENT BATTERY PACKS SHALL BE CAPABLE OF PROVIDING AT LEAST 1100 LUMENS OUTPUT FROM ONE LAMP FOR A DURATION OF 1.5 HOURS. REGARDLESS OF CATALOG NUMBER INDICATED IN SCHEDULE, PROVIDE BATTERY PACKS FOR ALL FIXTURES INDICATED ON THE DRAWINGS TO BE EMERGENCY TYPE. BOTH LAMPS OF A (2) LAMP FIXTURE SHALL BE SERVED BY THE EMERGENCY BALLAST, OUTBOARD LAMPS OF (3) AND (4) LAMP FIXTURES SHALL BE SERVED BY THE EMERGENCY BALLAST. ALL BATTERY PACKS SHALL BE FACTORY INSTALLED.

LF4: ALL FLUORESCENT FOUR FOOT LIGHT FIXTURES SHALL BE EQUIPPED WITH INSTANT START ELECTRONIC BALLASTS AND 3500K, INSTANT-START T-8 LAMPS.

LF5: ALL COMPACT FLUORESCENT LIGHT FIXTURES SHALL BE EQUIPPED WITH ELECTRONIC BALLASTS AND 3500K, 82 CRI LAMPS.

LF6: SUBMITTALS FOR EQUAL MANUFACTURERS WILL BE CONSIDERED. PROVIDED SUBMITTAL DATA TO INCLUDE COMPLETE PHOTOMETRIC DATA AS WELL AS DATA ON MATERIAL, FINISHES, SUPPORTS, REFLECTORS, LENSES, ETC.

LF7: PROVIDE BALLASTS AS REQUIRED FOR "INBOARD/OUTBOARD" SWITCHING WHERE INDICATED ON PLANS. IN ADDITION, ALL FIXTURES WIRED "INBOARD/OUTBOARD" SHALL BE TANDEM WIRED.

LF8: FIXTURES SHALL BE INDEPENDENTLY SUPPORTED DIRECTLY FROM THE STRUCTURE WITH CODE GUAGE WIRE AT A MINIMUM OF TWO OPPOSITE CORNERS.

LF9: ALL RECESSED FIXTURES INSTALLED IN CEILINGS, INDICATED BY ARCHITECT AS HAVING INSULATION INSTALLED OVER CEILING AND FIXTURES, SHALL BE UL. RATED FOR DIRECT CONTACT WITH INSULATION. VERIFY WITH ARCHITECTURAL PLANS.

LF10: ALL RECESSED FIXTURES RECESSED IN FIRE RATED CEILINGS, SHALL BE INSTALLED WITH AN APPROVED TENT ENCLOSURE BY G.C. OR BE UL. RATED FOR USE IN FIRE RATED CEILINGS. VERIFY WITH ARCHITECTURAL PLANS.

LF11: VERIFY ALL FIXTURE VOLTAGES PRIOR TO ORDERING.

GENERAL DWELLING UNIT NOTES:

1. WIRE DOOR BELL TO NEAREST ADJACENT 110V CIRCUIT, AHEAD OF ANY SWITCHING.

2. DWELLING UNIT SMOKE DETECTORS SHALL BE WIRED SO THAT ALL THE DETECTORS SOUND WHEN ANY ONE OF THEM ACTIVATES.

3. ALL FEEDERS/BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG UNLESS NOTED OTHERWISE. WHERE CONDUCTOR AND RACEWAY SIZE ARE SHOWN AT HOMERUN, SIZE INDICATED SHALL BE USED FOR THE ENTIRE LENGTH OF CIRCUIT. EXCEPTION: FINAL CONNECTION TO DEVICES IN OUTLET BOXES SHALL NOT BE REQUIRED TO BE LARGER THAN NO. 12 AWG.

4. WHEN A RECEPTACLE IS INDICATED TO BE MOUNTED ADJACENT TO A COMM/DATA/CATV OUTLET, THE DEVICES SHALL BE MOUNTED WITHIN 6" CENTER-TO-CENTER.

5. WHERE LIGHT SWITCH AND ABOVE-COUNTER RECEPTACLES ARE INDICATED TO BE MOUNTED ADJACENT TO EACH OTHER, THE DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNDER A COMMON DEVICE PLATE.

6. OUTLET BOXES FOR SWITCHES, RECEPTACLES, ETC MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATE WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBER IN THE WALL.

7. MOUNT SURFACE MOUNTED FIXTURES & UNDER CABINET FIXTURES TO UNDERSIDE OF SURFACE USING SPACERS TO PROVIDE 1/4"AIR GAP, UNLESS NOTED OTHERWISE ON INSTALLATION INSTRUCTIONS. HOLD FIXTURE 1/8" OFF WALL. FOR FIXTURES BELOW CABINETS, MAKE FLEXIBLE FINAL CONNECTIONS FROM JUNCTION BOX IN CEILING CAVITY ABOVE FIXTURES. DO NOT INSTALL OUTLET AT FIXTURE. ALL WIRING SHALL BE CONCEALED.

GENERAL NOTES

G1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL AND STATE CODES.

G2. ALL MATERIAL, EQUIPMENT AND APPLIANCES SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITERS LABORATORIES, INC, AND THE NATIONAL MANUFACTURERS ASSOCIATION.

G3. ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.

G4. ELECTRICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. DO NOT SCALE ELECTRICAL PLANS. OBTAIN ALL DIMENSIONS FROM THE ARCHITECTS DIMENSIONED DRAWINGS AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL PLANS FOR DOOR SWINGS AND BUILT-IN EQUIPMENT; CONDITIONS INDICATED ON THOSE PLANS SHALL GOVERN FOR THIS WORK.

G5. VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START. NOTIFY ENGINEER OF ANY CHANGES.

G6. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE FROM THE DATE OF SUBSTANTIAL COMPLETION.

G7. A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.

G8. ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. DO NOT CUT ANY MATERIAL THAT WILL WEAKEN THE STRUCTURE WITHOUT WRITTEN PERMISSION OF THE ARCHITECT. PATCHING SHALL BE ACCOMPLISHED TO MATCH ADJACENT SURFACES IN EVERY RESPECT. ENGAGE ORIGINAL INSTALLER FOR CUTTING/PATCHING OF ROOFS.

G9. PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION AND TYPE OF LOAD SERVED FOR ALL CIRCUITS.

G10. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND. NAMEPLATE SHALL CONTAIN EQUIPMENT DESIGNATION, VOLTAGE, FEEDER SOURCE & DATE INSTALLED.

G11. PROVIDE "FLASH HAZARD" LABELS FOR ALL PANELBOARDS IN ACCORDANCE WITH NEC REQUIREMENTS.

G12. ALL TERMINALS/LUGS SHALL BE 60 DEGREE/75 DEGREE RATED.

G13. FUSES 0-600 AMPS SHALL BE UL CLASS "RK-5" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMAN UNLESS NOTED OTHERWISE.

G14. ALL WATER HEATERS SHALL HAVE DISCONNECT SIZED PER 422.11(E)(3).

G15. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REGARDLESS OF WHO SUPPLIES THE EQUIPMENT. THIS INCLUDES ALL HVAC, PLUMBING AND OWNER FURNISHED EQUIPMENT CONNECTIONS OF 120V OR HIGHER.

G16. RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILINGS, BELOW FLOOR, AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. WHERE EXPOSED RACEWAYS MUST BE USED, LAYOUT RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.

G17. ALL EXPOSED RACEWAY SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE BUILDING SURFACES AND SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. NO EXPOSED CONDUIT SHALL BE ALLOWED IN FINISHED SPACES EXCEPT AS PERMITTED BY OWNER OR ARCHITECT. EXPOSED RACEWAY IN FINISHED SPACES SHALL BE WIREMOLD TYPE.

G18. BEFORE COMMENCING WITH ANY ROUGH-IN, COORDINATE THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED DEVICES WITH THE ARCHITECTURAL INTERIOR ELEVATIONS, CASEWORK SHOP DRAWINGS, AND EXISTING CONDITIONS. IF ANY DISCREPANCIES ARE DISCOVERED, NOTIFY THE ARCHITECT FOR FURTHER DIRECTION. MINOR ADJUSTMENTS IN DEVICE LOCATION I.E. 6"-0" IN ANY DIRECTION SHALL BE DONE AT NO ADDITIONAL COST TO THE CONTRACT.

G19. ALL WIRING SHALL BE INSTALLED IN EMC, RMC, EMT OR TYPE AC FLEXIBLE CABLE. RNC CONDUIT (PVC) SHALL ONLY BE USED UNDERGROUND AND OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. MINIMUM SIZE CONDUIT SHALL BE 1/2". AC FLEXIBLE CABLE SHALL BE USED ONLY IN AREAS PERMITTED BY CODE.

G20. ALL FLEX SHALL BE LIQUID TIGHT FLEXIBLE METAL.

G21. PROVIDE A PULL WIRE OR FISH TAPE IN ALL EMPTY CONDUITS. PROVIDE A BLANK COVER PLATE OVER ALL UNUSED BOXES INCLUDING DATA/COMM BOXES.

G22. WHERE A SINGLE HOMERUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT, DO NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS AND IN ACCORDANCE WITH THE NEC:

A MAXIMUM OF THREE 20A, 1 POLE BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN SHARING A COMMON NEUTRAL OR WITH SEPARATE NEUTRALS, FOR A TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO PANEL.

G23. CONDUCTORS SHALL BE COPPER, RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE NO. 12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED, #10 THRU #12 AWG CONDUCTORS SHALL BE SOLID. ALL INSULATION TYPES SHALL BE THWN OR THHN.

G24. 20A/120V BRANCH CIRCUITS EXCEEDING 100' IN LENGTH FROM PANEL TO FARTHEST DEVICE SHALL USE NO. 10 CONDUCTORS AND 3/4"C.

G25. FOR EVERY WIRING DEVICE MARK THE BRANCH CIRCUIT TO WHICH IT IS CONNECTED ON THE BACK OF EACH DEVICE PLATE, USING AN INDELIBLE MARKER PEN.

G26. ALL DEVICES AND DEVICE PLATES SHALL BE WHITE IN COLOR.

G27. EXACT LOCATION OF ALL FLOOR-MOUNTED OUTLETS SHALL BE COORDINATED WITH THE ARCHITECT BEFORE ROUGH-IN.

G28. TWO OR MORE ADJACENT POWER OR COMMUNICATION RECEPTACLES SHALL BE GANGED WITH A COMMON FACEPLATE - IF THEY CANNOT BE GANGED THEY SHALL BE INSTALLED WITH A MINIMUM DISTANCE BETWEEN UNITS.

G29. WALL RECEPTACLES SHOWN BACK TO BACK MAY BE OFFSET BUT SHALL BE INSTALLED DIRECTLY ADJACENT TO ONE ANOTHER.

G30. LIGHT SWITCHES SHALL BE NO MORE THAN 8" FROM EDGE OF DOOR FRAME.

G31. ALL BRANCH CIRCUITS WHICH SERVE OUTLETS LOCATED IN DWELLING UNIT BEDROOMS SHALL HAVE CIRCUIT BREAKERS WITH ARC-FAULT CIRCUIT INTERRUPTER PROTECTION INTEGRAL TO THE BREAKER, AS PER NEC 210-12, WHETHER NOTED ELSEWHERE ON THESE PLANS OR NOT.

G32. WHERE PENETRATIONS ARE MADE THROUGH A REQUIRED FIRE-RESISTIVE WALL, FLOOR, OR PARTITION FOR THE PURPOSE OF RUNNING RACEWAY CARRYING ELECTRICAL, TELEPHONE, TELEVISION, OR LOCAL COMMUNICATION AND/OR SIGNALING CIRCUITS, THE OPENING AROUND THE RACEWAY SHALL BE FIRE STOPPED PER THE STATE BUILDING CODE. COORDINATION WITH THE GENERAL CONTRACTOR SHALL BE MAINTAINED TO INSURE THAT THIS FIRE STOPPING IS ACCOMPLISHED. USE APPROVED ASSEMBLIES SUCH AS THE FOLLOWING:

*CONDUIT PENETRATIONS OF 1,2,3 & 4 HOUR GYP BOARD WALLS - UL#WL1001
*CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE OR BLOCK WALLS - UL#CAJ1001
*CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE FLOORS - UL#CAJ1001
*CONDUIT PENETRATIONS OF 1 HOUR GYPBOARD CEILING ASSEMBLY - L515
*BUILT. CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE OR BLOCK WALL OR FLOOR - CAJ1041

G33. IN REQUIRED FIRE RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQD BY UL. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO INSURE THAT THE INTEGRITY OF THE UL RATING IS MAINTAINED.

G34. OUTLET BOXES FOR DEVICES MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATE WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBER IN THE WALL.

G35. ALL INDOOR BRANCH CIRCUIT WIRING SHALL BE TYPE NM, NMC, OR NMS FOR DWELLING UNITS LOCATED IN BUILDINGS OF TYPE III, IV AND V CONSTRUCTION. UNIT SERVICE FEEDERS SHALL BE TYPE SE OR USE CABLES EXCEPT IN 4 STORY BUILDINGS ALL OTHER WIRING EXCEEDING 50 AMPERES SHALL BE INSTALLED IN EMT INDOORS OR PVC OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE.

