

VARIANCE REQUEST FOR:
27 STAR ISLAND

DRB FINAL SUBMITTAL
OCTOBER 11, 2021

27 E. STAR ISLAND DRIVE



27 E. STAR ISLAND DRIVE

CLIENT:
STARBOARD FLORIDA IV LLC
27 STAR ISLAND DR.
MIAMI BEACH, FL 33139

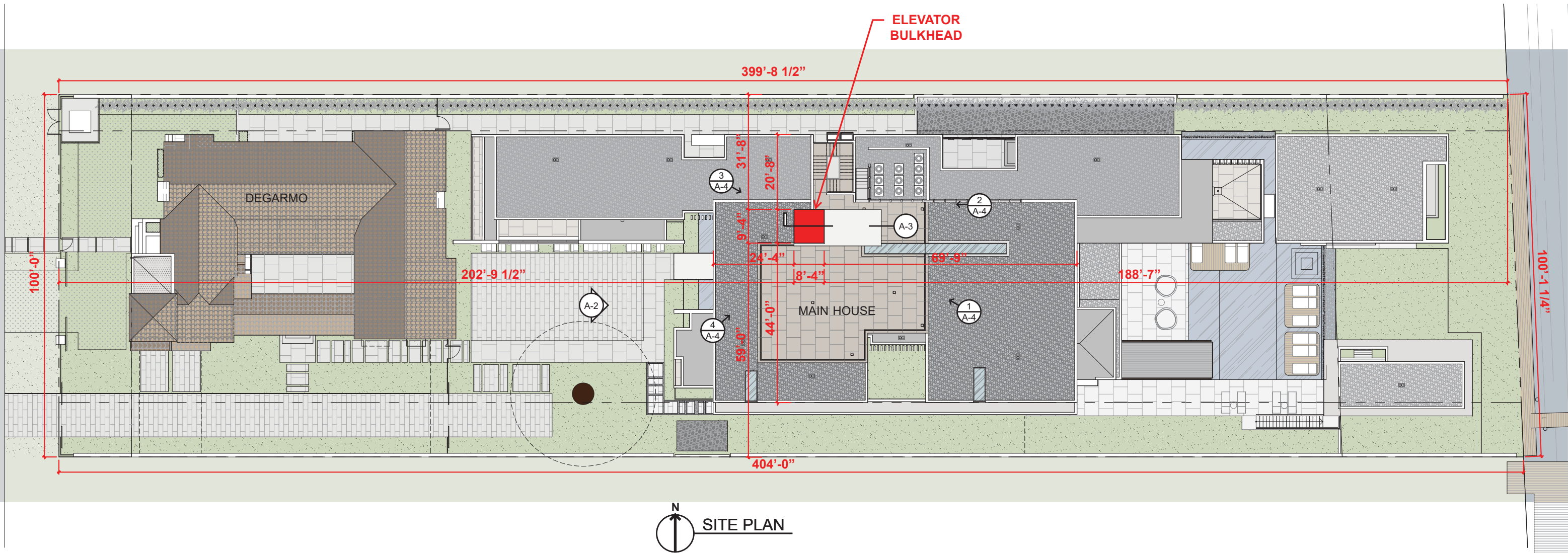
ARCHITECT:
CHOEFF LEVY FISCHMAN
8425 BISCAYNE BLVD., STE. 201
MIAMI, FL 33138

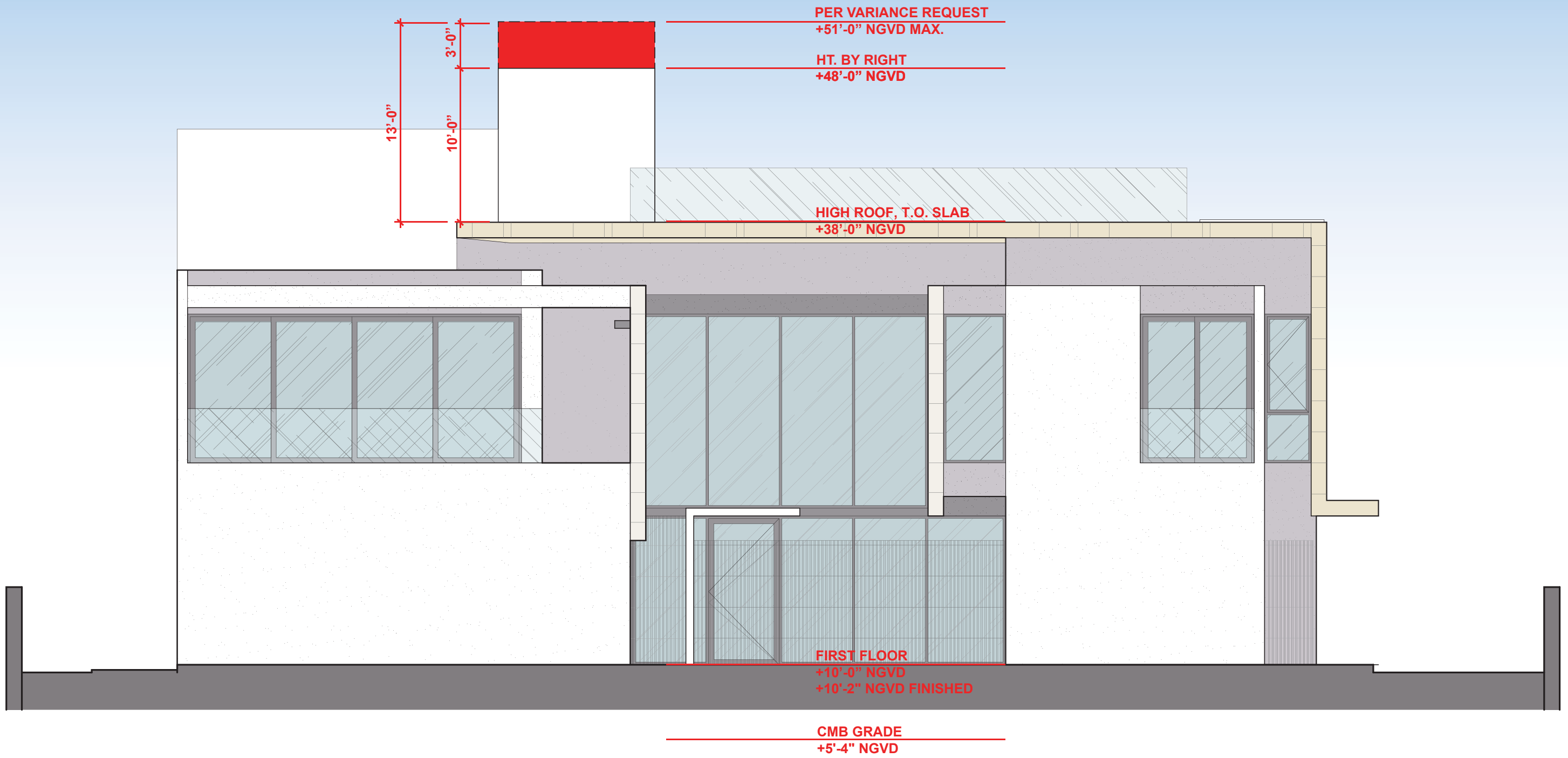
DESCRIPTION OF VARIANCE REQUEST

Request for a variance from DRB, to allow an elevator bulkhead to exceed the maximum 10' height above roof level, per Sec. 142-105 (b)(7)f, by 3'-0".

NOTE REGARDING AS-BUILT DRAWINGS:

Pages and excerpts from the approved As-Built Permit drawings, including landscape drawings, are for reference only and not part of the scope of work proposed in this application