ELECTRICAL SYMBOL LEGEND

- ARCS INDICATE CIRCUITING OF COMPONENTS. PARALLEL LINES INDICATE BREAK IN CONTROL OF CIRCUIT, IN OTHER WORDS, CONTINUATION OF HOT CONDUCTOR, BUT NOT NEUTRAL. ARROWHEADS INDICATE HOMERUNS BACK TO ELECTRICAL PANEL. NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS.
- ELECTRICAL CONNECTION TO EQUIPMENT
- JUNCTION BOX CEILING OR FLOOR MOUNTED. "D" INDICATES DATA CABLES IN J-BOX "T" INDICATES TELEPHONE CABLES IN J-BOX "ISO" INDICATES ISOLATED GROUND CIRCUITS IN J-BOX
- CEILING MOUNTED JUNCTION BOX UL. LISTED FOR USE AS CEILING FAN SUPPORT.
- JUNCTION BOX WALL MOUNTED AT 18" A.F.F. OR HEIGHT INDICATED ON DRAWINGS.
- SINGLE POLE SWITCH, 20A, 120/277V, +48" A.F.F. TO CENTER.
- MULTI-LEVEL SWITCHING. SWITCH INBOARD AND OUTBOARD LAMPS SEPERATELY. SUBSCRIPTED "3" INDICATES THREE-WAY SWITCHING
- CEILING FAN AND LIGHT SWITCH. "L" DENOTES SWITCH CONTROLLING LIGHT AND "F" DENOTES SWITCH CONTROLLING FAN.
- 3-WAY SWITCH, 20A, 120/277V, +48" A.F.F. TO CENTER.
- MOTOR RATED SWITCH, 20A, 120/277V.
- DIMMER SWITCH, 20A, 120/277V, +48" A.F.F.
- DUPLEX RECEPTACLE, 20A, 120 VOLT, +18" A.F.F. TO CENTER, U.O.N. "GFI" INDICATES GROUND FAULT PROTECTION "WP" INDICATES WEATHERPROOF "S" INDICATES SAFETY TYPE
- DOUBLE DUPLEX RECEPTACLE, 20 AMP, 120 VOLT, +18" A.F.F. TO CENTER
- 208V OR 240V SPECIALTY RECEPTACLE. REFER TO PANEL SCHEDULE FOR AMP RATING.
- DUPLEX RECEPTACLE, 20A, 120 VOLT, MOUNTED 6" ABOVE COUNTER OR AT HEIGHT INDICATED
- DUPLEX RECEPTACLE, 20 AMP, 120 VOLT, FLOOR MOUNTED WITH BRASS COVERPLATE.
- CABLE TELEVISION OUTLET.
- TELEPHONE OUTLET, +18" A.F.F. TO CENTER, W/ 3/4" CONDUIT STUBBED OUT ABOVE ACCESSABLE CEILING. "W" INDICATES WALL MOUNTED AT 4'-8"
- DATA OUTLET, +18" A.F.F. TO CENTER "W" INDICATES WALL MOUNTED AT 4'-8" PROVIDE CAT 5 STYLE CABLE FROM EACH DATA BOX BACK TO A CENTRAL POINT, COORDINATE EXACT TERMINATION POINT WITH OWNER.
- TELEPHONE BOARD, 4'x8'x3/4", UNLESS NOTED OTHERWISE, PAINTED WITH PLANE RETARDANT PAINT. EXTEND #6 GROUND WIRE FROM BOARD TO SERVICE GROUND.
- 30/3/FPN — HEAVY DUTY FUSIBLE/NON-FUSIBLE DISCONNECT SWITCH, NUMBERS INDICATE FRAME/POLES/FUSING. PROVIDE NEMA 1 ENCLOSURE INSIDE. PROVIDE NEMA 3R ENCLOSURE FOR ALL SWITCHES LOCATED OUTSIDE. "FPN" INDICATES FUSED PER NAMEPLATE, "NF" INDICATES NON FUSED.
- EXHAUST FAN, PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR.
- PANEL BOARD, RECESSED OR SURFACE MOUNTED, REFER TO PANEL BOARD SCHEDULES FOR ADDITIONAL DETAILS. DASHED LINES INDICATE LIMITS OF REQUIRED CLEARANCES.
- 2' X 4' FLUORESCENT LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS. SHADING INDICATES FIXTURE IS AN UNSWITCHED NIGHTLIGHT.
- FLUORESCENT STRIP LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS. SHADING INDICATES FIXTURE IS AN UNSWITCHED NIGHTLIGHT.
- 1' X 4' LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS. SHADING INDICATES FIXTURE IS AN UNSWITCHED NIGHTLIGHT.
- WALL MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS. SHADING INDICATES FIXTURE IS AN UNSWITCHED NIGHTLIGHT.
- CEILING MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS. SHADING INDICATES FIXTURE IS AN UNSWITCHED NIGHTLIGHT.
- EXIT LIGHT, WALL AND CEILING MOUNTED RESPECTIVELY, SHADING INDICATES FACE. PROVIDE EMERGENCY BATTERY PACK RATED FOR 90 MINUTES OF OPERATION.
- EMERGENCY LIGHTS, SURFACE AND CEILING MOUNTED. REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- (S) DWELLING UNIT SMOKE DETECTOR, CONNECT TO THE NEAREST UNSWITCHED 110V CIRCUIT, WITH BATTERY BACKUP. INTERCONNECT ALL DWELLING UNIT SMOKE DETECTORS SO THAT ALL ALARM WITH THE ACTUATION OF ANY SINGLE DETECTOR.
- (C) CARBON MONOXIDE DETECTOR

A	AMPERE
AFCI	ARC FAULT CIRCUIT INTERRUPT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
C	CONDUIT
CU	CONDENSING UNIT
EWC	ELECTRIC WATER COOLER
FPN	FUSED PER NAMEPLATE
HP	HEAT PUMP
NF	NON-FUSED
NTS	NOT TO SCALE
G	GROUND
GFI	GROUND FAULT INTERRUPTER
IG	ISOLATED GROUND
RTU	ROOF TOP UNIT
TX	TRANSFORMER
UON	UNLESS OTHERWISE NOTED
WH	WATER HEATER
WP	WEATHERPROOF

ELECTRICAL DRAWING INDEX

E1 ELECTRICAL LEGEND, NOTES AND SCHEDULE
E2 ELECTRICAL TYPICAL UNIT PLANS
E3 ELECTRICAL TYPICAL UNIT PLANS
E4 ELECTRICAL TYPICAL UNIT PLANS
E5 ELECTRICAL TYPICAL UNIT PLANS
E6 ELECTRICAL PANEL SCHEDULES, RISERS AND DETAILS

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NORTH CAROLINA REGISTERED No. 22658 KOSTAS A. PAPPAS

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. C02750

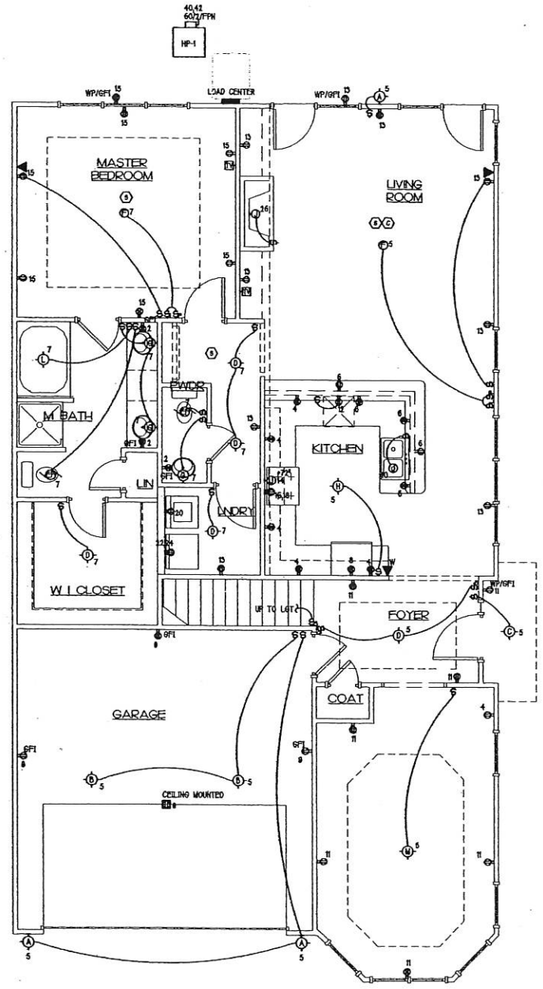
LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

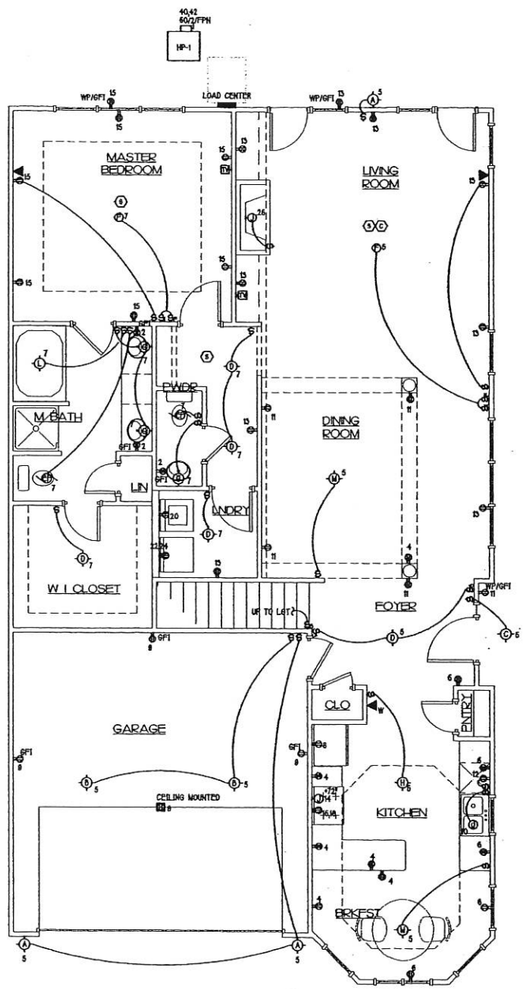
ISSUE DATE(S): 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

E1

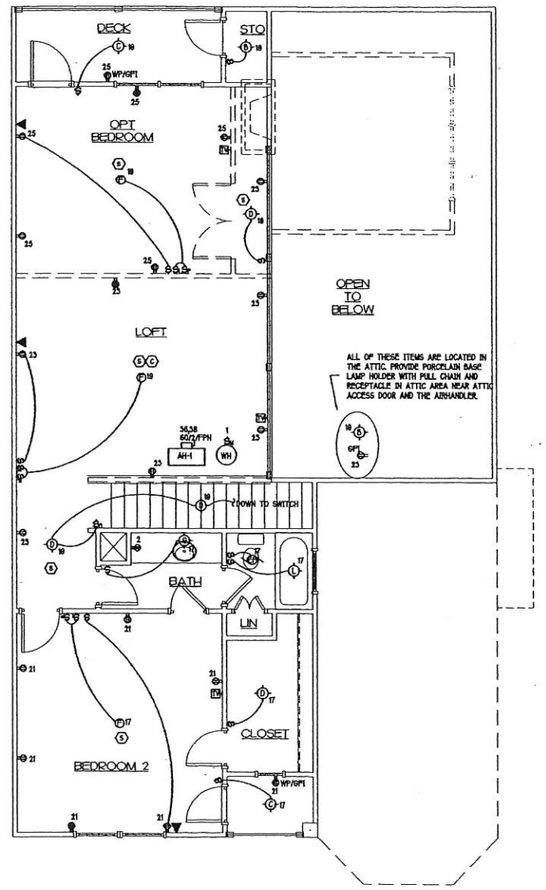
ELECTRICAL LEGEND, NOTES & SCHEDULE



1 E2 FIRST FLOOR 2 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



2 E2 FIRST FLOOR 2 STORY UNIT (ALTERNATE)
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



3 E2 SECOND FLOOR 2 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N

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LAKE SHORE TOWN HOMES

Tega Cay,
South Carolina

DATE ISSUED: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

E2

ELECTRICAL TYPICAL UNIT PLANS

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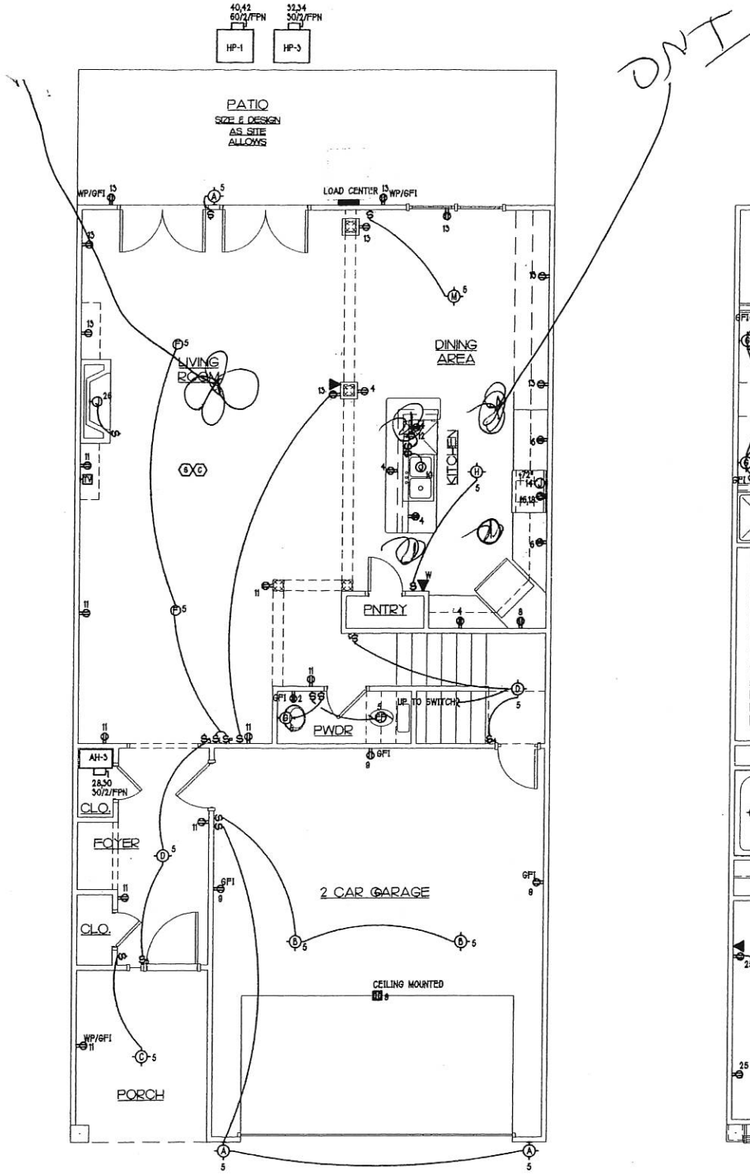
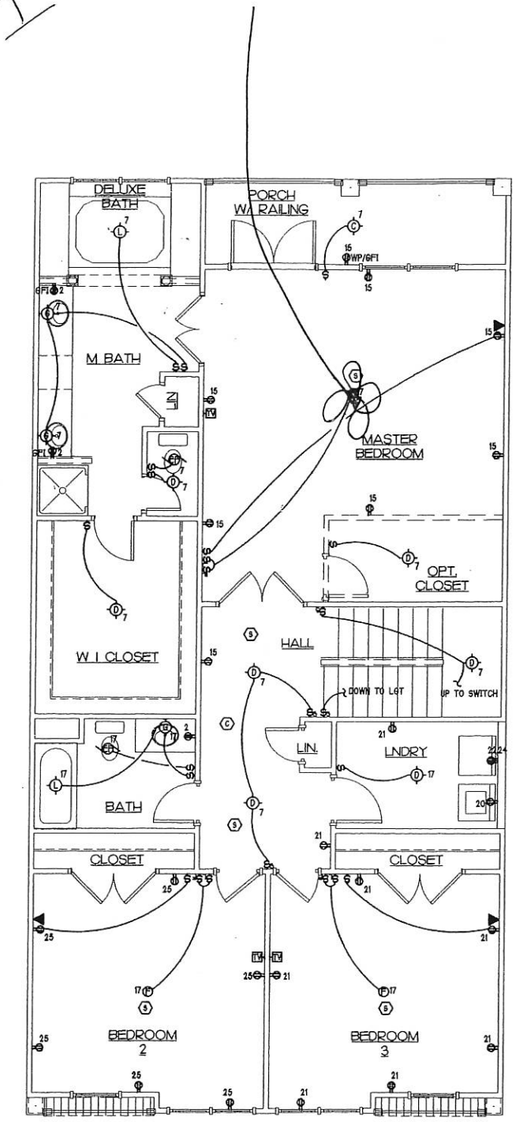


1 / E3 FIRST FLOOR 3 STORY UNIT

1/4" = 1'-0"

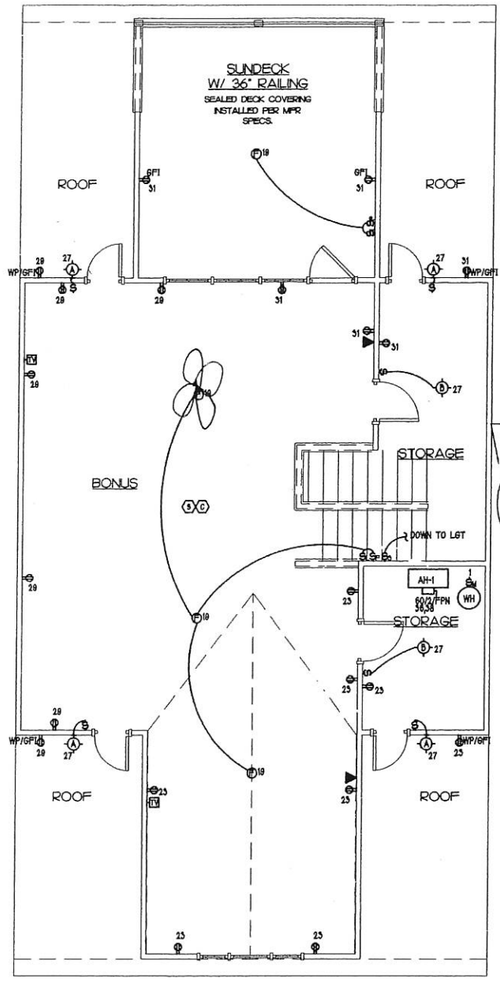
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



2 / E3 SECOND FLOOR 3 STORY UNIT

1/4" = 1'-0"

ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



ALL OF THESE ITEMS ARE LOCATED IN THE ATTIC. PROVIDE PORCELAIN BASE LAMP HOLDER WITH PULL CHAIN AND RECEPTACLE IN ATTIC AREA NEAR ATTIC ACCESS DOOR AND THE AIRHANDLER.