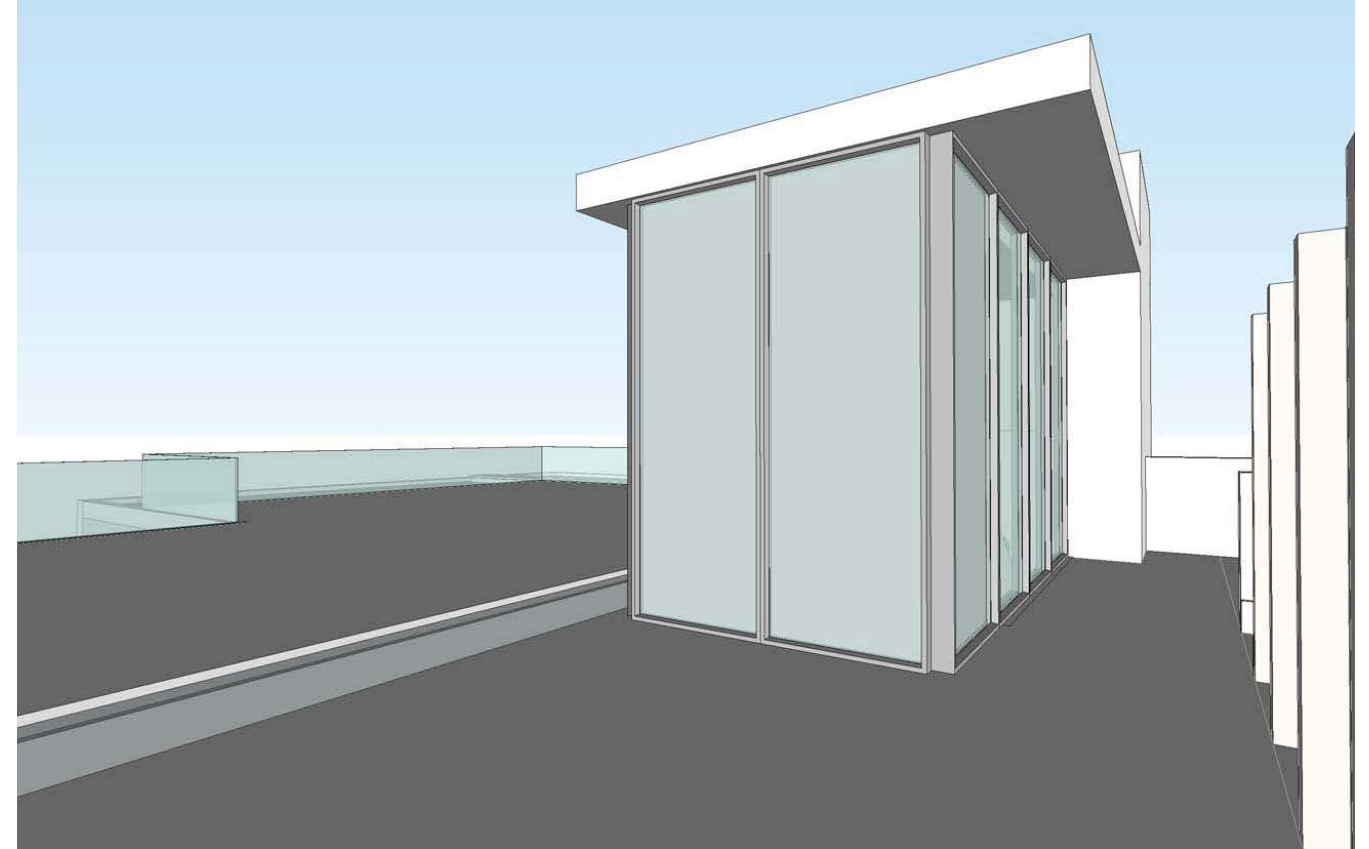


○ WEST ELEVATION





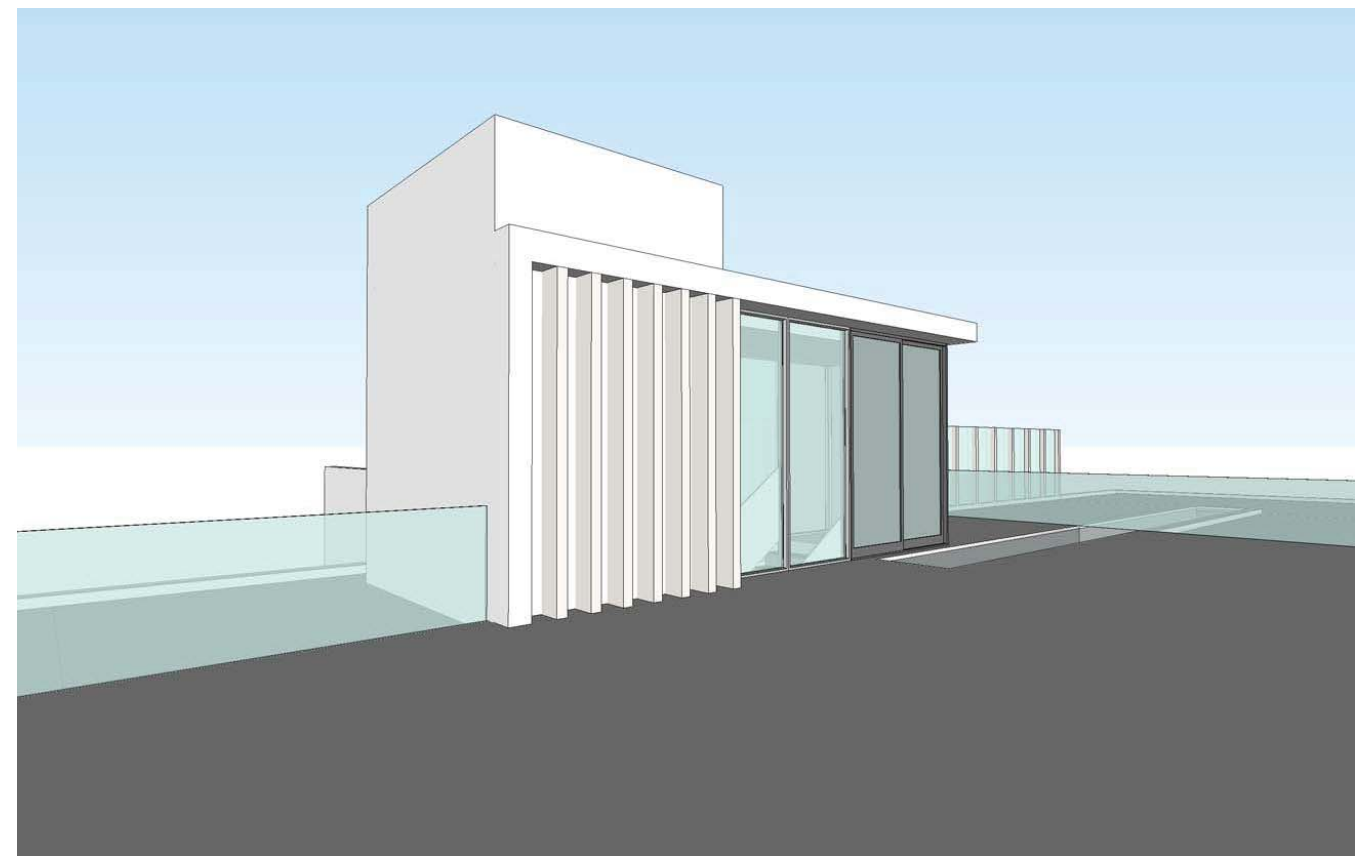
① VIEW FROM SOUTHEAST



② VIEW FROM NORTHEAST



③ VIEW FROM NORTHWEST

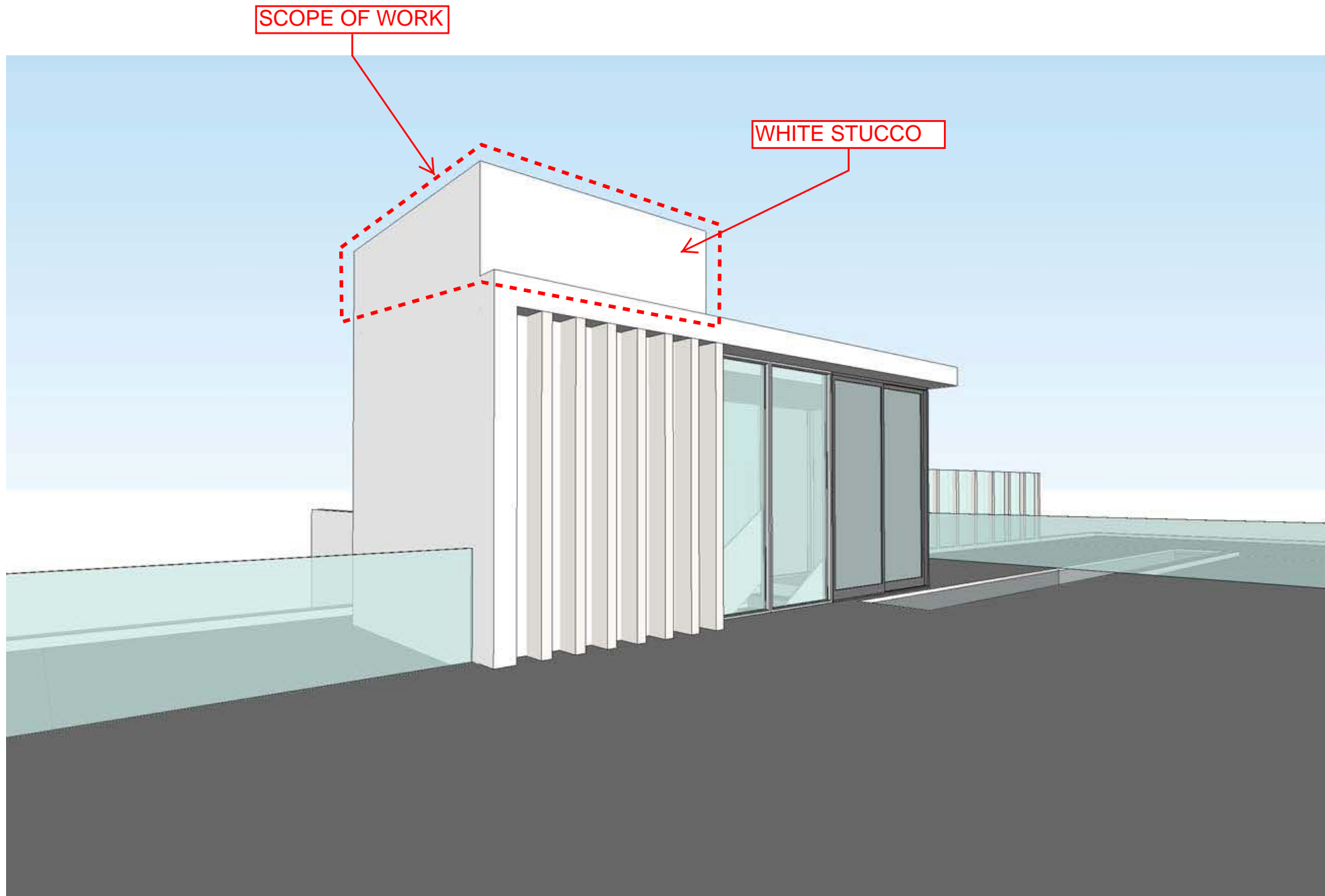


④ VIEW FROM SOUTHWEST



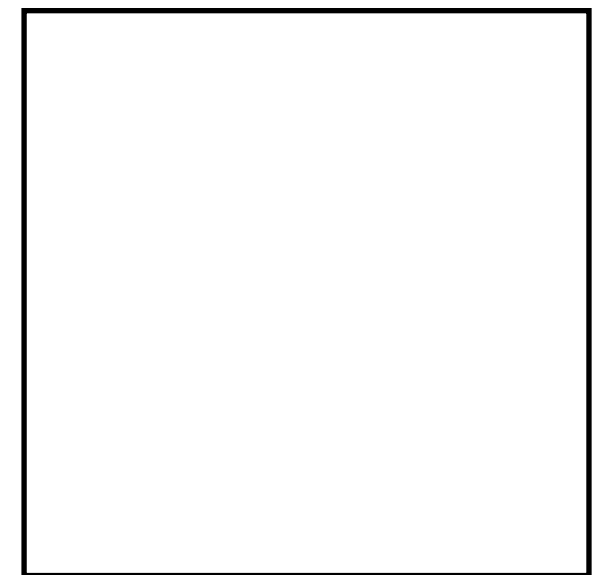
ELEVATOR
BULKHEAD
EXTENSION,
BEYOND

MAIN HOUSE,
BEYOND



① VIEW FROM SOUTHWEST

MATERIAL BOARD



WHITE STUCCO
(TO MATCH EXISTING)

ZONING DATA

LEGAL DESCRIPTION:
4 54 42
STAR ISLAND CORR PL
PB 31-80 LOT 27
LOT SIZE 100.000 X 400.

ZONING CLASS: RS-1

USE: RESIDENTIAL (R-3), SINGLE FAMILY RESIDENCE

FLOOD ZONE: AE-10
BASE FLOOD ELEVATION: 10'-0" NGVD
EST. GRADE: 5'-4" NGVD
ADJ. GRADE: 7'-8" NGVD

	PERMITTED	PROPOSED (TOTAL)
LOT AREA	30,000 SQFT MIN. (0.69 ACRES)	40,190 SQFT (0.92 ACRES)
LOT WIDTH	100'-0" MIN.	100'-0"
LOT COVERAGE:	35%; 14,067 SQFT MAX.	31.8%; 12,819 SQFT
UNIT SIZE:	60%; 24,114 SQFT MAX.	59.0%; 23,737 SQFT
1ST FLOOR		12,829 SQFT
2ND FLOOR		10,722 SQFT
ROOF		186 SQFT

SETBACKS @ MAIN STRUCTURES

FRONT	20'-0" MIN.	20'-0"
SIDE	25'-0" MIN. TOTAL	25'-0"
NORTH SIDE	10'-0" MIN.	10'-0"
SOUTH SIDE	15'-0" MIN.	15'-0"
REAR	LESSER OF 15% LOT LENGTH (80'-0") OR 50'-0"	72'-10 1/2"

SETBACKS @ ACCESSORY STRUCTURES

REAR	7'-6" MIN.	13'-7 1/2"
SIDE		
NORTH SIDE	7'-6" MIN.	11'-0"
SOUTH SIDE	7'-6" MIN.	11'-2"

DEGARMO HOUSE

3,622 SQFT
6,225 SQFT
3,133 SQFT
3,092 SQFT

NEW HOUSE

7,894 SQFT
15,710 SQFT
7,894 SQFT
7,820 SQFT
186 SQFT

GYM

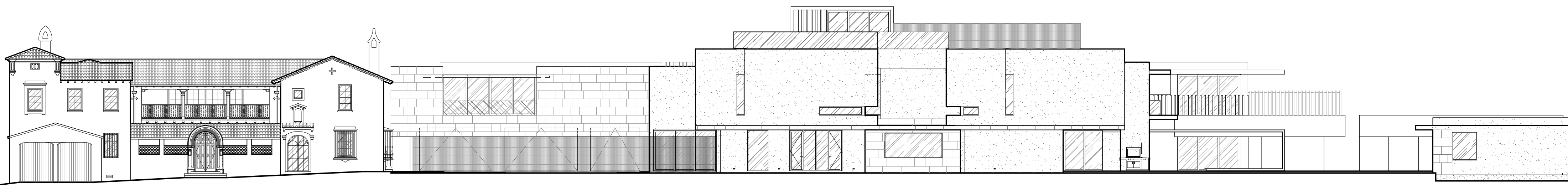
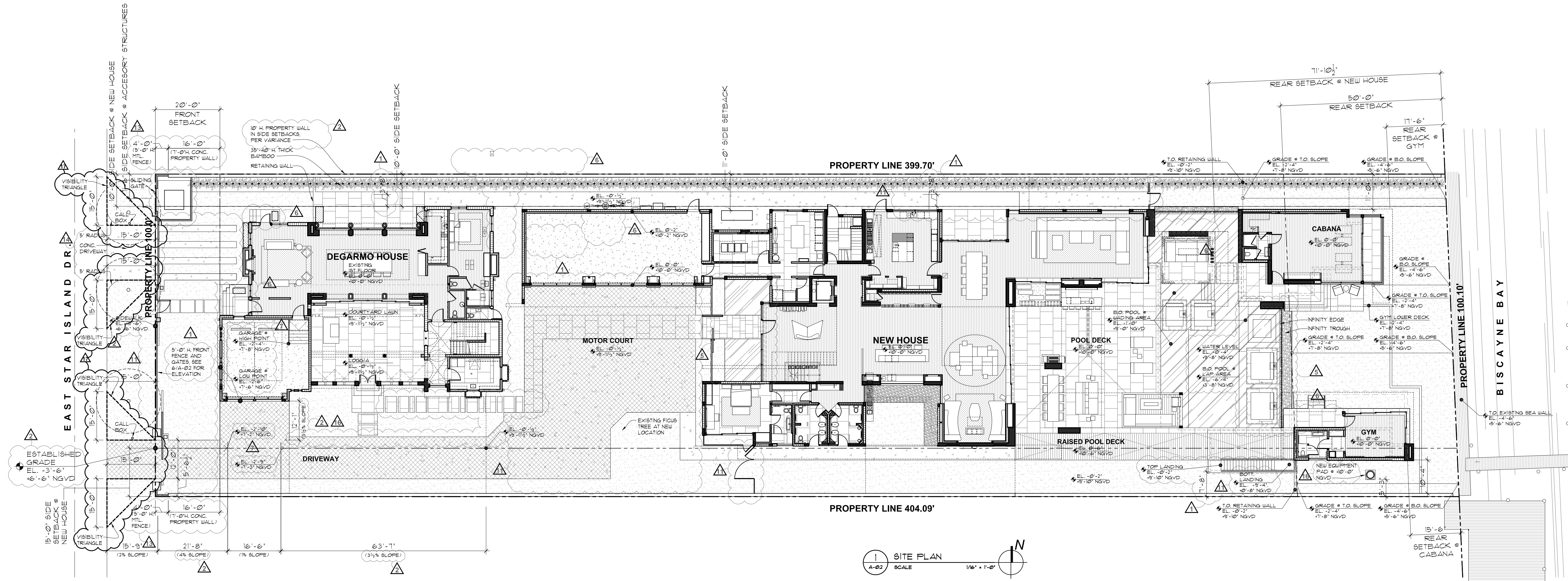
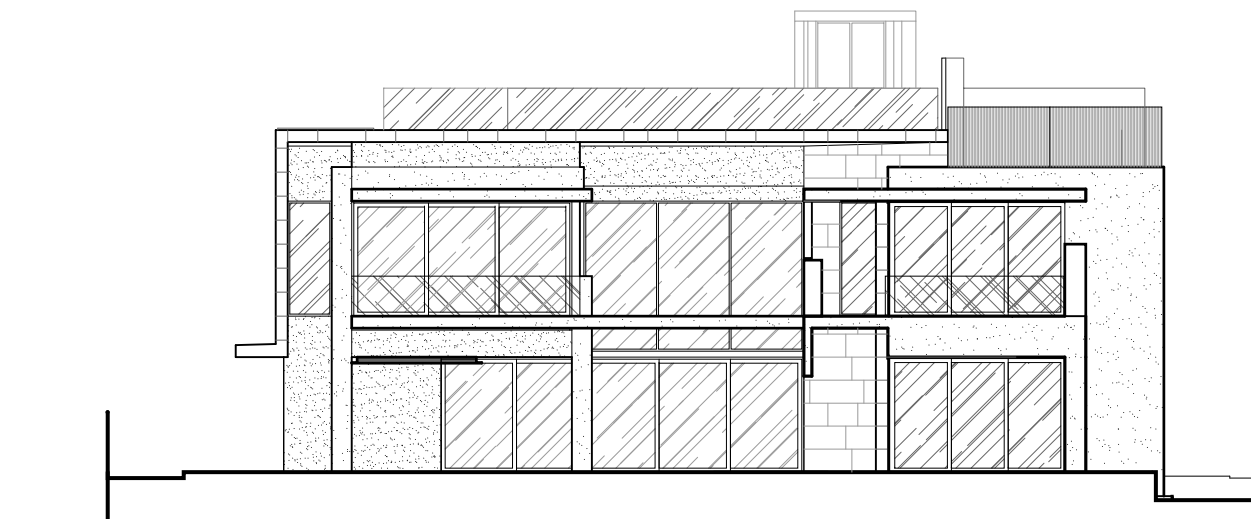
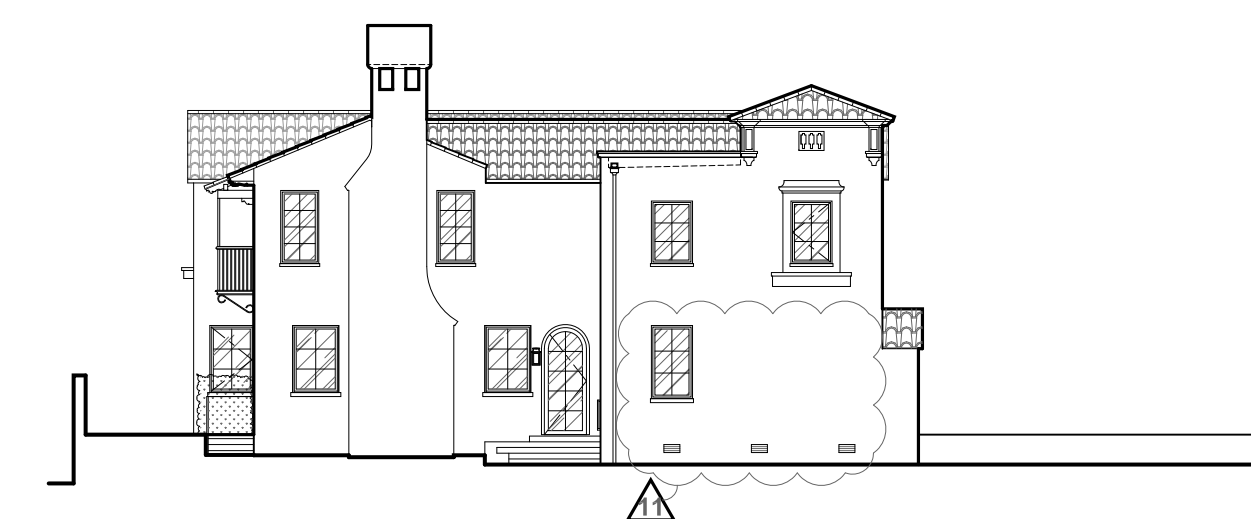
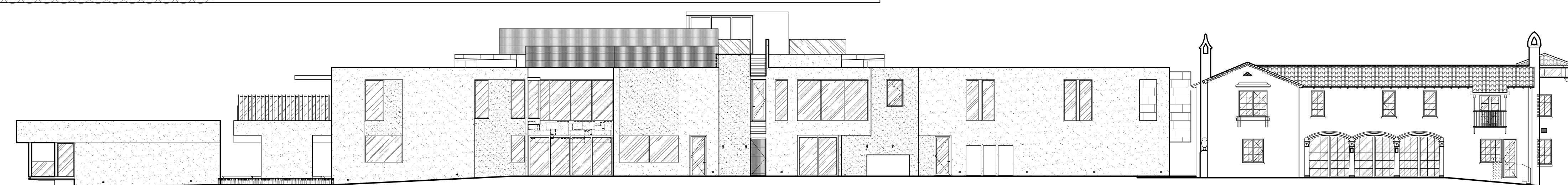
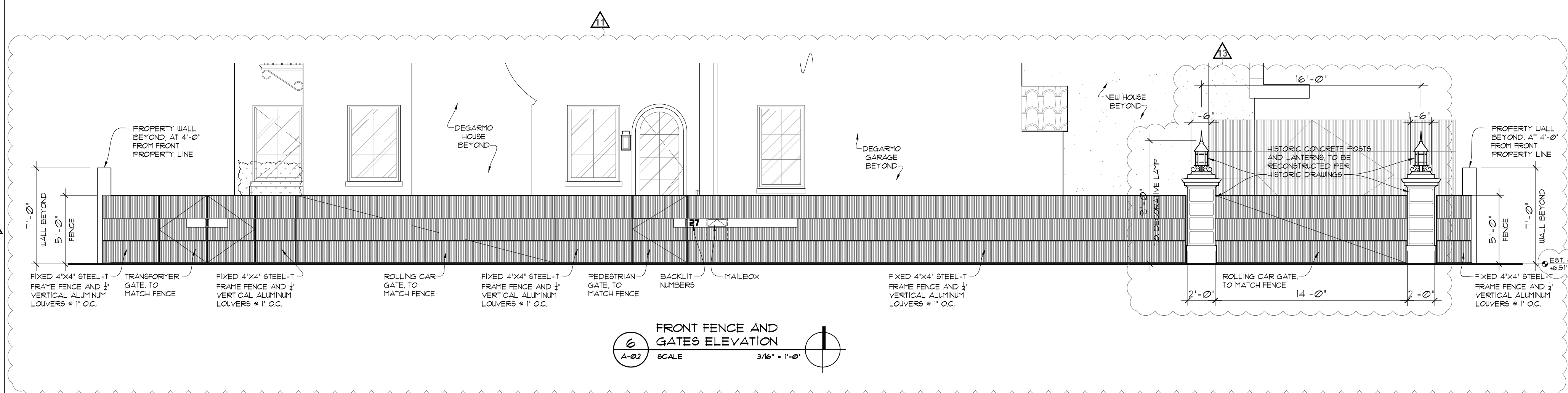
493 SQFT
493 SQFT
493 SQFT
493 SQFT