3 / E3 THIRD FLOOR 3 STORY UNIT

1/4" = 1'-0"

ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N

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LAKE SHORE TOWN HOMES

Tega Cay,
South Carolina

DATE DRAWN: 06/09/05
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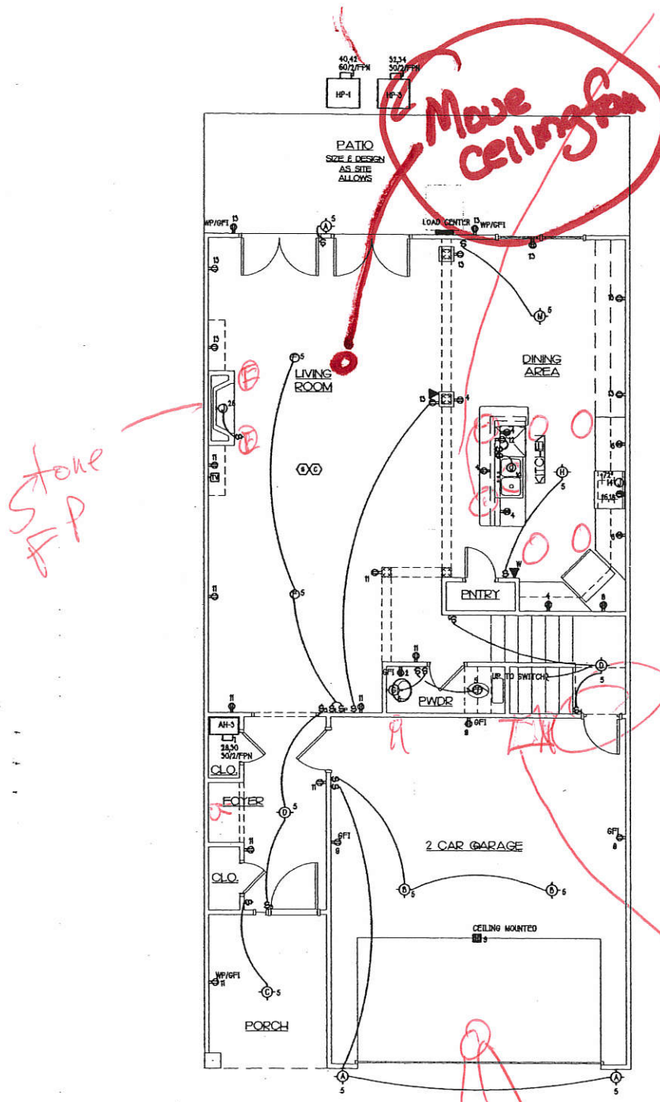
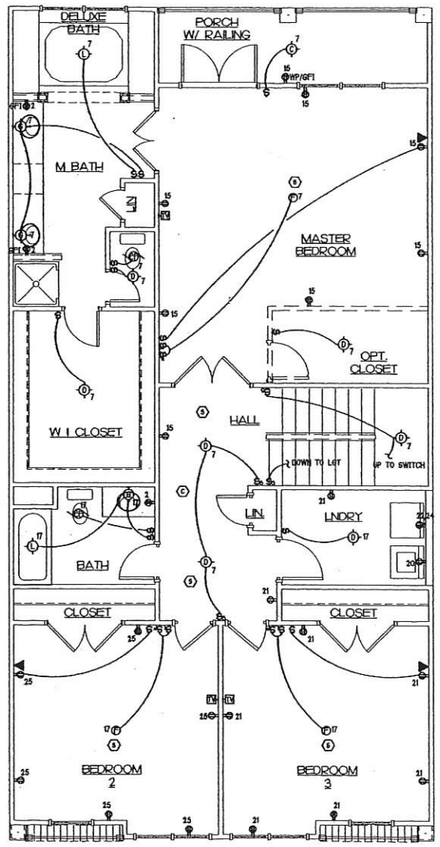
E3

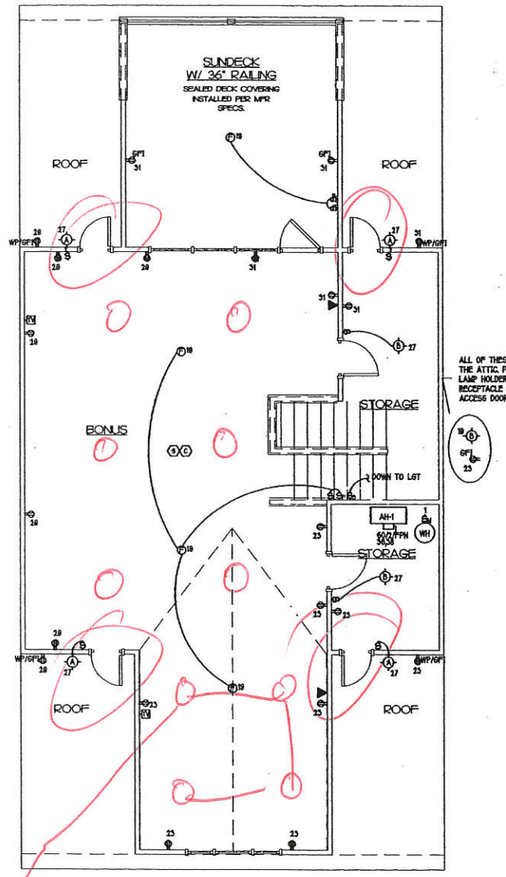
ELECTRICAL TYPICAL UNIT PLANS



1 E3 FIRST FLOOR 3 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N.



2 E3 SECOND FLOOR 3 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N.



ALL OF THESE ITEMS ARE LOCATED IN THE ATTIC. PROVIDE PORCELAIN BASE LAMP HOLDER WITH PULL CHAIN AND RECEPTACLE IN ATTIC AREA NEAR ATTIC ACCESS DOOR AND THE AIRHANDLER.

3 E3 THIRD FLOOR 3 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N.

Move ceiling fan
Seperate switch
Stone FP
Laundry sink
Idrive
Seperate switch

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 22658 KOSTA G. PAPPAS

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. 002726 CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

ISSUE DATE: 06/09/05
PROJECT NO.: 2530
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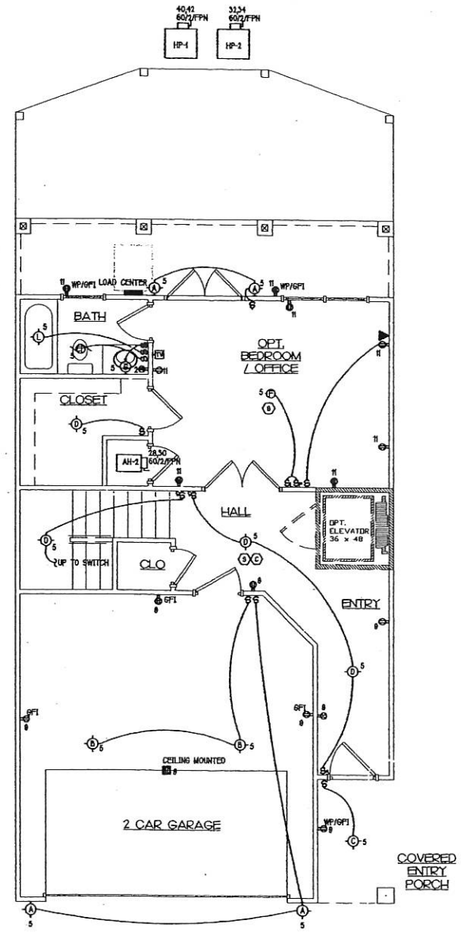
E3

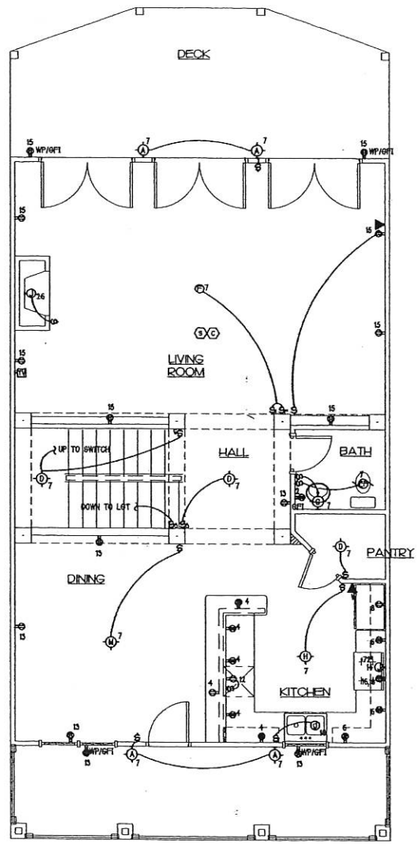
ELECTRICAL TYPICAL UNIT PLANS



1 / E4 FIRST FLOOR 4 STORY UNIT

1/4" = 1'-0"

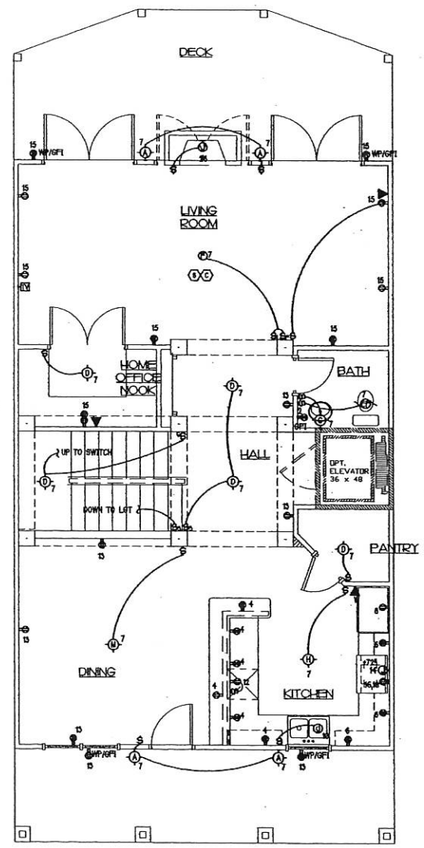
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



2 / E4 SECOND FLOOR 4 STORY UNIT

1/4" = 1'-0"

ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



3 / E4 SECOND FLOOR 4 STORY UNIT (ALTERNATE)

1/4" = 1'-0"

ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N

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SOUTH CAROLINA
REGISTERED
No. 22658
JOSHUA J. PAPPAS

SOUTH CAROLINA
VRETTOS
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ENGINEERS, PA
No. C02750
CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay,
South Carolina

ISSUE DATE:	06/09/05
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ISSUED FOR:	Permit & Construction:

E4

ELECTRICAL TYPICAL
UNIT PLANS

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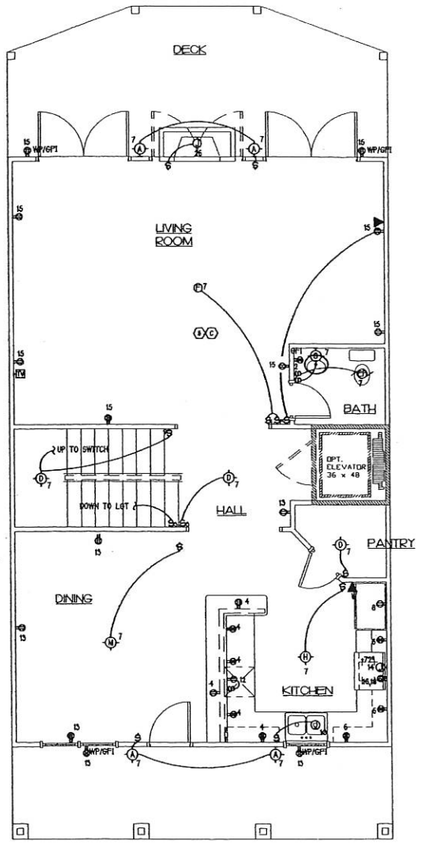
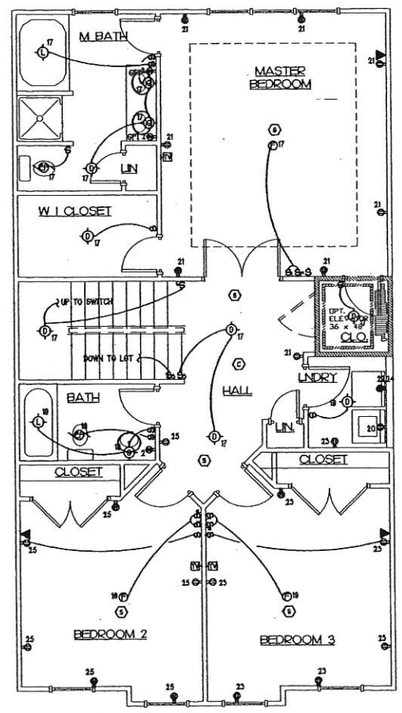
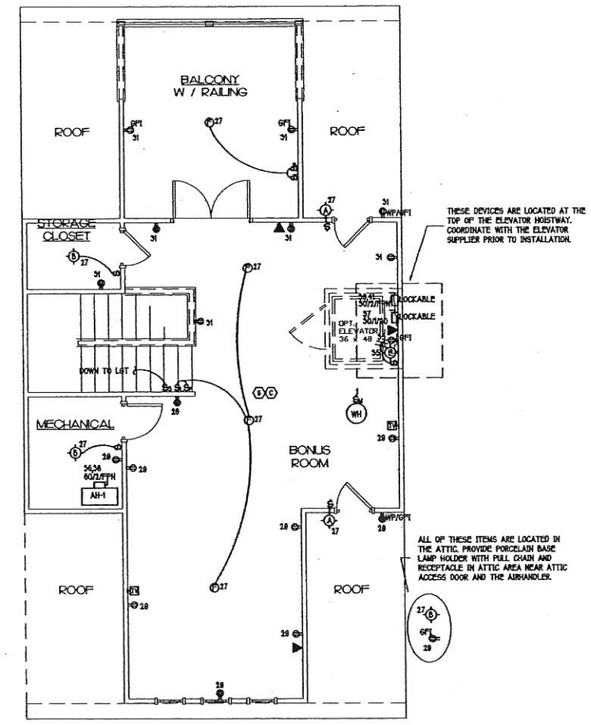