CABANA

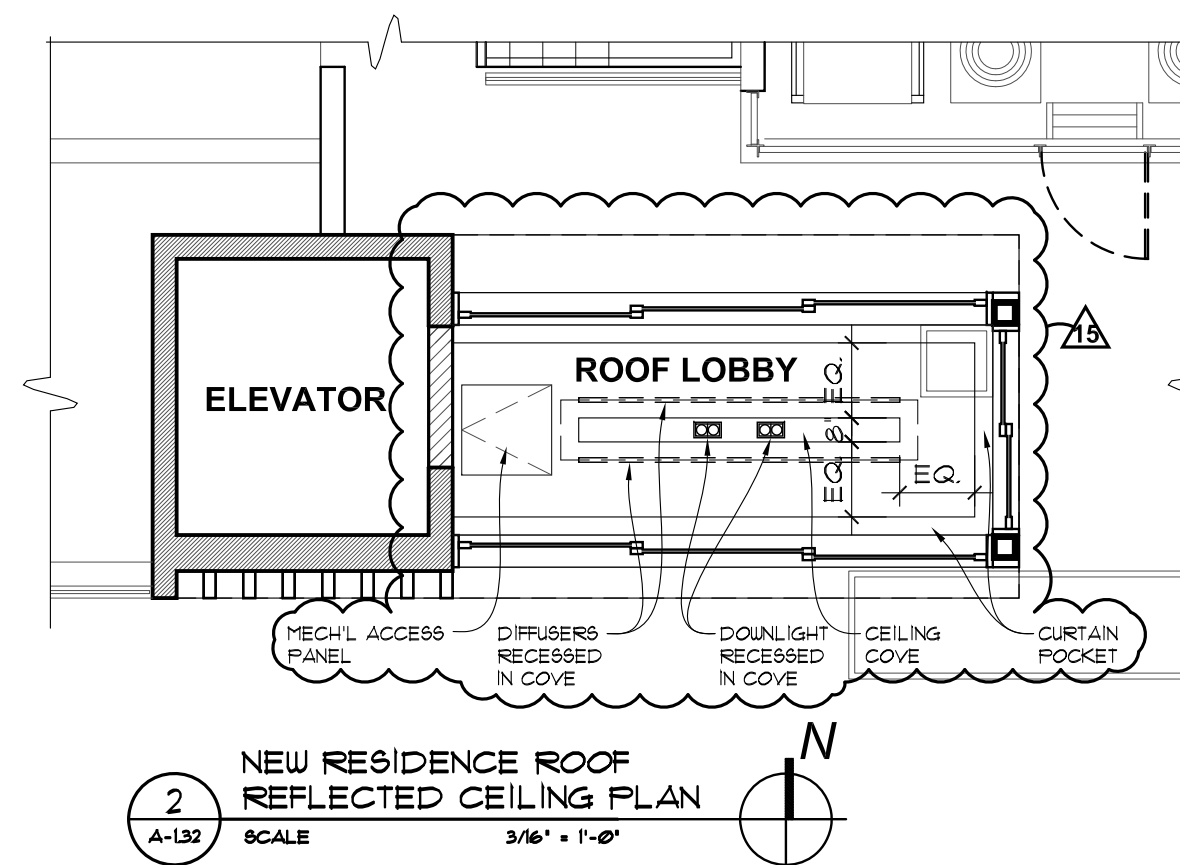
810 SQFT
810 SQFT
810 SQFT
810 SQFT

POOL EQUIPMENT

499 SQFT
499 SQFT
499 SQFT
499 SQFT



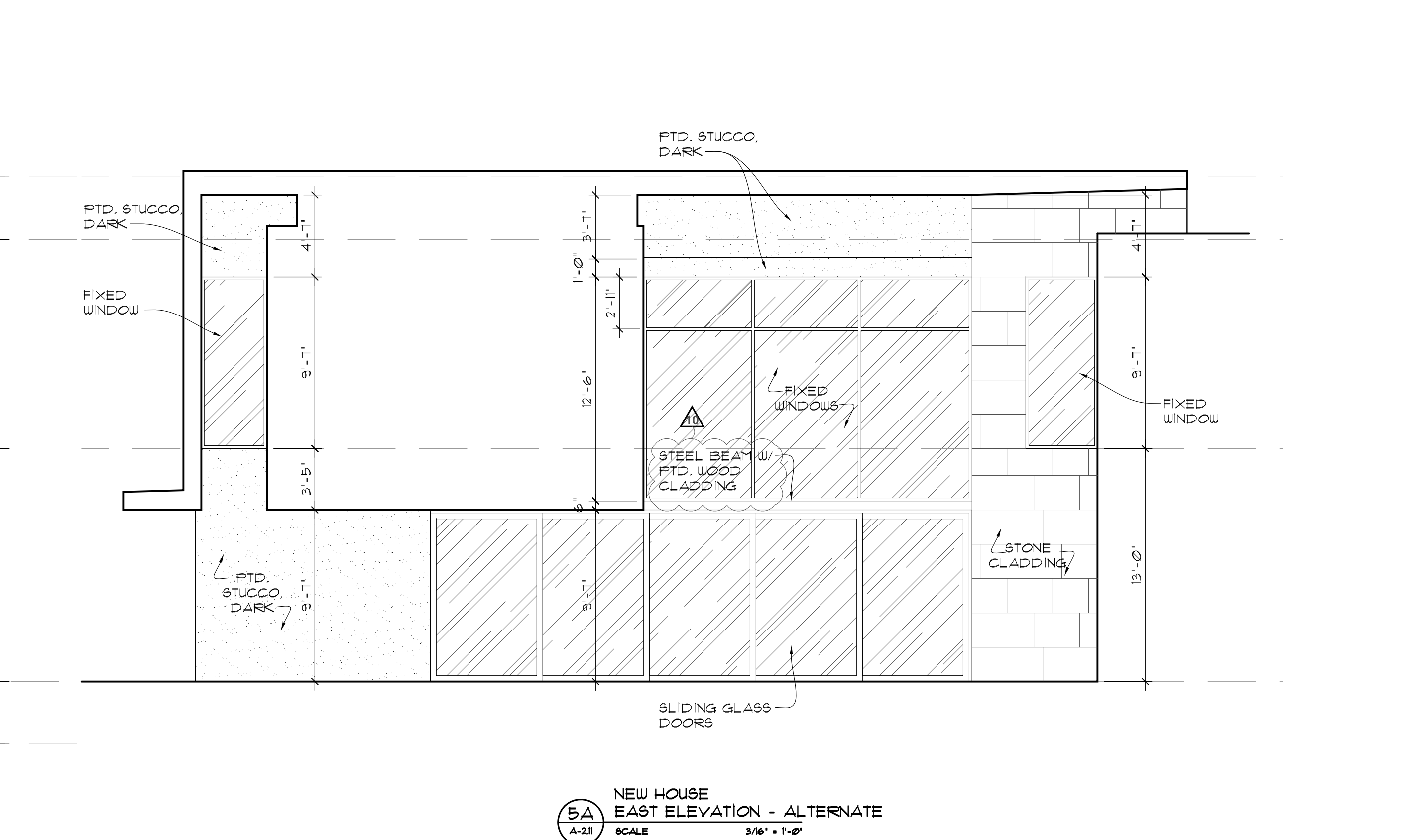
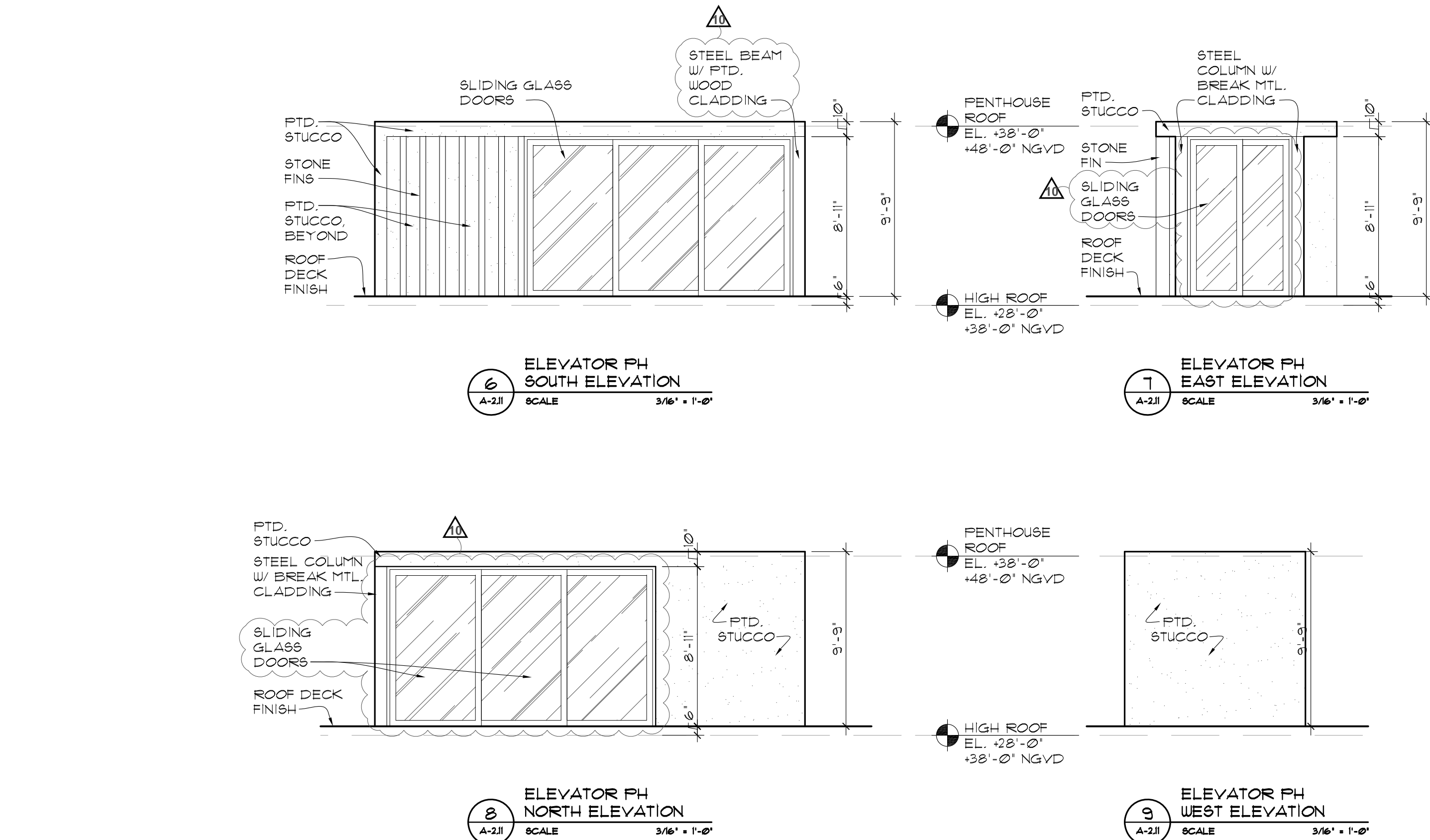
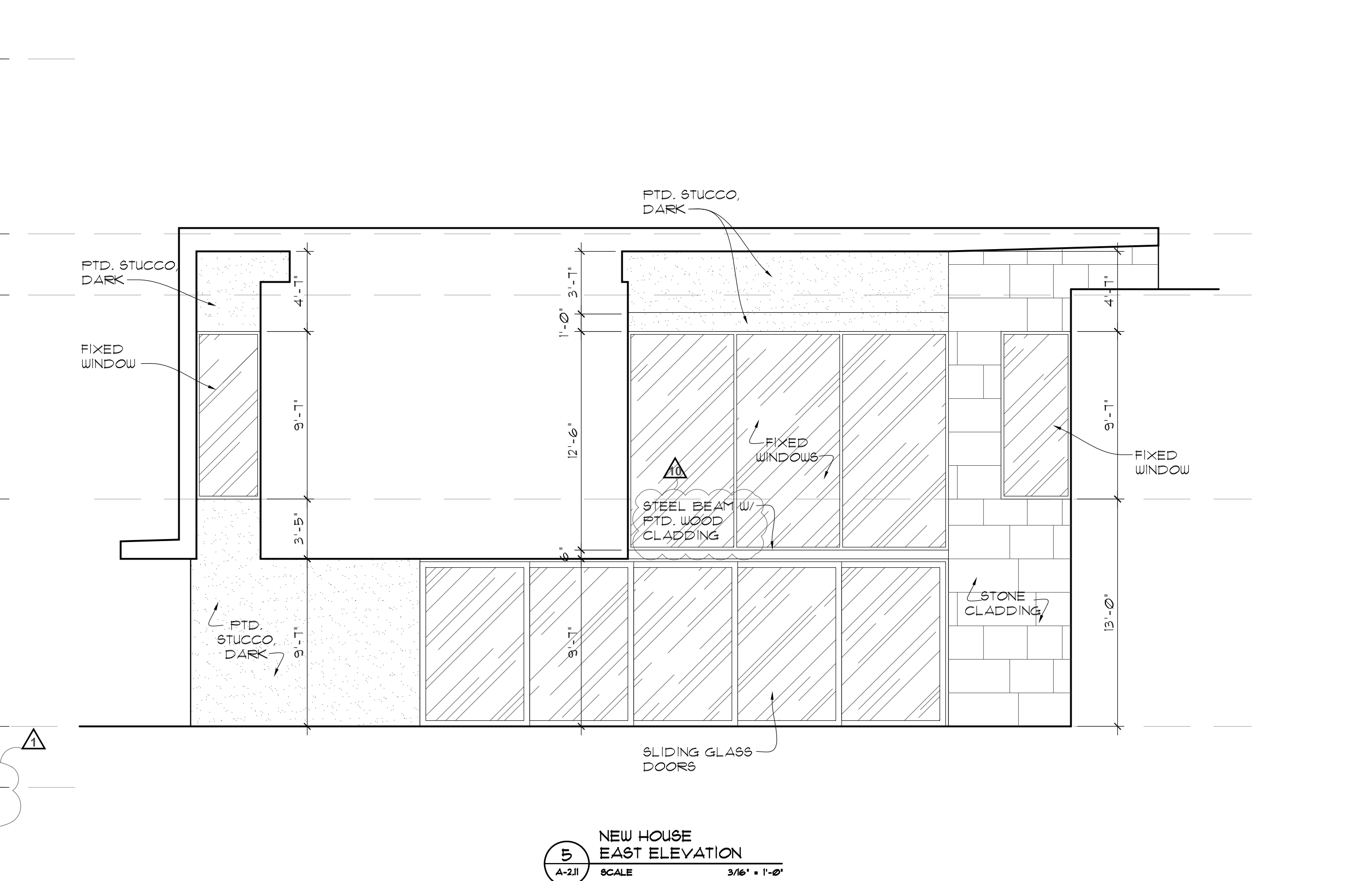
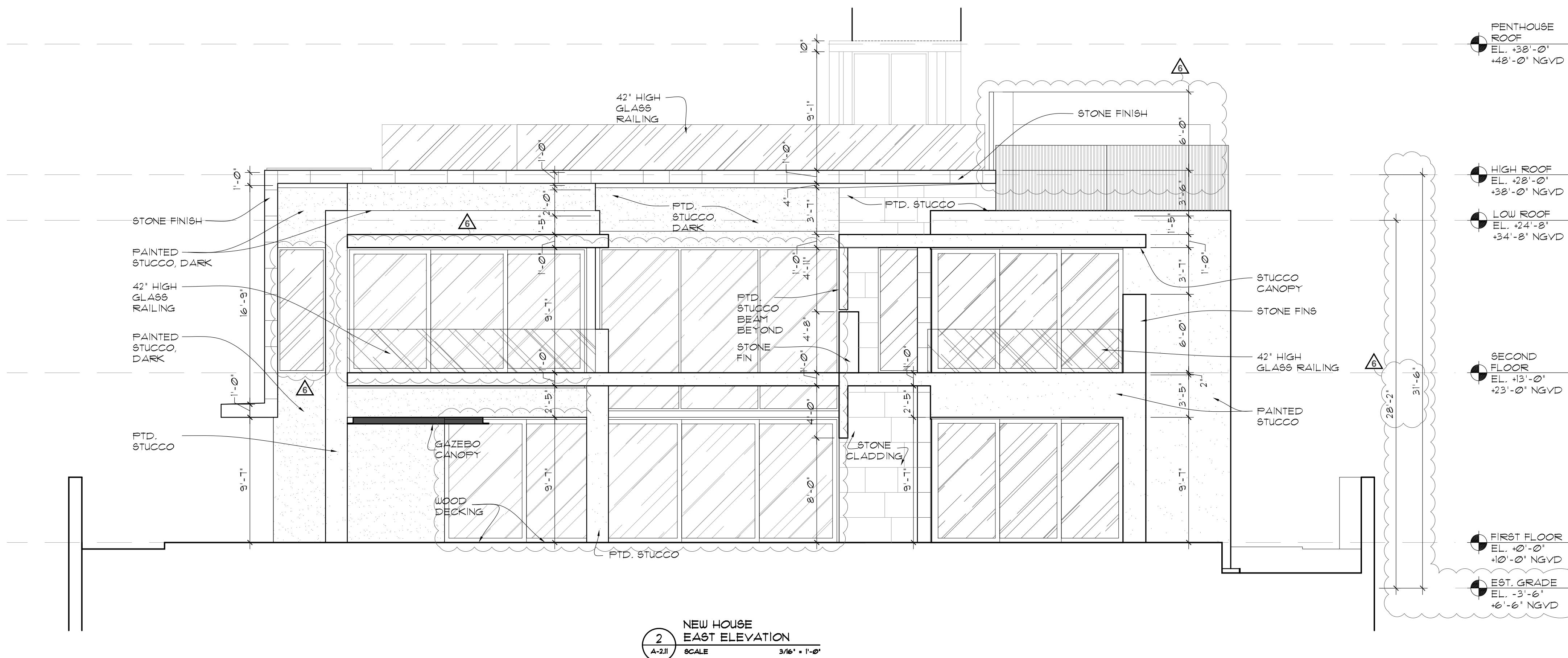