1 E5 SECOND FLOOR 4 STORY UNIT (ELEVATOR)
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



2 E5 THIRD FLOOR 4 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N



3 E5 FOURTH FLOOR 4 STORY UNIT
1/4" = 1'-0"
ALL CIRCUIT NUMBERS REFER TO TENANT PANEL U.O.N

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SOUTH CAROLINA No. 22658 COSTA J. PAPPAS

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. C02750 CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay, South Carolina

DATE ISSUED: 06/09/05
PROJECT NO.: 2530
ISSUED FOR: Permit & Construction:

E5

ELECTRICAL TYPICAL UNIT PLANS

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VOLTAGE: 240/120
AMPS: 200 - MCB
PANEL RMS SYM. AMPS: 10,000

NEW
LOAD CENTER: 2 STORY

1-PHASE/3-WIRE
SURFACE
NEMA 3R ENCLOSURE

- DESCRIPTION -	VOLT	WIRE SIZE	BRK SIZE	CCT #	LOAD PER PHASE A	LOAD PER PHASE B	CCT #	BRK SIZE	WIRE SIZE	VOLT	- DESCRIPTION -
WATER HEATER	1	12	20	1	17 / 0		3	20	12	1	* BATHROOM RECPT
SPARE	1	-	20	3		0.0 / 1.5	4	20	12	1	* KITCHEN RECPT
LIGHTS	1	12	20	4	1.5 / 1.5		6	20	12	1	* KITCHEN RECPT
+ LIGHTS	1	12	20	7		1.5 / 1.5	8	20	12	1	REFRIGERATOR
RECPT	1	12	20	8	1 / 1.5		10	20	12	1	DISPOSAL
RECPT	1	12	20	9		1.5 / 1.5	12	20	12	1	DISHWASHER
RECPT	1	12	20	10	1.5 / 1.5		14	20	12	1	MICROWAVE/FAN
+ RECPT	1	12	20	11		1.5 / 4.5	16	50	6	2	RANGE
+ LIGHTS	1	12	20	13	1 / 4.5		15				
+ LIGHTS	1	12	20	14	4.5 / 1.5		18	30	12	1	WASHER
+ RECPT	1	12	20	15	1.5 / 0.5		17	30	10	2	DRYER
RECPT	1	12	20	19		0.5 / 2.0	20				
+ RECPT	1	12	20	21	1.5 / 1.5		22	20	12	1	FIRE PLACE
SPARE	1	-	20	23		0.0 / 0.0	24	20	-	1	SPARE
SPARE	1	-	20	25	0.0 / 0.0		26	20	-	1	SPARE
SPARE	1	-	20	27		0.0 / 0.0	28	20	-	1	SPARE
SPACE	-	-	-	29	0.0 / 0.0		30	-	-	-	SPACE
SPACE	-	-	-	31		0.0 / 0.0	32	60	4	2	AH-1
SPACE	-	-	-	33	0.0 / 0.0		34				
SPACE	-	-	-	35		0.0 / 0.0	36	60	4	2	HP-1
SPACE	-	-	-	37	0.0 / 0.0		38				
					31.5	28.5					

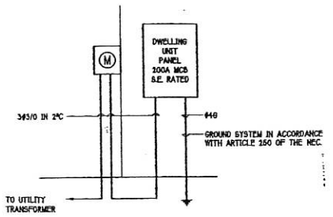
TOTAL CONNECTED KVA: 60.8 — DEMAND KVA: 37.8
DEMAND AMPS: 157.8

* QFI CIRCUIT BREAKER
+ ARC FAULT CIRCUIT BREAKER

DWELLING UNIT DEMAND CALCULATION
(OPTIONAL METHOD)
NEC SECTION 220.30

UNIT TYPE : 2 STORY
SYSTEM VOLTAGE : 120/240
SERVICE SIZE : 200 AMPS
SQUARE FEET : 2,760

LOAD DESCRIPTION	KVA
LIGHTING & RECEPTACLES (SQUARE FEET X 3 VA)	8.3
SMALL APPLIANCE CIRCUITS (2 CIRCUITS X 1.5 KVA/CIRCUIT)	3.0
CLOTHES DRYER	4.0
CLOTHES WASHER	1.5
RANGE	8.0
DISHWASHER	1.5
WATER HEATER	1.7
MICROWAVE	1.8
DISPOSAL	1.5
REFRIGERATOR	1.5
TOTAL	35.7
FIRST 10 KVA AT 100%	10.0
REMAINDER AT 40%	10.3
AIR HANDLER	10.0
HEAT PUMP	7.6
TOTAL DEMAND	37.9



FAULT CURRENT NOTE:
FAULT CURRENT RATING OF PANEL IS BASED ON A 45kVA 240V-1# TRANSFORMER WITH 2% IMPEDANCE, PROVIDING 8,375AIC AT THE LUGS. IF TRANSFORMER OTHER THAN THIS IS USED, E.C. SHALL CONTACT THE ENGINEER.

1 / E6 TYPICAL 2 STORY POWER RISER
N.T.S.

VOLTAGE: 240/120
AMPS: 200 - MCB
PANEL RMS SYM. AMPS: 10,000

NEW
LOAD CENTER: 3 STORY

1-PHASE/3-WIRE
SURFACE
NEMA 3R ENCLOSURE

- DESCRIPTION -	VOLT	WIRE SIZE	BRK SIZE	CCT #	LOAD PER PHASE A	LOAD PER PHASE B	CCT #	BRK SIZE	WIRE SIZE	VOLT	- DESCRIPTION -
WATER HEATER	1	12	20	1	17 / 0		3	20	12	1	* BATHROOM RECPT
SPARE	1	-	20	3		0.0 / 1.5	4	20	12	1	* KITCHEN RECPT
LIGHTS	1	12	20	4	1.5 / 1.5		6	20	12	1	* KITCHEN RECPT
+ LIGHTS	1	12	20	7		1.5 / 1.5	8	20	12	1	REFRIGERATOR
RECPT	1	12	20	8	1 / 1.5		10	20	12	1	DISPOSAL
RECPT	1	12	20	9		1.5 / 1.5	12	20	12	1	DISHWASHER
RECPT	1	12	20	10	1.5 / 1.5		14	20	12	1	MICROWAVE/FAN
+ RECPT	1	12	20	11		1.5 / 4.5	16	50	6	2	RANGE
+ LIGHTS	1	12	20	13	1 / 4.5		15				
LIGHTS	1	12	20	14	4.5 / 1.5		18	20	12	1	WASHER
+ RECPT	1	12	20	15	1.5 / 0.5		17	30	10	2	DRYER
RECPT	1	12	20	19		0.5 / 2.0	20				
+ RECPT	1	12	20	21	1.5 / 1.5		22	20	12	1	FIRE PLACE
LIGHTS	1	12	20	23	1 / 1.5		24	30	10	2	AH-5
RECPT	1	12	20	25		1.5 / 1.5	26				
RECPT	1	12	20	27	1.5 / 1.5		28	20	12	1	HP-3
SPARE	1	-	20	29		0.0 / 0.0	30				
SPARE	1	-	20	31	0.0 / 0.0		32	60	4	2	AH-1
SPARE	1	-	20	33		0.0 / 0.0	34				
SPARE	1	-	20	35	0.0 / 0.0		36	60	4	2	HP-1
SPARE	1	-	20	37		0.0 / 0.0	38				
					37.1	35.8					

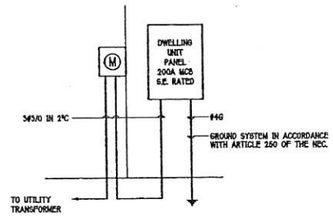
TOTAL CONNECTED KVA: 72.9 — DEMAND KVA: 41.8
DEMAND AMPS: 174.2

* QFI CIRCUIT BREAKER
+ ARC FAULT CIRCUIT BREAKER

DWELLING UNIT DEMAND CALCULATION
(OPTIONAL METHOD)
NEC SECTION 220.30

UNIT TYPE : 3 STORY
SYSTEM VOLTAGE : 120/240
SERVICE SIZE : 200 AMPS
SQUARE FEET : 3,800

LOAD DESCRIPTION	KVA
LIGHTING & RECEPTACLES (SQUARE FEET X 3 VA)	11.7
SMALL APPLIANCE CIRCUITS (2 CIRCUITS X 1.5 KVA/CIRCUIT)	3.0
CLOTHES DRYER	4.0
CLOTHES WASHER	1.5
RANGE	8.0
DISHWASHER	1.5
WATER HEATER	1.7
MICROWAVE	1.8
DISPOSAL	1.5
REFRIGERATOR	1.5
TOTAL	38.1
FIRST 10 KVA AT 100%	10.0
REMAINDER AT 40%	11.6
AIR HANDLER	8.8
HEAT PUMP	10.4
TOTAL DEMAND	41.8



FAULT CURRENT NOTE:
FAULT CURRENT RATING OF PANEL IS BASED ON A 45kVA 240V-1# TRANSFORMER WITH 2% IMPEDANCE, PROVIDING 8,375AIC AT THE LUGS. IF TRANSFORMER OTHER THAN THIS IS USED, E.C. SHALL CONTACT THE ENGINEER.

2 / E6 TYPICAL 3 STORY POWER RISER
N.T.S.

VOLTAGE: 240/120
AMPS: 250 - MCB
PANEL RMS SYM. AMPS: 22,000

NEW
LOAD CENTER: 4 STORY

1-PHASE/3-WIRE
SURFACE
NEMA 3R ENCLOSURE

- DESCRIPTION -	VOLT	WIRE SIZE	BRK SIZE	CCT #	LOAD PER PHASE A	LOAD PER PHASE B	CCT #	BRK SIZE	WIRE SIZE	VOLT	- DESCRIPTION -
WATER HEATER	1	12	20	1	17 / 0		3	20	12	1	* BATHROOM RECPT
SPARE	1	-	20	3		0.0 / 1.5	4	20	12	1	* KITCHEN RECPT
+ LIGHTS	1	12	20	5	1.5 / 1.5		6	20	12	1	* KITCHEN RECPT
LIGHTS	1	12	20	7		1.5 / 1.5	8	20	12	1	REFRIGERATOR
+ RECPT	1	12	20	9	1 / 1.5		10	20	12	1	DISPOSAL
RECPT	1	12	20	11		1.5 / 1.5	12	20	12	1	DISHWASHER
RECPT	1	12	20	13	1.5 / 1.5		14	20	12	1	MICROWAVE/FAN
RECPT	1	12	20	15		1.5 / 4.5	16	50	6	2	RANGE
+ LIGHTS	1	12	20	17	1.5 / 4.5		18				
+ LIGHTS	1	12	20	19		1.5 / 1.5	20	20	12	1	WASHER
+ RECPT	1	12	20	21	1.5 / 0.5		22	30	10	2	DRYER
+ RECPT	1	12	20	23		0.5 / 2.0	24				
+ RECPT	1	12	20	25	1.5 / 1.5		26	20	12	1	FIRE PLACE
LIGHTS	1	12	20	27		1.5 / 4.5	28	45	6	2	AH-2
RECPT	1	12	20	29	1.5 / 4.5		30				
RECPT	1	12	20	31		1.5 / 1.5	32	35	8	3	HP-2
SPARE	1	-	20	33	0.0 / 1.5		34				
++ HOIST LGTS/RECPT	1	12	20	35		1 / 1.5	36	60	4	2	AH-1
++ ELEV LGTS/CTRL	1	12	20	37	1 / 1.5		38				
++ ELEVATOR	2	12	20	39		1.5 / 1.5	40	60	4	2	HP-1
				41	1.5 / 1.5		42				
					43.6	42.8					

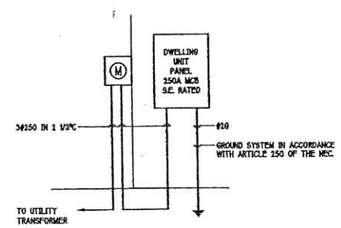
TOTAL CONNECTED KVA: 86.4 — DEMAND KVA: 49.8
DEMAND AMPS: 207.0

* QFI CIRCUIT BREAKER
+ ARC FAULT CIRCUIT BREAKER
++ PROVIDE ONLY IF ELEVATOR IS BEING INSTALLED

DWELLING UNIT DEMAND CALCULATION
(OPTIONAL METHOD)
NEC SECTION 220.30

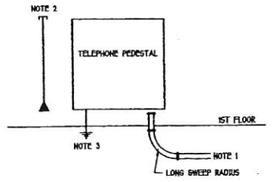
UNIT TYPE : 4 STORY
SYSTEM VOLTAGE : 120/240
SERVICE SIZE : 250 AMPS
SQUARE FEET : 3,535

LOAD DESCRIPTION	KVA
LIGHTING & RECEPTACLES (SQUARE FEET X 3 VA)	10.6
SMALL APPLIANCE CIRCUITS (2 CIRCUITS X 1.5 KVA/CIRCUIT)	3.0
CLOTHES DRYER	4.0
CLOTHES WASHER	1.5
RANGE	8.0
DISHWASHER	1.5
WATER HEATER	1.7
MICROWAVE	1.8
DISPOSAL	1.5
REFRIGERATOR	1.5
TOTAL	38.0
FIRST 10 KVA AT 100%	10.0
REMAINDER AT 40%	11.2
AIR HANDLER	12.1
HEAT PUMP	12.2
ELEVATOR MOTOR	2.8
ELEV MISC EQUIPMENT	1.6
TOTAL DEMAND	49.8



FAULT CURRENT NOTE:
FAULT CURRENT RATING OF PANEL IS BASED ON A 75kVA 240V-1# TRANSFORMER WITH 2% IMPEDANCE, PROVIDING 15,625AIC AT THE LUGS. IF TRANSFORMER OTHER THAN THIS IS USED, E.C. SHALL CONTACT THE ENGINEER.

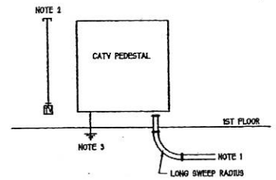
3 / E6 TYPICAL 4 STORY POWER RISER
N.T.S.



4 / E6 RESIDENTIAL TELEPHONE RISER
N.T.S

TELEPHONE RISER NOTES

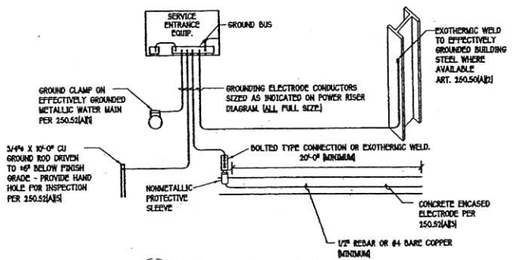
1. 4" CONDUIT PROVIDED UNDER SLAB TO PROPERTY LINE. DETERMINE EXACT TERMINATION POINT IN THE FIELD WITH TELEPHONE COMPANY FIELD REP.
2. PROVIDE 2 PAIR RESIDENTIAL STYLE TELEPHONE CABLE BETWEEN ALL TELEPHONE OUTLETS AND TELEPHONE PEDESTAL.
3. PROVIDE #6 CU GROUND TO SERVICE GROUND BAR WITH ADEQUATE SLACK FOR GROUNDING OF TELEPHONE EQUIPMENT.



5 / E6 RESIDENTIAL CATV RISER
N.T.S

TELEPHONE RISER NOTES

1. 4" CONDUIT PROVIDED UNDER SLAB TO PROPERTY LINE. DETERMINE EXACT TERMINATION POINT IN THE FIELD WITH CABLE COMPANY FIELD REP.
2. PROVIDE CO-AXIAL STYLE TELEVISION CABLE BETWEEN ALL TV OUTLETS AND CATV PEDESTAL.
3. PROVIDE #6 CU GROUND TO SERVICE GROUND BAR WITH ADEQUATE SLACK FOR GROUNDING OF TELEPHONE EQUIPMENT.



6 / E6 SERVICE GROUNDING DETAIL
N.T.S

GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC 250-C.

URBAN Architectural Group P.A.
1242 Mann Drive, Suite 200
Matthews North Carolina 28105
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VRETTOS PAPPAS Consulting Engineers, PA
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Charlotte, NC 28204
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(F) 704.372.7799
www.vpce.com

SOUTH CAROLINA REGISTERED No. 22658 KOSTA J. PAPPAS

SOUTH CAROLINA VRETTOS PAPPAS CONSULTING ENGINEERS, PA No. C02750 CERTIFICATE OF AUTHORIZATION

LAKE SHORE TOWN HOMES

Tega Cay,
South Carolina

DATE ISSUED:
06/09/05
PROJECT NO.:
2530
ISSUED FOR:
Permit & Construction:

E6

ELECTRICAL PNL SCHEDULES, RISERS & DETAILS

CONSTRUCTION DATA

APPENDIX B

NAME OF PROJECT: LAKE SHORE TOWNHOMES
Address: TEGA CAY, ROCK HILL, SC
Proposed Use: MULTIFAMILY RESIDENTIAL
Owner or Authorized Agent: Scott Dellinger PHONE # 704-377-2006
Owned By: [ ] City/County [X] Private [ ] State
Code Enforcement Jurisdiction: [ ] City ______ [X] County York County

LEAD DESIGN PROFESSIONAL: JOHN R. URBAN, AIA

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE NO.
Architectural	URBAN ARCHITECTURAL GROUP	JOHN R. URBAN	5409	(704) 841.1899
Civil	ISAACS GROUP	ISAACS GROUP	C01037	(704) 527-3440
Electrical	VP CONSULTING ENGINEERS, PA	NICHOLAS C. VRETTOS	23183	(704) 333.3312
Fire Alarm				
Plumbing	VP CONSULTING ENGINEERS, PA	DINO M. PAPPAS	22725	(704) 333.3312
Mechanical	VP CONSULTING ENGINEERS, PA	DINO PAPPAS	22725	(704) 333.3312
Sprinkler-Standpipe				
Structural				
Retaining Walls>5' High				
Other				

YEAR ADDITION OF CODE: 2003 IBC
[X] New Construction [ ] Renovation (Existing Bldg) [ ] Upfit [ ] Alteration

BUILDING DATA:

Construction Type: [ ] I-A [ ] I-B [ ] II-A [ ] II-B [ ] III-A [ ] III-B [ ] IV [X] V-A [ ] V-B
Mixed Construction: [X] No [ ] Yes Types: ______
Sprinklers: [ ] No [X] Yes [ ] NFPA 13 [X] NFPA 13R [ ] NFPA 13D
Standpipes: [X] No [ ] Yes Class [ ] I [ ] II [ ] III [ ] Wet [ ] Dry
Fire District: [X] No [ ] Yes
Building Height: 45 feet 4 Number of Stories [ ] Unlimited per ______
Mezzanine: [X] No [ ] Yes
High Rise: [X] No [ ] Yes Central Reference Sheet (K if provided) ______
Gross Building Area: See Aggregate Building Layout

Floor	Existing (sq. ft.)	New (sq. ft.)	Sub-Total
Unit A First Floor	x	585	
Unit A Second Floor	x	807	
Unit A Third Floor	x	1,088	
Unit A Fourth Floor	x	538	
Total	x	3,170	

ALLOWABLE AREA:

Primary Occupancy: [ ] Assembly [ ] A-1 [ ] A-2 [ ] A-3 [ ] A-4 [ ] A-5
[ ] Business [ ] Educational [ ] Factory-Industrial [ ] F-1 [ ] F-2
[ ] High-Hazard [ ] H-1 [ ] H-2 [ ] H-3 [ ] H-4 [ ] H-5
[ ] Institutional [ ] I-1 [ ] I-2 [ ] I-3 [ ] I-4
I-3 USE CONDITION [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
[ ] Mercantile [X] Residential [ ] R-1 [X] R-2 [ ] R-3 [ ] R-4
[ ] Storage [ ] S-1 [ ] S-2 [ ] High-Piled
[ ] Utility & Miscellaneous Parking Garage [ ] Open [ ] Enclosed [ ] Repair
Secondary Occupancy: Private garage: Incidental use: Exclusion 302.1.1
Special Occupancy: [ ] 508.2 [ ] 508.3 [ ] 508.4 [ ] 508.5 [ ] 508.6 [ ] 508.7 [ ] 508.8
Mixed Occupancy: [X] No [ ] Yes Separation: ___ Hr. Exception: ______

[ ] Non-Separated Mixed Occupancy (302.3.2)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

[ ] Separated Mixed Occupancy (302.3.3) — See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

______ + ______ + . . . ≤1.00

STORY NO. ONE MAX AREA	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 AREA 4	(C) AREA FOR OPEN SPACE INCREASE 1	(D) AREA FOR SPRINKLER INCREASE 2	(E) ALLOWABLE AREA OR INCREASE 3	(F) MAXIMUM BUILDING AREA 4
First Floor	R-2	585	12,000	–	–	–	–
Second Floor	R-2	807	12,000	–	–	–	–
Third Floor	R-2	1,088	12,000	–	–	–	–
Fourth Floor	R-2	538	12,000	–	–	–	–

1. Open space area increases from Section 506.2 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet min. width= ____ (F)
   b. Total Building Perimeter= ____ (P)
   c. Ratio (F/P)= ____ (F/P)
   d. W= Minimum width of public way= ____ (W)
   e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = ____ (%)
2. The sprinkler increase per Section 506.3 is as follows
   a. Multi-story building I_s=200 percent
   b. Single story building I_s=300 percent
3. Unlimited area applicable under conditions of Sections Group B,F,M,S,A-4 (507.1,507.2,507.3,507.5); Group A motion picture(507.8); Malls(402.6); and H-2 aircraft paint hangars(507.6).
4. Maximum Building Area=total number of stories in the building x E but not greater than 3 x E.
5. The maximum area of parking garages must comply with 406.3.5 The maximum area of traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type= V-A		Type= V-A	
Building Height in Feet	Feet= 40'	Feet=H + 20'= 60'	45'	
Building Height in Stories	Stories= 3	Stories + 1= 4	Stories= 4	

FIRE PROTECTION REQUIREMENTS:

Life Safety Plan Sheet#, If Provided ______

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING: REQ'D	RATING: PROVIDED (W/ ___ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame including columns, girders, and trusses	N/A	0	N/A				
Bearing Walls							
Exterior	> 10	0	N/A				
North	> 10	0	N/A				
East	> 10	0	N/A				
West	> 10	0	N/A				
South	> 10	0	N/A				
Interior	N/A	0	N/A				
Nonbearing Walls and Partitions							
Exterior							
North	≥ 10	0	N/A				
East	> 10	0	N/A				
West	> 10	0	N/A				
South	> 10	0	N/A				
Interior	N/A	N/A	N/A				
Floor Construction including supporting beams and joists	N/A	0	N/A				
Roof Construction including supporting beams and joists	N/A	0	N/A		RC2001		
Shafts-Exit	N/A	0	N/A				
Shafts-Other	N/A	0	N/A				
Corridor Separation	N/A	0	N/A				
Occupancy Separation	N/A	0	0				
Party/Fire Wall Separation	N/A	2	2	A0.1	U334		
Smoke Barrier Separation	N/A	0	N/A				
Tenant Separation	N/A	0	N/A				

* Indicate section number permitting reduction

SCOPE OF WORK:

1. New Multi-Family Residential which includes private garages.
2
3
4

LIFE SAFETY SYSTEM REQUIREMENTS:

Emergency Lighting: [X] No [ ] Yes
Exit Signs: [X] No [ ] Yes
Fire Alarm: [ ] No [X] Yes
Smoke Detection Systems: [ ] No [X] Yes
Panic Hardware: [X] No [ ] Yes

EXIT REQUIREMENTS:

Number and Arrangement of Exits:

FLOOR, ROOM, OR SPACE DESIGNATION	MINIMUM[1] NUMBER OF EXITS: REQUIRED	MINIMUM NUMBER OF EXITS: SHOWN ON PLANS	TRAVEL DISTANCE: ALLOWABLE TRAVEL DISTANCE (TABLE 1015.1)	TRAVEL DISTANCE: ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS[1,3] (SECTION 1001.4.2.1): REQUIRED DISTANCE BETWEEN EXIT DOORS	ARRANGEMENT: ACTUAL DISTANCE SHOWN ON PLANS
Unit Type A	2	2	250	74'	14	40

1. Corridor dead ends (Section 1016.3)
2. Single exits (Table 1018.2)
3. Common Path of Travel (Section 1013.3)

Exit Width:

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] sq. ft.	(b) AREA[1] PER OCCUPANT (TABLE 1003.2.2.2)	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1): STAIR	(c) LEVEL	EXIT WIDTH (in)[2,3,4,5,6]: REQUIRED WIDTH (SECTION 1005.1) (a ÷ b) x c: STAIR	REQUIRED WIDTH: LEVEL	ACTUAL WIDTH SHOWN ON PLANS: STAIR	ACTUAL WIDTH: LEVEL
Unit Type A – R2	3470	200	.3	.15	2.7	1.8	36"	44"

1. See Table 1003.2.2.2 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)
2. Footnote Deleted.
3. Minimum stairway width (Section 1009.1); Min. corridor width (Section 1016.2); Minimum door width (Section 1008.1.1)
4. Minimum width of exit passageway (Section 1020.1)
5. The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required
6. Assembly occupancies

STRUCTURAL DESIGN:

Design Loads:
Importance Factors:
Wind (I_w) 1.0
Snow (I_s) 1.0
Seismic (I_e) 1.0
Live Loads:
Roof 20 psf
Mezzanine N/A psf
Floor 40 psf
Snow Load: 10 psf
Wind Load:
Basic Wind Speed 90 mph (ASCE-7-98)
Exposure Category B UNIT A
Wind Base Shears (for MWFRS) Vx= 7.2
Seismic Design Category A: Vy= 7.2
Compliance with Section 1616.4 only? [X] No [ ] Yes
Seismic Design Category B,C&D:
Provide the following Seismic Design Parameters:
Seismic Use Group I
Spectral Response Acceleration Sms 582 %g Sm1 330 %g
Site Classification D
Basic Structural System (check one)
X Bearing Wall ___ Dual w/Special Moment Frame
___ Building Frame ___ Dual w/Intermediate R/C or Special Steel
___ Moment Frame ___ Inverted Pendulum UNIT A
Seismic Base Shear Vx= ______ Vy= ______ 4.6
Analysis Procedure ______ Simplified X Equivalent Lateral Force ______ Modal
Architectural, Mechanical, Components anchored? ______
Lateral Design Control: Earthquake ______ Wind X
Soil Bearing Capacities:
Field Test (provide copy of test report) ______ psf
Presumptive Bearing Capacity 2000 psf
Pile size, type and capacity ______

PLUMBING FIXTURE REQUIREMENTS: 3 W.C. & 3 Lav min per unit, typical

OCCUPANCY	WATERCLOSETS: MALE	WATERCLOSETS: FEMALE	URINALS	LAVATORIES: MALE	LAVATORIES: FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS: REGULAR	DRINKING FOUNTAINS: ACCESSIBLE
R2								

ACCESSIBLE PARKING: See Civil Drawings

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES: PROVIDED	TOTAL # OF PARKING SPACES: REQUIRED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	# OF ACCESSIBLE SPACES PROVIDED: VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
Garages	2 cars per unit	—	—	—	—
TOTAL					

ENERGY SUMMARY:
METHOD OF COMPLIANCE:
[Prescriptive] Performance Energy Cost Budget

ROOF/CEILING ASSEMBLY(each assembly)
Description of assembly: wood truss w/ 1/2" O.S.B. and shingle roof w/ r-30 batt
U- value of total assembly: .0318
R- value of insulation: R-30
Skylights in each assembly: N/A
U- value of skylight: N/A
Total square footage of skylights in each assembly: N/A

EXTERIOR WALLS (each assembly)
Description of assembly: Siding over wood framing
U- value of total assembly: .084
R- value of insulation: R-13
Openings (windows or doors with glazing): vinyl windows R-1.69
U- value of assembly: .58
Shading coefficient: –
Projection factor: –
Low e required, if applicable: N/A
Door R-Values: min. 1.86 unglazed 1.70 glazed

WALLS ADJACENT TO UNCONDITIONED SPACE (each assembly)
Description of assembly: N/A
U- value of total assembly: N/A
R- value of insulation: –
Openings (windows or doors with glazing): N/A
U- value of assembly: N/A
Low e required, if applicable: N/A
Door R-Values: N/A

WALLS BELOW GRADE (each assembly)
Description of assembly: N/A
U- value of total assembly: N/A
R- value of insulation: N/A

FLOORS OVER UNCONDITIONED SPACE (each assembly)
Description of assembly: N/A
U- value of total assembly: N/A
R- value of insulation: N/A

FLOORS SLAB ON GRADE
Description of assembly: 4" Conc slab
U- value of total assembly: .172
R- value of insulation: R-0 per zone 7 Table 802-2000 IECC

FIRE PROTECTION

Fire protection sub-contractors to provide signed and sealed fire protection drawings with calculations per layout or as required.
Submittals and shop drawings are to be submitted for fire review before execution of work.