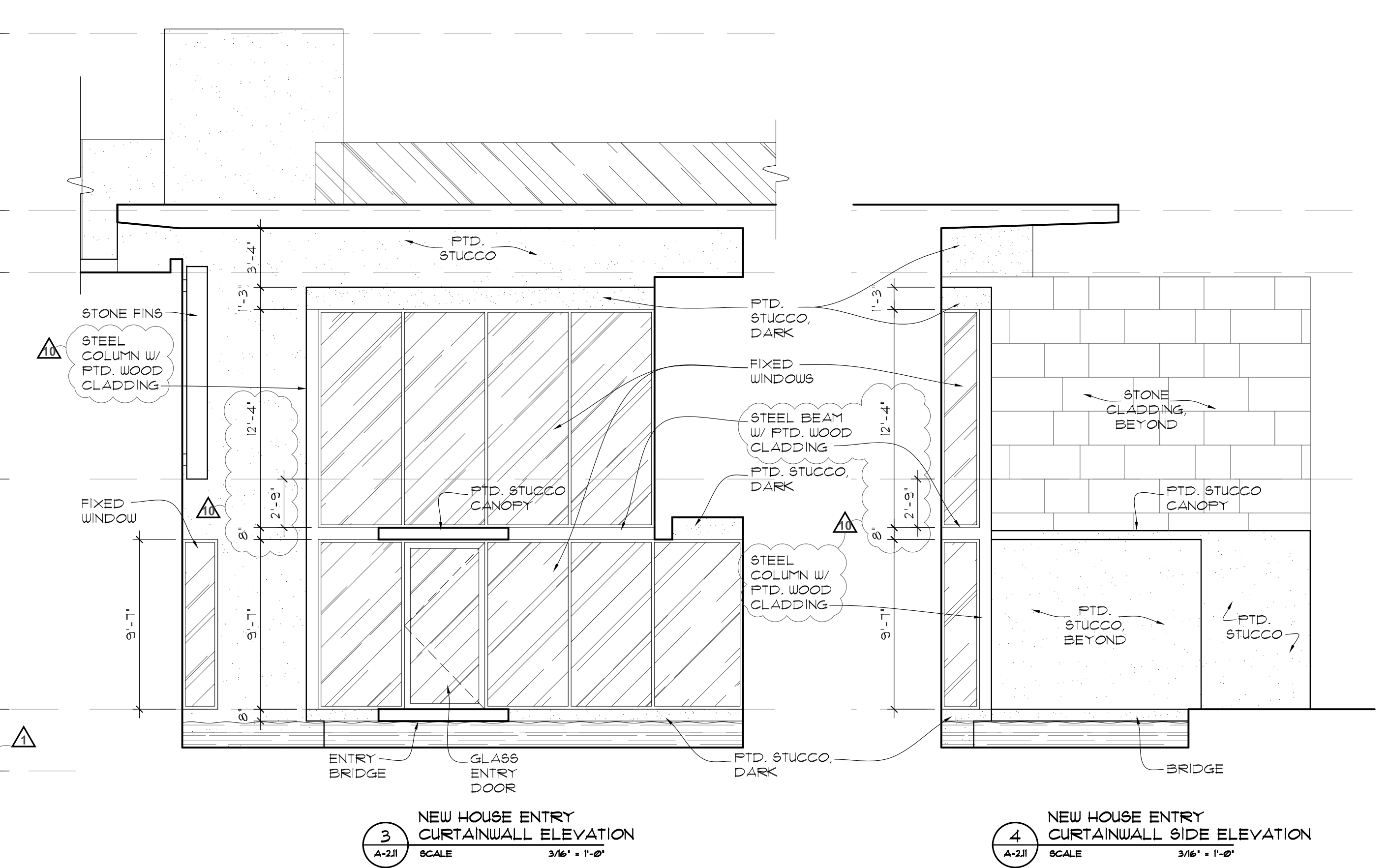
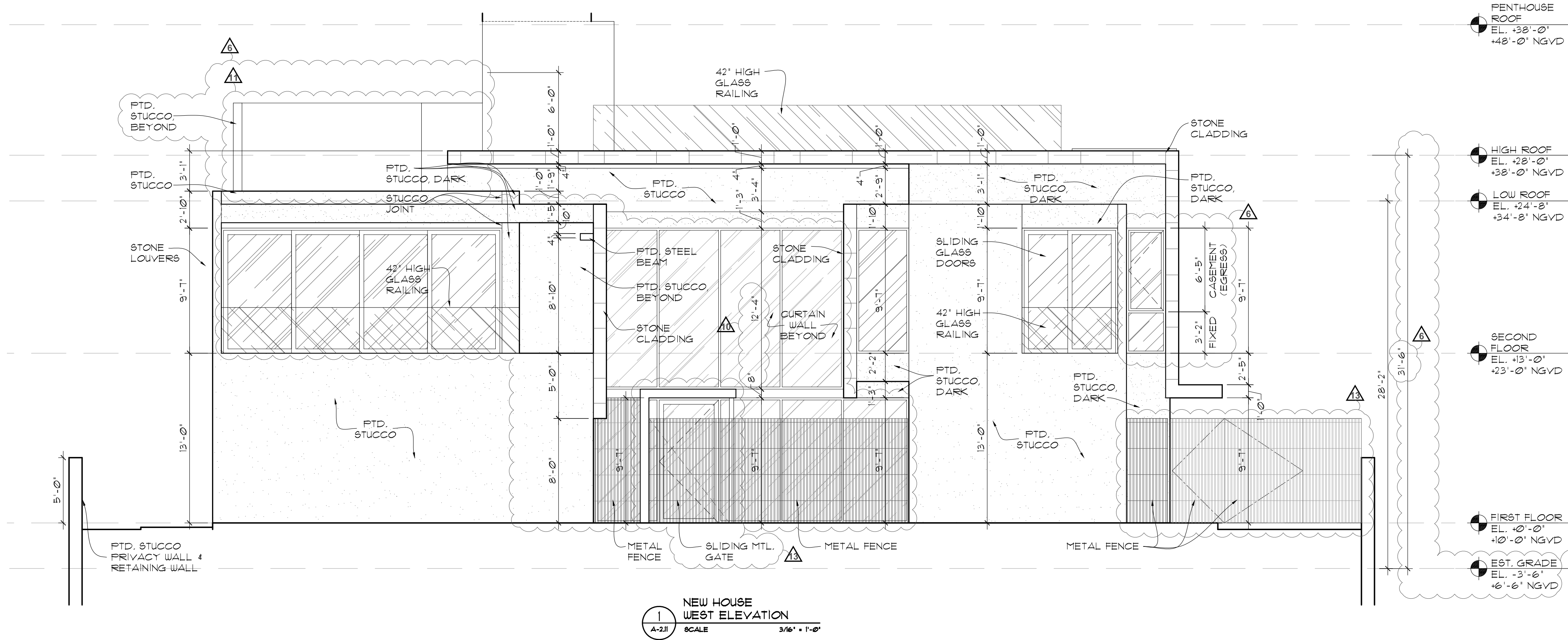
TOTAL GROSS AREA				
LOT AREA	40,190 SQFT			
NEW CONSTRUCTION				
NEW HOUSE	14,357 SQFT	7,291 SQFT	6,321 SQFT	145 SQFT
CABANA	727 SQFT	727 SQFT		
GYM	375 SQFT	375 SQFT		
BASEMENT	845 SQFT	845 SQFT		
ALTERATION				
DEGARMO HOUSE	6,610 SQFT	3,518 SQFT	3,092 SQFT	
IMPERVIOUS GROUND COVER	4,284 SQFT			
SLABS, WALKS, PAVERS	3,934 SQFT			
DRIVES	3,502 SQFT			
POOL DECK				
WATER FEATURES				
POOL	1,560 SQFT			
REFLECTING POND	299 SQFT			
LANDSCAPE AREA	13,855 SQFT			