CODE ASSUMPTIONS

Units B and C– Townhomes per 2003 IRC
Unit A– R-2 per 2003 IBC

Required Separation of Occupancies: 2 Hours per Table 302.3.2 2003 IBC

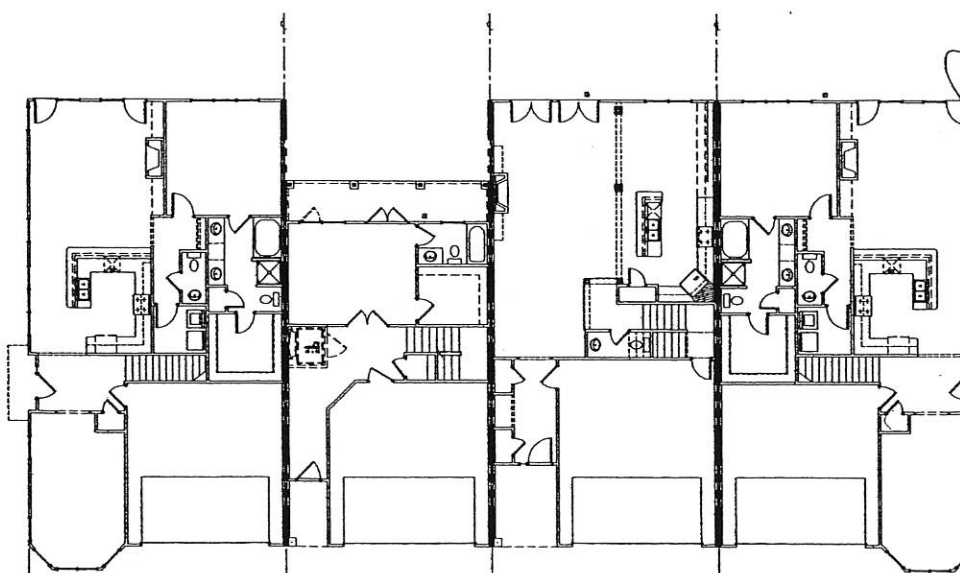
Construction Type: Type VA Protected/ Sprinkled

Building Ht. Limitations per Table 503 2003 IBC: 3 Stories/ 50'
Unit A as shown on Plans: 4 Stories/ 45' (Height Modification per section 504.2 2003 IBC)

Building Area Limitations: 12,000 sf/floor
Unit A as shown on Plans: 1,068 sf max/floor

Area Increases: 200% per section 506.3 2003 IBC
Unit A as shown on Plans: Increase not necessary

LEGEND
2 HOUR FIRE PARTITION PER TABLE 302.3.2 2003 IBC



4-UNIT BUILDING LAYOUT

Architectural Group
1242 Mann Drive, Suite 200
Matthews North Carolina 28105
www.urbanarchitecturalgrp.com
P: 704.841.1899 F: 704.841.8440

D·R·HORTON America's Builder

STATE OF SOUTH CAROLINA
Urban Architectural Group PA
Charlotte, NC
01054
REGISTERED ARCHITECTS

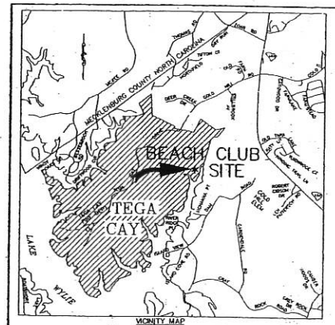
STATE OF SOUTH CAROLINA
JOHN R. URBAN
Matthews, NC
5409
REGISTERED ARCHITECT
6/6/06

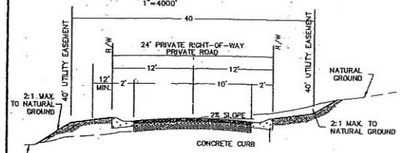
LAKE SHORE TOWN HOMES
TEGA CAY, SC

DATE DRAWN: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

App. B

LAKE SHORE ON LAKE WYLIE
POD MF-1-BEACH CLUB TOWNHOMES
TEGA CAY, SOUTH CAROLINA

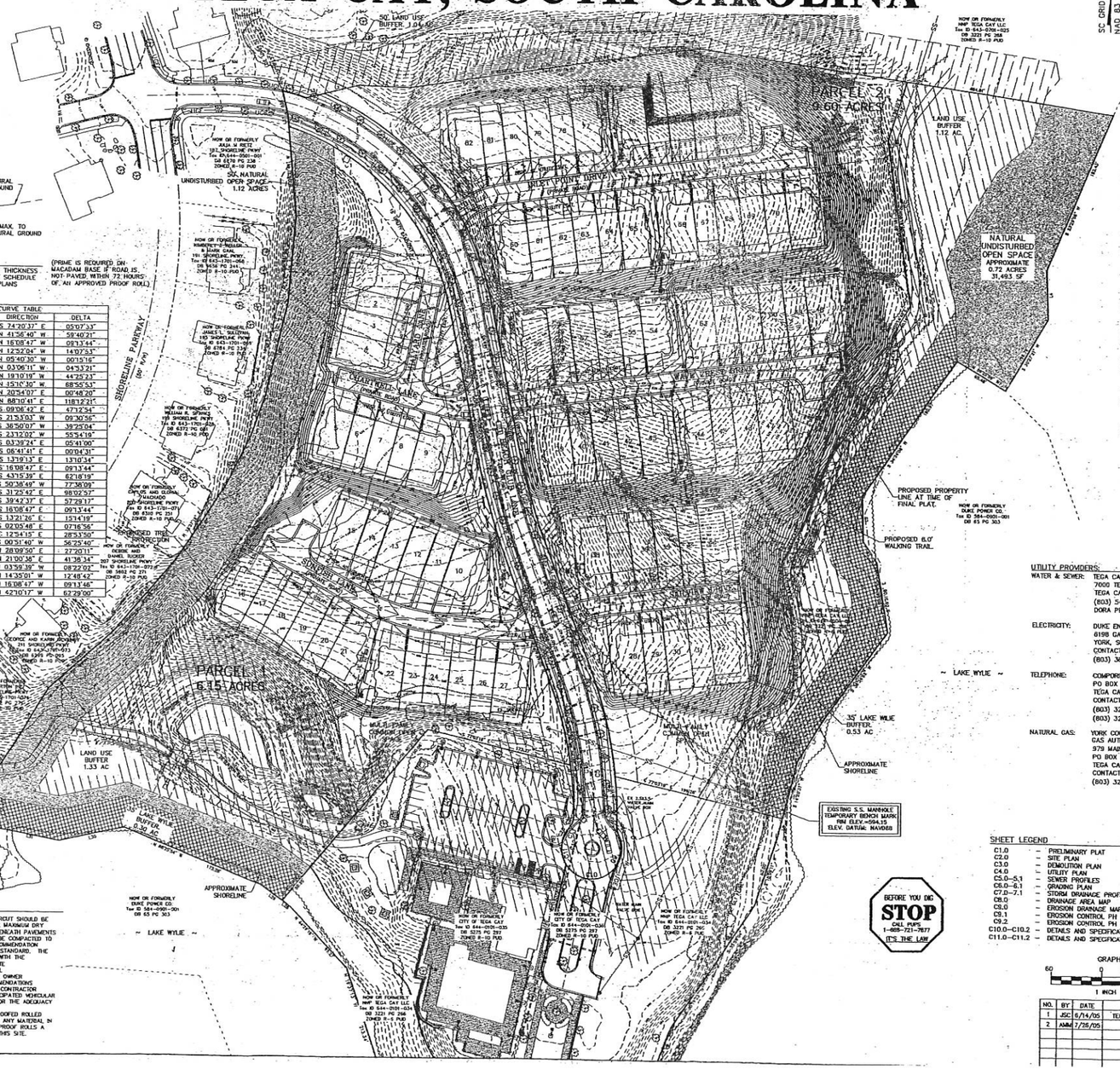




TOWNHOME ROADWAY DETAIL:
(NOT TO SCALE)

NOTE:
FOR PAVEMENT THICKNESS SEE PAVEMENT SCHEDULE ON THE SITE PLANS

(PRIME IS REQUIRED ON MACADAM BASE IF ROAD IS NOT PAVED WITHIN 72 HOURS OF AN APPROVED PROOF ROLL)



LAND BOUNDARY LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	N 75°52'40" E	22.33'
L2	N 75°52'40" E	42.74'
L3	S 88°15'22" E	59.44'
L4	S 02°01'52" E	57.25'
L5	S 02°12'40" E	51.08'
L6	S 32°38'01" E	29.04'
L7	S 32°00'52" W	58.83'
L8	S 14°20'37" W	20.39'
L9	S 22°05'05" W	40.81'
L10	S 00°35'55" W	20.76'
L11	S 08°56'58" E	12.91'
L12	S 35°56'41" E	11.72'
L13	S 08°41'17" E	17.82'
L14	S 26°25'12" W	17.56'
L15	S 37°14'28" W	29.98'
L16	S 52°32'17" W	20.90'
L17	S 31°31'06" W	41.50'
L18	S 35°56'13" W	57.55'
L19	S 51°08'13" W	32.93'
L20	S 71°06'27" W	29.94'
L21	N 85°30'20" W	29.26'
L22	N 64°19'25" W	1.48'
L23	N 64°19'25" W	49.80'
L24	N 57°18'10" W	25.47'
L25	N 41°55'06" W	29.11'
L26	N 31°19'07" W	34.16'
L27	N 24°37'03" W	38.65'
L28	N 50°20'04" W	10.89'
L29	N 55°20'04" W	31.33'
L30	S 78°21'04" W	76.41'
L31	N 79°36'08" W	72.80'
L32	N 10°55'38" W	53.42'
L33	N 05°37'21" E	50.58'
L34	N 31°32'25" E	77.17'
L35	N 26°47'07" E	65.51'
L36	N 19°36'26" E	52.03'
L37	N 03°21'44" W	13.43'
L38	N 13°14'06" W	28.20'
L39	S 13°13'54" W	115.98'
L40	S 77°03'19" E	35.82'
L41	S 12°56'41" W	115.50'

LAND BOUNDARY CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	DIRECTION	DELTA
C1	312.50'	27.96'	27.95'	S 74°20'37" E	05°07'43"
C2	312.50'	325.46'	310.95'	N 41°56'40" W	59°40'21"
C3	787.50'	126.85'	126.71'	N 16°08'47" W	09°13'44"
C4	430.81'	106.26'	105.99'	N 12°52'04" W	14°07'53"
C5	430.81'	1.91'	1.91'	N 05°40'30" W	00°15'16"
C6	430.81'	36.76'	36.75'	N 03°06'11" W	04°53'21"
C7	31.67'	24.55'	23.94'	N 19°10'19" W	44°25'23"
C8	35.04'	42.16'	39.86'	N 15°01'30" W	68°56'53"
C9	428.16'	5.02'	5.02'	N 20°54'07" E	00°48'20"
C10	35.00'	72.21'	60.07'	N 88°10'41" E	118°12'21"
C11	35.00'	28.84'	28.03'	S 09°06'42" E	47°12'54"
C12	10.00'	1.66'	1.66'	S 21°53'03" W	09°30'56"
C13	35.00'	24.08'	23.61'	S 36°56'07" W	39°25'04"
C14	23.30'	22.73'	21.84'	S 23°12'02" W	55°54'19"
C15	427.81'	42.44'	42.42'	S 03°38'24" E	05°41'00"
C16	405.81'	0.53'	0.53'	S 08°41'41" E	00°04'31"
C17	405.81'	93.32'	93.12'	S 13°19'13" E	13°10'34"
C18	812.50'	130.83'	130.73'	S 16°08'47" E	09°13'44"
C19	287.50'	312.64'	297.46'	S 43°15'39" E	62°18'19"
C20	29.97'	40.62'	37.58'	S 50°38'49" W	77°38'09"
C21	31.03'	35.98'	31.75'	S 31°25'42" E	98°02'57"
C22	324.98'	328.07'	312.57'	S 39°42'37" E	57°28'17"
C23	775.00'	124.83'	124.70'	S 16°08'47" E	09°13'44"
C24	450.00'	119.88'	119.33'	S 13°21'26" E	15°14'19"
C25	450.00'	53.19'	57.16'	S 02°05'48" E	07°16'56"
C26	20.00'	10.09'	9.98'	S 12°54'15" E	28°53'50"
C27	35.00'	34.47'	33.09'	S 00°51'40" W	56°25'40"
C28	35.00'	16.70'	16.54'	N 28°09'50" E	27°20'11"
C29	20.00'	14.54'	14.22'	N 21°00'36" E	41°38'34"
C30	400.00'	58.41'	58.36'	N 03°58'39" W	08°22'02"
C31	400.00'	89.44'	89.26'	N 14°35'01" W	12°48'42"
C32	825.00'	130.89'	130.75'	N 16°08'47" W	09°13'46"
C33	275.00'	299.90'	285.26'	N 42°10'17" W	62°29'00"

DEVELOPMENT DATA

TOTAL ACREAGE:	+/- 15.75 ACRES
ACREAGE PARCEL 1	+/- 6.15 ACRES
ACREAGE PARCEL 2	+/- 9.60 ACRES
MULTI-FAMILY COMMONS OPEN SPACE	
PARCEL 1:	+/- 2.97 ACRES
PARCEL 2:	+/- 3.67 ACRES
TOTAL:	+/- 9.60 ACRES
TOTAL ACREAGE TO BE DEVELOPED:	+/- 14.71 ACRES
TOTAL NATURAL UNDISTURBED OPEN SPACE:	+/- 1.84 ACRES
APPROXIMATE LAND USE BUFFER:	+/- 3.50 ACRES
EXISTING ZONING:	R-6 PUD
COUNTY:	YORK COUNTY
MIN FRONT SETBACK	25'
MIN REAR SETBACK	24'
MIN SIDE SETBACK	8'
TAX PARCEL:	644-01-01-032 (PARCEL 1) 644-01-01-034 (PARCEL 2)
PROPOSED USE OF LOTS:	MULTI-FAMILY RESIDENTIAL
MULTI FAMILY UNITS:	82 LOTS
AREA SCHOOLS:	FORT MILL 4
FIRE DISTRICT:	TEGA CAY

PARKING REQUIREMENTS: EACH SINGLE AND MULTI FAMILY UNIT WILL BE PROVIDED WITH A MIN. OF (2) 9'x17' PARKING SPACES. PARKING SPACE REQUIREMENT CAN BE SATISFIED WITHIN PROPOSED GARAGES.