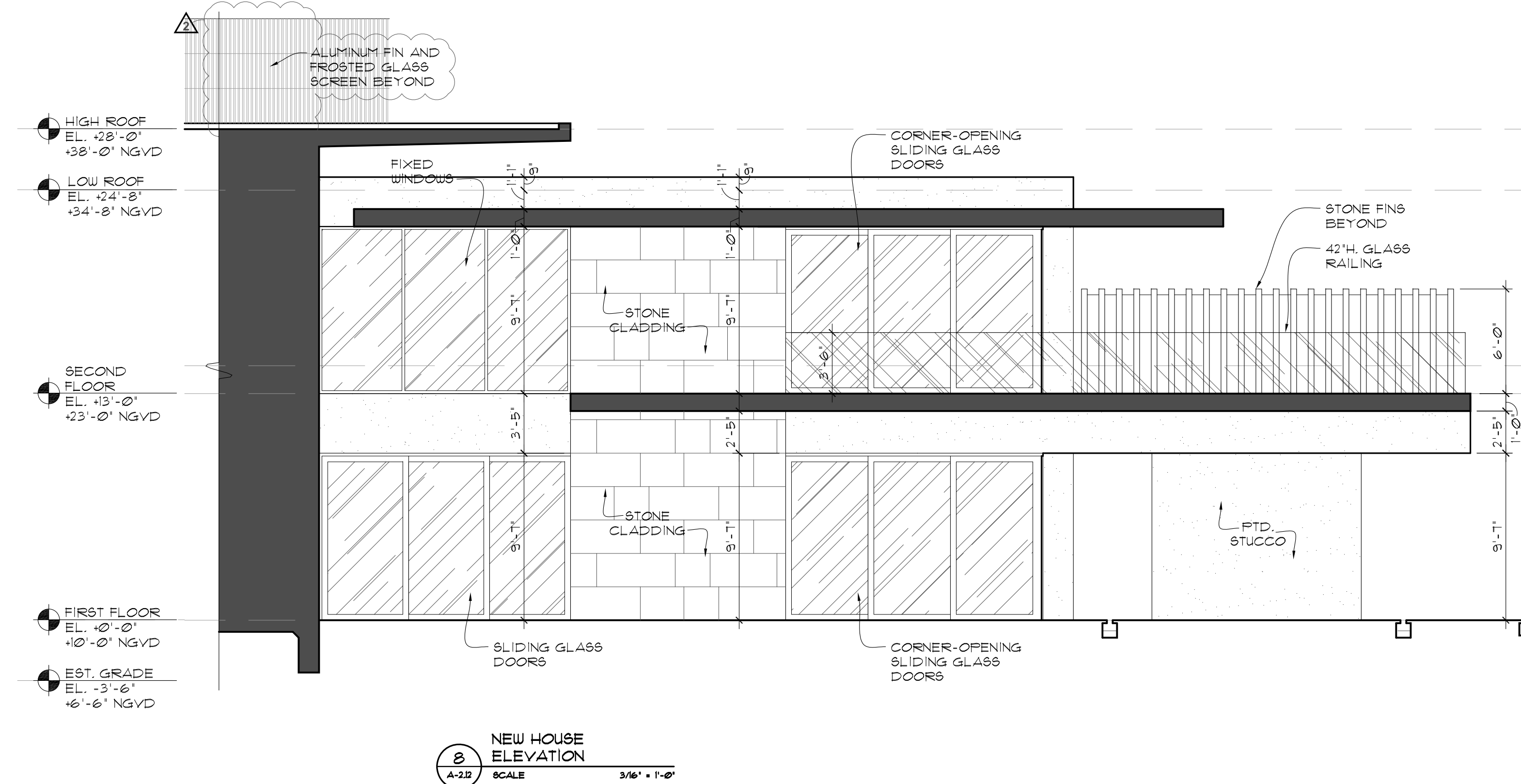
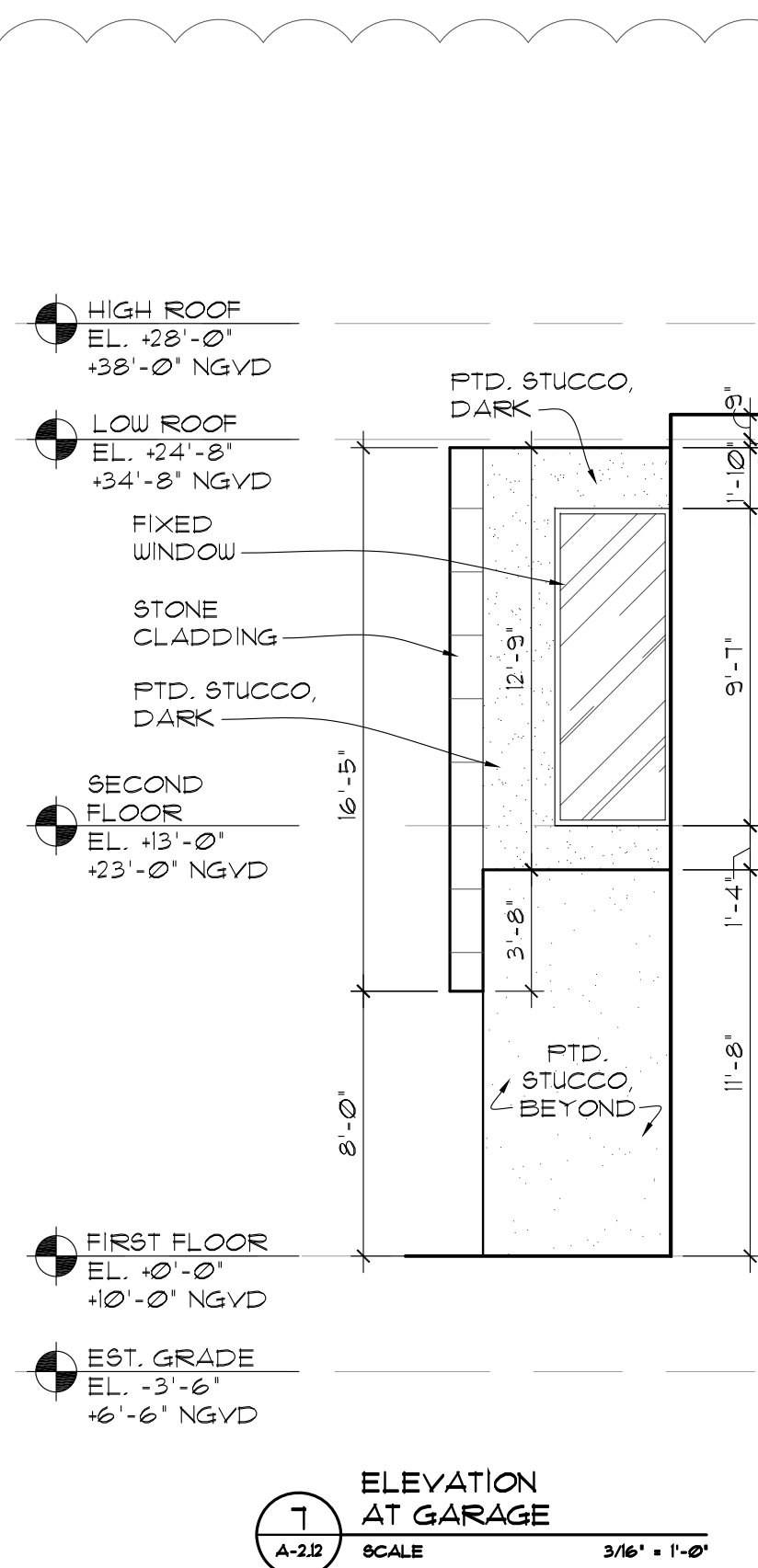
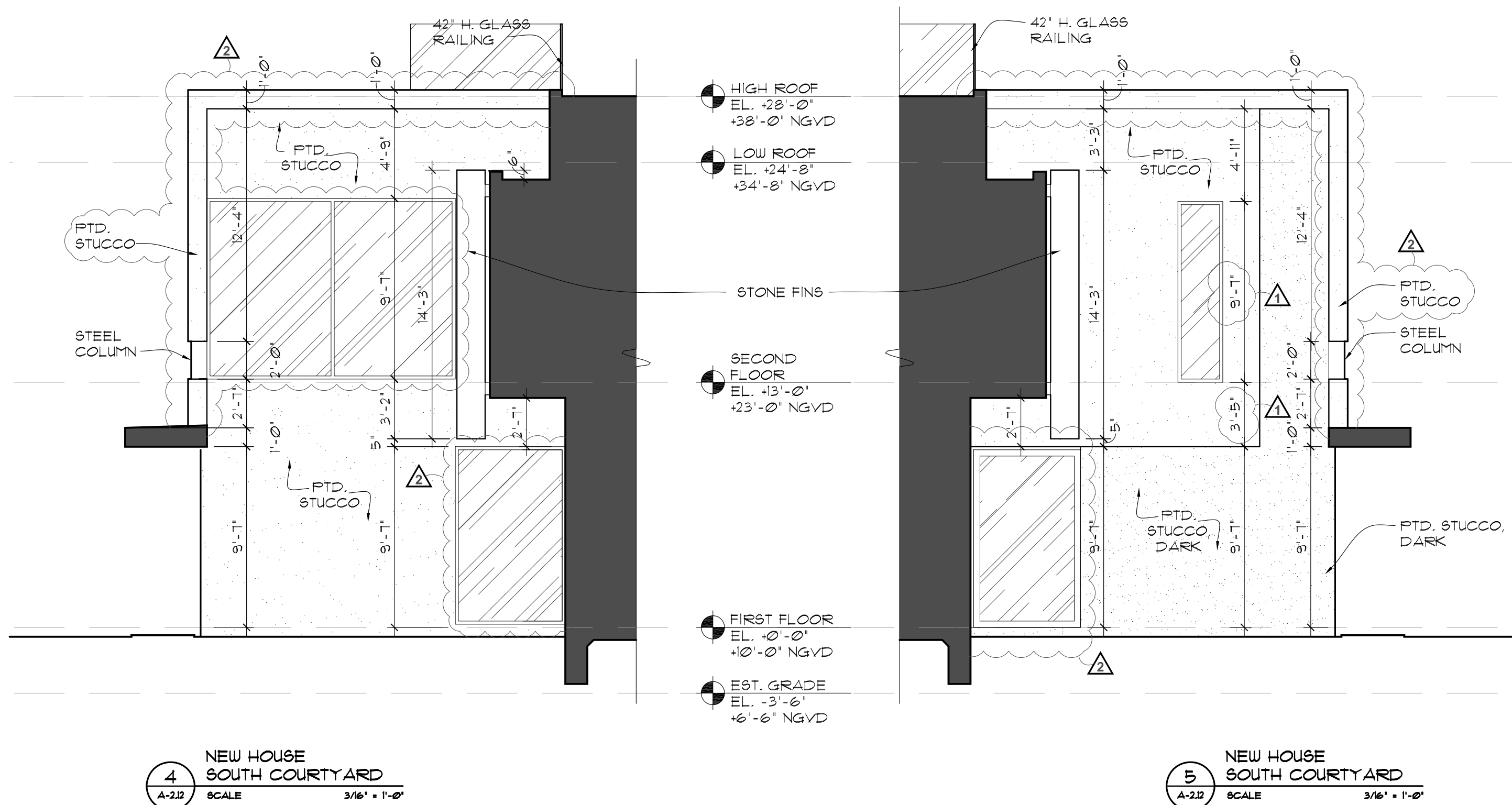