PAVEMENT NOTES:

1. ALL FILL USED FOR RAISING SITE GRADES OR FOR REPLACEMENT OF MATERIAL THAT IS UNDERCUT SHOULD BE UNIFORMLY COMPACTED IN THIN LIFTS TO AT LEAST 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). IN ADDITION, AT LEAST THE UPPER 12 INCHES OF SUBGRADE FILL BENEATH PAVEMENTS AND FLOOR SLABS AND 24 INCHES BELOW PAVEMENTS SUBJECT TO TRUCK TRAFFIC SHOULD BE COMPACTED TO 98 PERCENT OF THE SAME SPECIFICATION. THE ABOVE COMPACTION SPECIFICATION IS A RECOMMENDATION ONLY. SPECIFIC PAVEMENT OR FLOOR SLAB DESIGNS MAY REQUIRE A DIFFERENT COMPACTION STANDARD. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SITE WORK MEASURES IN STRICT ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IN THE PROJECT SOILS REPORT AND/OR ON-SITE RECOMMENDATIONS PROVIDED BY A QUALIFIED GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
2. PAVEMENT SPECIFICATIONS LISTED ABOVE ARE RECOMMENDATIONS ONLY AS PROVIDED BY THE OWNER SPECIFICATIONS ARE ARE SUBJECT TO CHANGE BASED UPON PROJECT CONDITIONS OR RECOMMENDATIONS CONTAINED WITHIN THE SOILS REPORT. PRIOR TO COMMENCEMENT OF PAVING, THE OWNER OR CONTRACTOR SHOULD HIRE A GEOTECHNICAL ENGINEER TO PROVIDE A PAVEMENT DESIGN BASED UPON ANTICIPATED VEHICULAR TRAFFIC AND PROJECT SOIL CONDITIONS. THE ISAACS GROUP ASSUMES NO RESPONSIBILITY FOR THE ADEQUACY OF THE PAVEMENT SPECIFICATION PROVIDED ABOVE.
3. ALL CURB AND GUTTER, SIDEWALK, SUBGRADE FOR ROADS, AND MACADAM BASE MUST BE PROOFED ROLLED AND APPROVED BY THE ISAACS GROUP OR GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ANY MATERIAL IN THE SUBJECT AREA TO BE PROOF ROLLED. CONTACT THE ISAACS GROUP TO SCHEDULE ALL PROOF ROLLS A MINIMUM OF 48 HOURS PRIOR TO PROOF ROLLS. THERE ARE NO SCDOT RIGHTS OF WAY ON THIS SITE.

STREET NOTES:

1. PRIME SHALL BE REQUIRED WHERE STREET SLOPES ARE 6% OR GREATER.
2. THE OWNER'S GEOTECHNICAL ENGINEER SHALL SUBMIT A CALIFORNIA BEARING RATIO (CBR) CALCULATION FOR SUBGRADE ANALYSES THAT EITHER SUPPORTS THE USE OF THE CITY OF TEGA CAY'S MINIMUM TYPICAL CROSS-SECTION OR THE DEVELOPMENT OF A GREATER ADEQUATE AGGREGATE BASE COURSE/PAVEMENT DESIGN.
3. WHERE STREET SLOPES ARE 6% OR GREATER, THE PAVING CONTRACTOR MUST SUBMIT A DETAILED ROLLING PLAN TO CITY OF TEGA CAY TO ENSURE THE PREVENTION OF SLIPPAGE DURING THE COMPACTION PROCESS.
4. PRIME SHALL BE REQUIRED IF ROAD IS NOT PAVED WITHIN 72 HOURS OF AN APPROVED COMPACTION TEST.

NOTES:

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2. THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THIS PLAN. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED EXCAVATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY, IF BEING UTILIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
6. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.
8. ALL WATER AND SANITARY SEWER SHALL BE PUBLIC. ALL PUBLIC WATER LINES SHALL HAVE A 20 FOOT UTILITY EASEMENT, ALL STORM SEWER LINES SHALL HAVE A 20 FOOT EASEMENT, AND ALL SANITARY SEWER LINES SHALL HAVE A 20 FOOT UTILITY EASEMENT.
9. UTILITIES SHALL BE INSTALLED EXCLUSIVELY IN THE ROAD RIGHTS OF WAY AND EASEMENTS SHOWN UNLESS NOTED OR SHOWN OTHERWISE. ELECTRIC LINES SHALL BE INSTALLED IN A PRIVATE EASEMENT LOCATED OUTSIDE OF THE PRIVATE ROADS.
10. PROPERTY USE TO BE RESIDENTIAL (TOWNHOMES).
11. ALL MULTI-FAMILY COMMON AREAS SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
12. CROSS WALKS SHALL BE PROVIDED WHERE SIDEWALKS MEET ROAD INTERSECTIONS.
13. ALL DRAINAGE EASEMENTS NOT CENTERED ON PROPERTY LINES MUST BE SURVEYED FOR FINAL PLAT.
14. TEGA CAY IS NOT RESPONSIBLE FOR MAINTAINING THE TREES IN THE ROAD RIGHT-OF-WAY OR PRIVATE ROADS.
15. SIGHT TRIANGLE AT INTERSECTIONS OF ROADS SHALL BE MAINTAINED FREE OF ANY MATERIAL INTERFERING WITH SIGHT AS SHOWN.
16. MAXIMUM POSTED SPEED LIMIT FOR ALL ROADWAYS INSIDE THE SUBDIVISION IS 20 MPH.
17. THIS SUBMITTAL IS THE PRELIMINARY PLAT FOR POD MF-1-BEACH CLUB TOWNHOMES.
18. THE LAND USE BUFFER AREAS SHALL BE RETAINED IN THEIR NATURAL STATE AND SHALL CONTAIN A MINIMUM REFORESTATION OF 100 CALIPER INCHES PER ACRE.
19. THIS SUBDIVISION IS SUBJECT TO ALL OF THE APPLICABLE REQUIREMENTS OF THE CITY OF TEGA CAY ORDINANCE.
20. NO PUBLIC ROADS ARE TO BE PROPOSED FOR ACCEPTANCE INTO THE TEGA CAY ROADWAY SYSTEM FOR THIS PROJECT. BEACH CLUB LANE PUBLIC R/W SHALL BE INCLUDED AS PART OF THE FINAL PLATS FOR MF-1.
21. THE MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION AND STORM WATER MANAGEMENT CONTROLS, OUTSIDE THE ROAD RIGHT-OF-WAY, IS THE RESPONSIBILITY OF THE DEVELOPER OR HIS DESIGNEE. TEGA CAY RESERVES THE RIGHT TO PERFORM WORK ON THESE AREAS SHOULD THE DEVELOPER OR DESIGNEE NOT PROPERLY MAINTAIN THESE AREAS CAUSING POTENTIAL DANGER TO THE INTEGRITY OF THE ROADWAY. IN THIS EVENT THE DEVELOPER OR HIS DESIGNEE WOULD BE BILLED FOR ANY COST INCURRED BY TEGA CAY.
22. THE DEVELOPER, INDIVIDUAL LOT OWNER, OR THEIR REPRESENTATIVE SHALL NOT PIPE NOR DISCHARGE LOT OR ROOF DRAINAGE SYSTEMS INTO ENCLOSED ROAD DRAINAGE SYSTEMS OR ROAD RIGHT OF WAY WITHOUT SUBMITTING A ROAD ENCROACHMENT PERMIT TO TEGA CAY FOR APPROVAL.
23. NMP TEGA CAY, LLC, WILL BE THE RESPONSIBLE PARTY FOR THE INSTALLATION AND MAINTENANCE OF ALL IMPROVEMENTS, PROTECTIVE DEVICES, OPEN SPACES, AND BUFFERYARDS DURING CONSTRUCTION.
24. ALL DIMENSIONS FOR SINGLE FAMILY LOTS SHOWN ON THE PRELIMINARY PLAT ARE ROUNDED TO THE FOOT.
25. ALL LOT DIMENSIONS ARE SHOWN TO THE NEAREST HUNDREDTH OF A FOOT.
26. ALL DRAINAGE ARROWS W/SLOPES ARE POINTING IN A DOWNHILL FLOW DIRECTION.
27. NATURAL UNDISTURBED OPEN SPACE AND LAND USE BUFFERS WILL BE DEDED TO THE CITY OF TEGA CAY.
28. THE 24.0' PRIVATE ROAD EASEMENT IN THE TOWNHOMES SECTION SHALL FOLLOW THE BACK-OF-CURB ALONG THE PRIVATE ROADS.
29. THE TOTAL DISTURBED AREA FOR THE POD MF-1-BEACH CLUB TOWNHOMES SITE IS 10.55 ACRES, FOR THE INDIVIDUAL DRAINAGE AREAS ASSOCIATED WITH EROSION CONTROL MEASURES AND STORM DRAIN, PLEASE REFER TO SHEETS C5.0-5.2 FOR DETAILED INFORMATION.
30. ALL SIDEWALK, RETAINING WALLS, AND STRUCTURES, WHETHER IN PUBLIC OR PRIVATE RIGHTS-OF-WAY OR EASEMENTS, SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
31. ACCORDING TO THE PROPERTY SURVEY FOR NMP-TEGA CAY LLC BY FISHER-SHERER DATED: JUNE 11, 2003, REVISED 11-20-2003, THE MAXIMUM WATER LEVEL FOR LAKE WYLIE IS 570.0'. THIS PROPERTY COULD BE SUBJECT TO DUKE POWER FLOOD RIGHTS EXTENDING TO ELEVATION 580.0' (REF DB 397 PG 361)
32. MAXIMUM BUILDING ALLOWABLE HEIGHT FOR THIS PROJECT IS 35 FEET.
33. EXISTING TRAIL THAT RUNS THROUGH PROPERTY ALONG THE LAKESIDE OF THE PROPOSED BEACHCLUB TOWNHOMES SHALL BE RELOCATED AND RECONSTRUCTED AS SHOWN ON THE GRADING PLAN. THE EXISTING AND RELOCATED TRAIL SECTIONS SHALL BE DEEDED TO THE CITY OF TEGA CAY UPON FINAL PLAT RECORDATION.

UTILITY PROVIDERS:

WATER & SEWER: TEGA CAY UTILITY DEPARTMENT
7000 TEGA CAY DRIVE
TEGA CAY, SC 29708
(803) 548-3512
DORA PERRY

ELECTRICITY: DUKE ENERGY
6198 GALLANT RD.
YORK, SC 29745
CONTACT: LUKE JENKINS
(803) 385-4654

TELEPHONE: COMPORIUM COMMUNICATIONS
PO BOX 470
TEGA CAY, SC 29730
CONTACT: ERIC McCALL
(803) 326-6019 (TELEPHONE)
(803) 324-9000 (CABLE)

NATURAL GAS: YORK COUNTY NATURAL GAS AUTHORITY
979 MAIN STREET
PO BOX 11907
TEGA CAY, SC 29731
CONTACT: JIMMY SPROUSE
(803) 329-5255

DEVELOPER:
NMP-TEGA CAY, LLC
13777 BALLANTYNE CORPORATE PLACE STE. 550
CHARLOTTE, N.C.C 28277
Ph: 704 887-5956/Fax 704 887-5655

ENGINEER/SURVEYOR/PLANNER:
THE ISAACS GROUP, P.C.
8720 RED OAK BLVD., STE. 420
CHARLOTTE, NC 28217
PH: 704-527-3440/FAX: 704-527-8335

SHEET LEGEND

C1.0	-	PRELIMINARY PLAT
C2.0	-	SITE PLAN
C3.0	-	DEMOLITION PLAN
C4.0	-	UTILITY PLAN
C5.0-5.1	-	SEWER PROFILES
C6.0-6.1	-	GRADING PLAN
C7.0-7.1	-	STORM DRAINAGE PROFILES
C8.0	-	DRAINAGE AREA MAP
C9.0	-	EROSION DRAINAGE MAP
C9.1	-	EROSION CONTROL PH 1
C9.2	-	EROSION CONTROL PH 2
C10.0-C10.2	-	DETAILS AND SPECIFICATIONS (CIVIL)
C11.0-C11.2	-	DETAILS AND SPECIFICATIONS (UTILITIES)

GRAPHIC SCALE
60 0 30 60 120
1 INCH = 60 FEET

THE ISAACS GROUP, P.C. ENGINEERING NO. C01037 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER JOHN SCOTT CHILDRS 7-26-05

FINAL DRAWING
FOR REVIEW PURPOSES ONLY

NO.	BY	DATE	REVISION
1	JSC	6/14/05	TEGA CAY, SCDHEC COMMENTS
2	AMM	7/26/05	TEGA CAY COMMENTS

Project: LAKE SHORE ON LAKE WYLIE
POD MF-1-BEACH CLUB TOWNHOMES
TEGA CAY, SOUTH CAROLINA

Title: PRELIMINARY PLAT

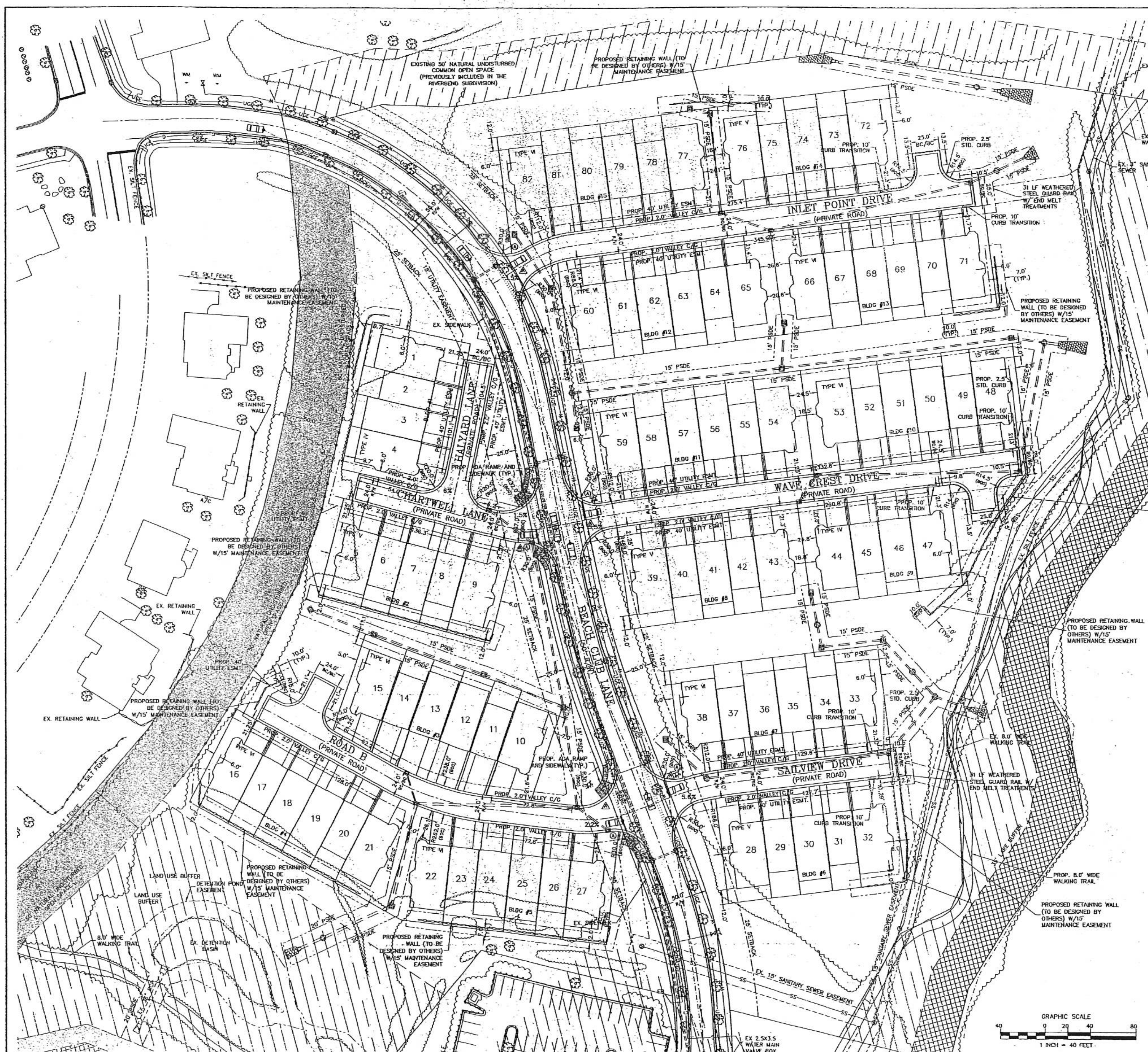
File #: 04316.dwg	Date: 04/09/05	Project Eqr: JSC
		Design By: AMM
		Drawn By: AMM
		Scale: 1"=60'

THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND LAND SURVEYING
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C1.0

SC GRID NAD 83

APPROVED FOR CONSTRUCTION JSC



PAVING SPECIFICATIONS

PRIVATE PAVEMENT SECTION [MULTI. FAMILY – ROADS/ PRIVATE ROADS]

1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, I–2
4" BITUMINOUS CONCRETE BASE COURSE, TYPE HB, OR
6" COMPACTED AGGREGATE BASE COURSE

PAVEMENT NOTES:

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2. PAVEMENT SPECIFICATIONS LISTED ABOVE ARE RECOMMENDATIONS ONLY AS PROVIDED BY THE OWNER SPECIFICATIONS AND ARE SUBJECT TO CHANGE BASED UPON PROJECT CONDITIONS OR RECOMMENDATIONS CONTAINED WITHIN THE SOILS REPORT. PRIOR TO COMMENCEMENT OF PAVING, THE OWNER OR CONTRACTOR SHOULD HIRE A GEOTECHNICAL ENGINEER TO PROVIDE A PAVEMENT DESIGN BASED UPON ANTICIPATED VEHICULAR TRAFFIC AND PROJECT SOIL CONDITIONS. THE ISAACS GROUP ASSUMES NO RESPONSIBILITY FOR THE ADEQUACY OF THE PAVEMENT SPECIFICATION PROVIDED ABOVE.

3. ALL CURB AND GUTTER, SIDEWALK, SUBGRADE FOR ROADS, AND MACADAM BASE MUST BE PROOFED ROLLED AND APPROVED BY THE ISSACS GROUP OR GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ANY MATERIAL IN THE SUBJECT AREA TO BE PROOF ROLLED. CONTACT THE ISAACS GROUP TO SCHEDULE ALL PROOF ROLLS A MINIMUM OF 48 HOURS PRIOR TO PROOF ROLLS. THERE ARE NO SCDOT RIGHTS OF WAY ON THIS SITE.

NOTES:

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4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION.

5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.

6. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.

8. NO GRADING OR CLEARING SHALL OCCUR IN ANY PROPERTY DESIGNATED AS NATURAL UNDISTURBED OPEN SPACE.

LEGEND

- PROPOSED TREE LINE
- PROPOSED TREE SAVE PROTECTION FENCE
- PROPOSED WEATHERED STEEL GUARDRAIL
- EXISTING SANITARY SEWER
- EXISTING BRUSH/HEAVY GRASS AREA
- PROPOSED STORM DRAINAGE PIPE
- PROPOSED CATCH BASIN
- PROPOSED JUNCTION BOX
- PROPOSED RETAINING WALL
- EXISTING CATCH BASIN
- EXISTING STORM DRAINAGE PIPE
- EXISTING RETAINING WALL

NOTE: WHERE DOUBLE LINES ARE SHOWN FOR RETAINING WALLS, THIS DELINEATES TOP OF WALL AND BOTTOM OF WALL.

SIGN SCHEDULE

(A) STOP SIGN (30"x30") (MUTCD R1–1)

PAVEMENT MARKING SCHEDULE

(A) 12" WIDE STOP BAR PAINTED WHITE.

GRAPHIC SCALE

0 20 40 80

1 INCH = 40 FEET

SOUTH CAROLINA — THE ISAACS GROUP, P.C. ENGINEERING NO. C01037 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER No. 22781 — JOHN SCOTT CHILDERS

7-26-05

FINAL DRAWING
FOR REVIEW PURPOSES ONLY

NO.	BY	DATE	REVISION
1	JSC	6/14/05	TEGA CAY, SCDHEC COMMENTS
2	AMM	7/26/05	TEGA CAY COMMENTS

Project: **LAKE SHORE ON LAKE WYLIE**
POD MF–1–BEACH CLUB TOWNHOMES
TEGA CAY, SOUTH CAROLINA

Title: SITE PLAN

File #: 04316.dwg	Date: 04/08/05
Project Egr:	JSC
Design By:	AMM
Drawn By:	AMM
Scale:	1"=40'

THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527–3440 FAX (704) 527–8335

C2.0

NOTES

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3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY, IF BEING UTILIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. CONTRACTOR IS TO MAINTAIN UTILITY SERVICES, INCLUDING WATER, SANITARY SEWER, STORM SEWER, NATURAL GAS, ELECTRIC AND TELEPHONE AT ALL TIMES DURING CONSTRUCTION.
5. CONTRACTOR IS TO KEEP ALL PARKING AREAS, ALLEYS, AND STREETS ADJACENT TO THE CONSTRUCTION SITE CLEAN AT ALL TIMES DURING CONSTRUCTION.
6. CONTRACTOR SHALL ADJUST THE ELEVATION OF THE RINGS AND COVERS OF ALL EXISTING UTILITIES WHICH ARE TO REMAIN AND ARE TO MATCH PROPOSED GRADES. CONTRACTOR SHALL ALSO MATCH AT GRADE UTILITIES TO FINAL PROJECT GRADES UNLESS OTHERWISE NOTED.
7. ALL SIGNS WITHIN THE LIMITS OF CONSTRUCTION MAY BE REMOVED AS NEEDED FOR THE CONSTRUCTION AND REPLACED AS SOON AS POSSIBLE. TEMPORARY FREESTANDING SIGNS MAY BE NEEDED/REQUIRED DURING CONSTRUCTION.
8. SIGNING OF THE CONSTRUCTION AREA SHALL COMPLY WITH THE CURRENT "SC DOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS". ALL SIGNAGE INCLUDING REGULATORY AND WARNING SIGNS WHICH ARE OWNED AND MAINTAINED BY THE SCDOT ARE TO REMAIN THROUGHOUT THE DEMOLITION AND CONSTRUCTION PHASES. ALL SIGNS WHICH NEED TO BE REMOVED ARE TO BE RELOCATED IMMEDIATELY.
9. CONTRACTOR TO SET UP TEMPORARY SEDIMENT CONTROL MEASURES BEFORE WORK COMMENCES. ALL TRAPS & BASINS SHALL BE INSPECTED DAILY (MONDAY THROUGH FRIDAY) FOR EXCESSIVE SILT. CONTRACTOR SHALL REMOVE EXCESSIVE SILT FROM THE TRAPS IMMEDIATELY BEFORE CONSTRUCTION COMMENCES ON THAT DAY. MAINTENANCE SHALL CONTINUE THROUGH PROJECT COMPLETION.
10. CONTRACTOR IS TO DRESS, SEED AND MULCH ALL AREAS DISTURBED DURING CONSTRUCTION. FINAL DRESSING, SEEDING & MULCHING SHALL BE IN ACCORDANCE TO THE CONTRACT/SCDHEC SPECIFICATIONS.
11. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
12. HANDICAP SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH A.D.A. STANDARDS AT H/C PARKING SPACES SHOWN.
13. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
14. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.

SEWER NOTES

1. ALL 8" PVC SANITARY SEWER IS TO BE SDR 35 PVC SANITARY SEWER PIPE UNLESS NOTED OTHERWISE.
2. STATIONS SHOWN FOR SANITARY SEWER MANHOLE LOCATIONS IN ARE SEWER PROFILE STATIONS NOT TIED TO ROADWAY STATIONING.
3. ALL SANITARY SEWER SERVICES SHALL BE SCHEDULE 40 PVC.
4. STONE BEDDING IS REQUIRED FOR ALL SDR 35 PVC SEWER PIPE.
5. ALL SEWER SERVICES ARE TO BE LOCATED AS SHOWN ON THE PLAN AND AT LEAST 5 FEET FROM ANY WATER SERVICE.
6. ALL CLEAN OUTS ARE TO BE LOCATED ON THE HOUSE SIDE OF THE SIDEWALK WHERE APPLICABLE.
7. PIPE DEFLECTION AT EACH JOINT IS NOT TO EXCEED PIPE MANUFACTURER'S RECOMMENDATIONS. WHERE REQUIRED DEFLECTION EXCEEDS THE RECOMMENDATIONS, MAKE THE DEFLECTION OVER MULTIPLE PIPE JOINTS TO MEET MANUFACTURER'S REQUIREMENTS.
8. CONTRACTOR SHALL NOTIFY TEGA CAY PUBLIC WORKS 24 HOURS PRIOR TO ANY SEWER TIES OR SEWER LINE RELOCATION.
9. SEWER LATERAL SERVICE LOCATIONS SHOULD BE MARKED WITH A "S" CUT INTO THE PROPOSED CURB.

WATER NOTES

1. ALL NEW 4" OR LARGER WATER LINE SHALL BE C900 PC 150 PVC PVC UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO FIELD VERIFY SIZE AND TYPE OF EXISTING LINES AT TIE POINTS PRIOR TO COMMENCING CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. ALL SERVICES ARE TO BE LOCATED ON THE DOWNSTREAM SIDE OF THE LOT 8.33 FEET OFF LOT LINES 5.00 FEET FROM SEWER LATERAL UNLESS OTHERWISE INDICATED.
4. ALL SERVICES ARE TO BE LOCATED ON THE HOUSE SIDE OF SIDEWALKS WHERE APPLICABLE.
5. CONTRACTOR TO INSTALL 14 GAUGE SOLID COPPER TRACER WIRE FOR ALL PVC WATERLINES.
6. ALL DUCTILE IRON WATER PIPE SHALL HAVE MECHANICAL JOINT FITTINGS.
7. CONTRACTOR SHALL USE DUCTILE IRON PIPE AT ALL CREEK CROSSINGS.
8. WATER LINE SHALL BE DUCTILE IRON AT ALL SEWER CROSSINGS.
9. STUB OUT ASSEMBLIES ARE TO EXTEND 10 FEET BEYOND END OF PAVEMENT UNLESS NOTED OR INDICATED OTHERWISE.
10. WATER FITTINGS FOR SERVICES TO HAVE A WORKING PRESSURE OF 200 PSI OR GREATER.
11. PIPE DEFLECTION AT EACH JOINT IS NOT TO EXCEED PIPE MANUFACTURER'S RECOMMENDATIONS. WHERE REQUIRED DEFLECTION EXCEEDS THE RECOMMENDATIONS, MAKE THE DEFLECTION OVER MULTIPLE PIPE JOINTS TO MEET MANUFACTURER'S REQUIREMENTS.
12. CONTRACTOR IS TO ENSURE THAT ALL AIR RELEASE VALVES ARE SET AT THE HIGHEST ELEVATION POINTS ON THE WATERLINE.
13. MAINTAIN 12" MINIMUM CLEARANCE BETWEEN WATER & STORM DRAIN PIPES. ALL WATERLINES CROSSING STORM MUST HAVE A 20' LENGTH OF DI WATER PIPE CENTERED AT THE STORM DRAINAGE CROSSINGS.
14. CONTRACTOR SHALL NOTIFY TEGA CAY AND SCDOT 24 HOURS PRIOR TO ANY CONNECTIONS TO CITY WATERLINE ARE MADE. A TEGA CAY REPRESENTATIVE SHALL BE PRESENT WHEN TAPPING TO EXISTING WATER LINES.
15. ALL PROPOSED FIRE HYDRANTS MUST BE PAINTED WHITE.
16. WATER METER SERVICE LOCATIONS SHOULD BE MARKED WITH A "W" CUT INTO THE PROPOSED CURB.
17. WATER VALVE LOCATIONS SHOULD BE MARKED WITH A "V" CUT INTO THE PROPOSED CURB.

LEGEND

Symbol	Existing	Symbol	Proposed
—SS—	EXISTING SANITARY SEWER LINE	—SS—	PROPOSED SANITARY SEWER LINE
—W—	EXISTING WATER LINE	—W—	PROPOSED WATER LINE
	EXISTING STORM DRAINAGE PIPE		PROPOSED STORM DRAINAGE PIPE
	EXISTING CATCH BASIN		PROPOSED CATCH BASIN
	EXISTING SAN. SEWER MH		PROPOSED JUNCTION BOX
	EXISTING UTILITY POLE		PROPOSED SANITARY SEWER MANHOLE
	EXISTING WATER VALVE		PROPOSED 4" SEWER LATERAL
	EXISTING FIRE HYDRANT		PROPOSED WATER VALVE
—G—	EXISTING GAS LINE		PROPOSED FIRE HYDRANT
—UGE—	EXISTING UNDERGROUND ELECTRIC		

UTILITY NOTE

THE CONTRACTOR SHALL PROVIDE SUBMITTAL DATA TO THE CITY FOR ALL MATERIALS TO BE USED TO CONSTRUCT THE UTILITY INFRASTRUCTURE. THE SUBMITTALS AT A MINIMUM SHALL INCLUDE PIPE, VALVES, FITTINGS, VAULTS, WATER SERVICE CONNECTION MATERIALS AND OTHER SPECIALTY ITEMS.

SOUTH CAROLINA — THE ISAACS GROUP, P.C. ENGINEERING NO. C01037 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 22781 — JOHN SCOTT CHILDERS

FINAL DRAWING 7-26-05
FOR REVIEW PURPOSES ONLY

GRAPHIC SCALE
40 0 20 40 80
1 INCH = 40 FEET

NO.	BY	DATE	REVISION
1	JSC	6/14/05	TEGA CAY, SCDHEC COMMENTS
2	AMM	7/28/05	TEGA CAY COMMENTS

Project: LAKE SHORE ON LAKE WYLIE
POD MF-1-BEACH CLUB TOWNHOMES
TEGA CAY, SOUTH CAROLINA

Title: **UTILITY PLAN**

File #: 04316.dwg | Date: 04/09/05 | Project Egr: JSC | Design By: AMM | Drawn By: AMM | Scale: 1"=40'

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