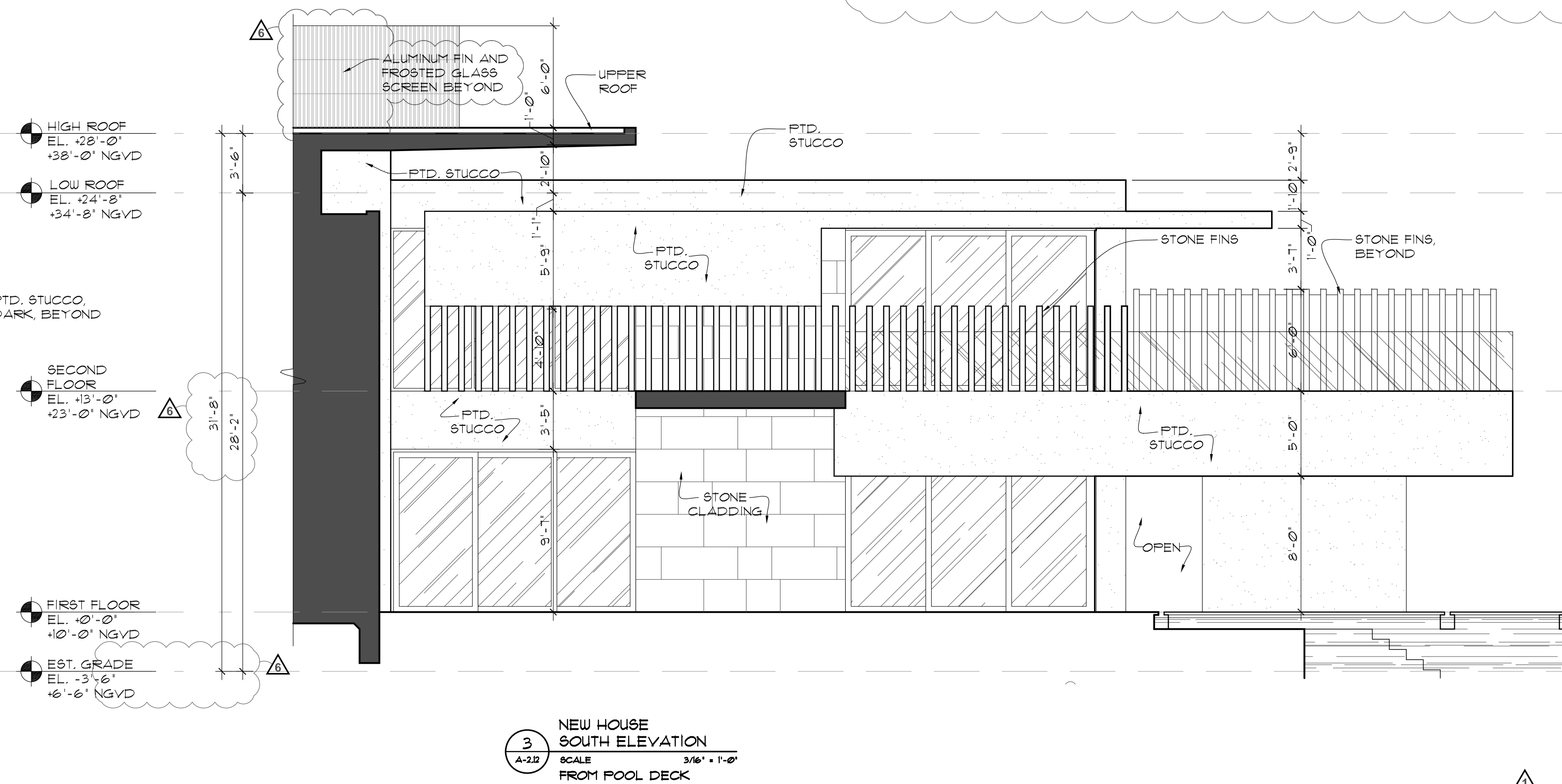
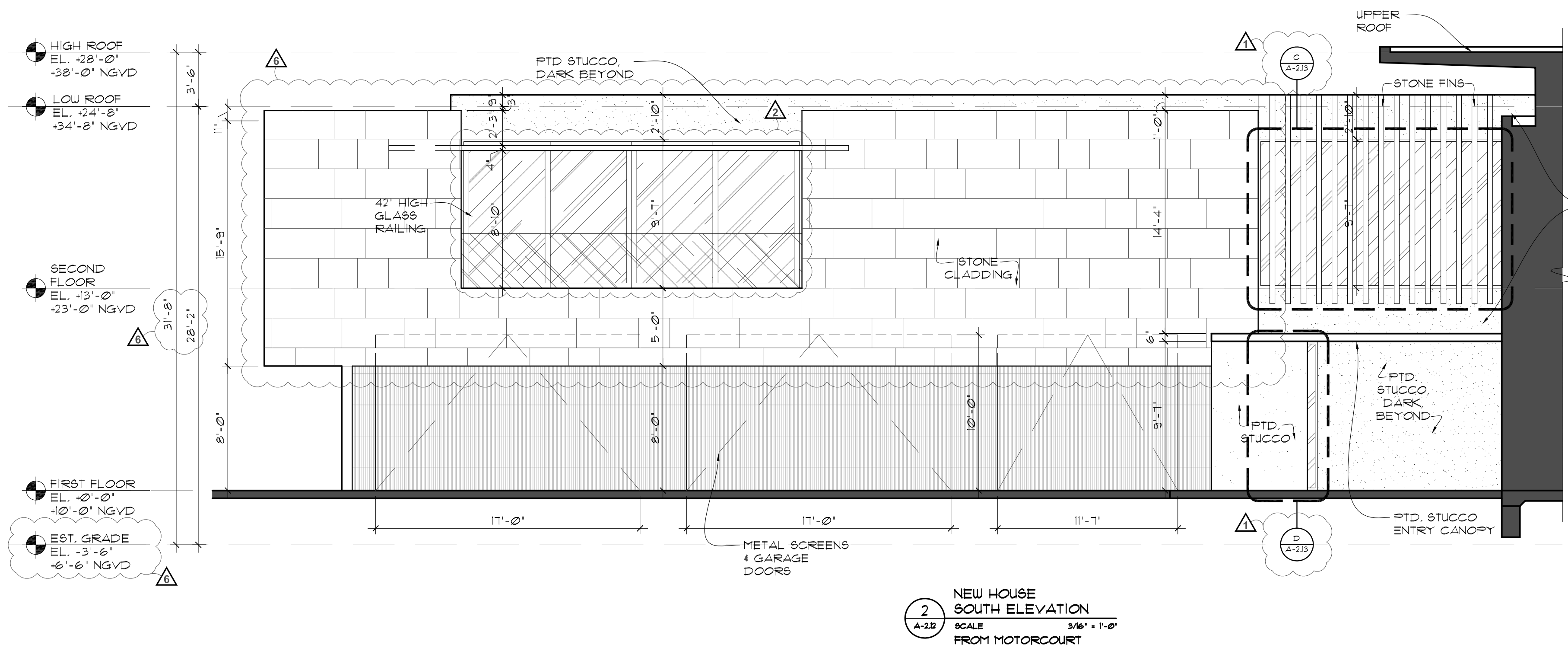
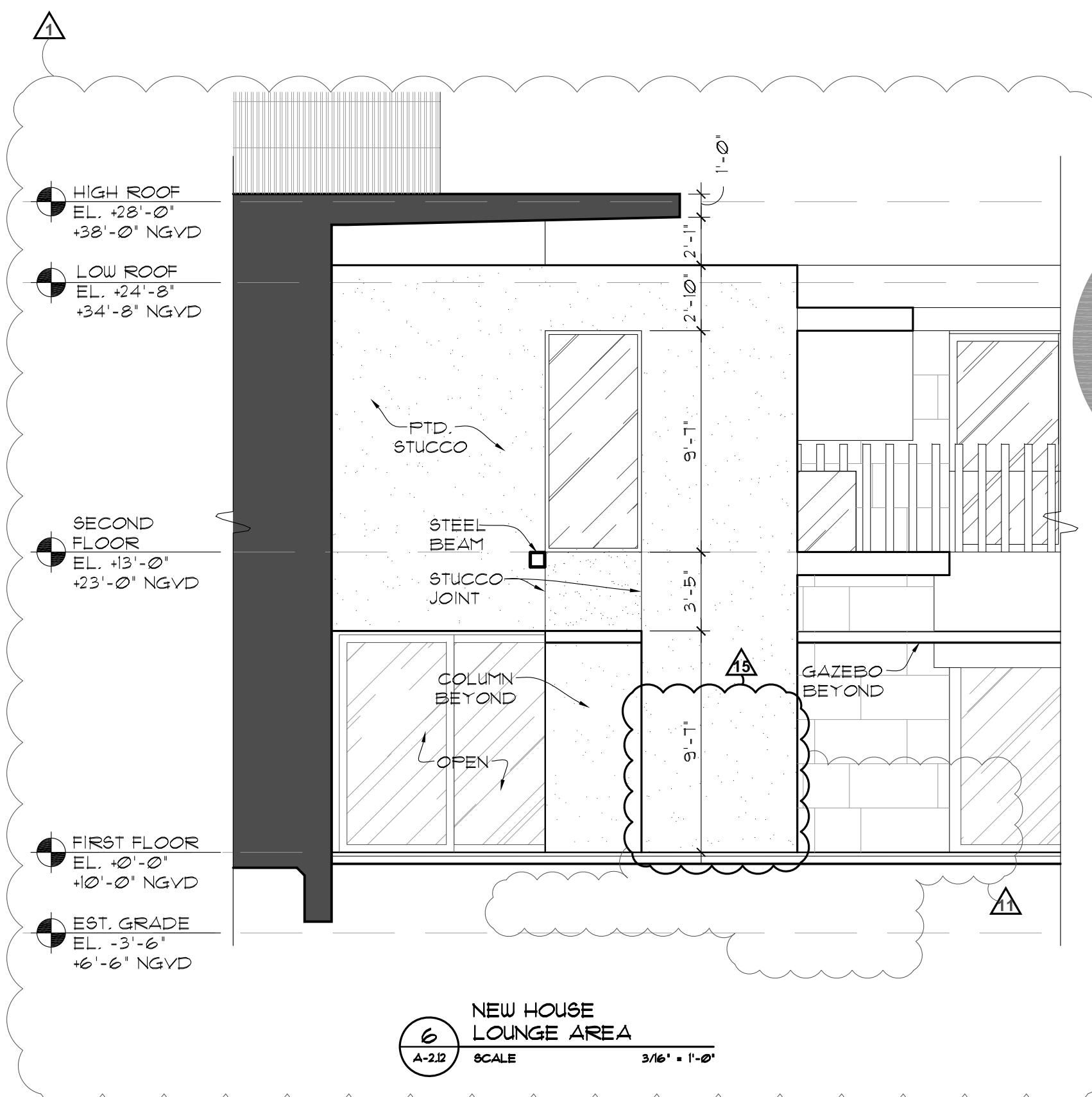
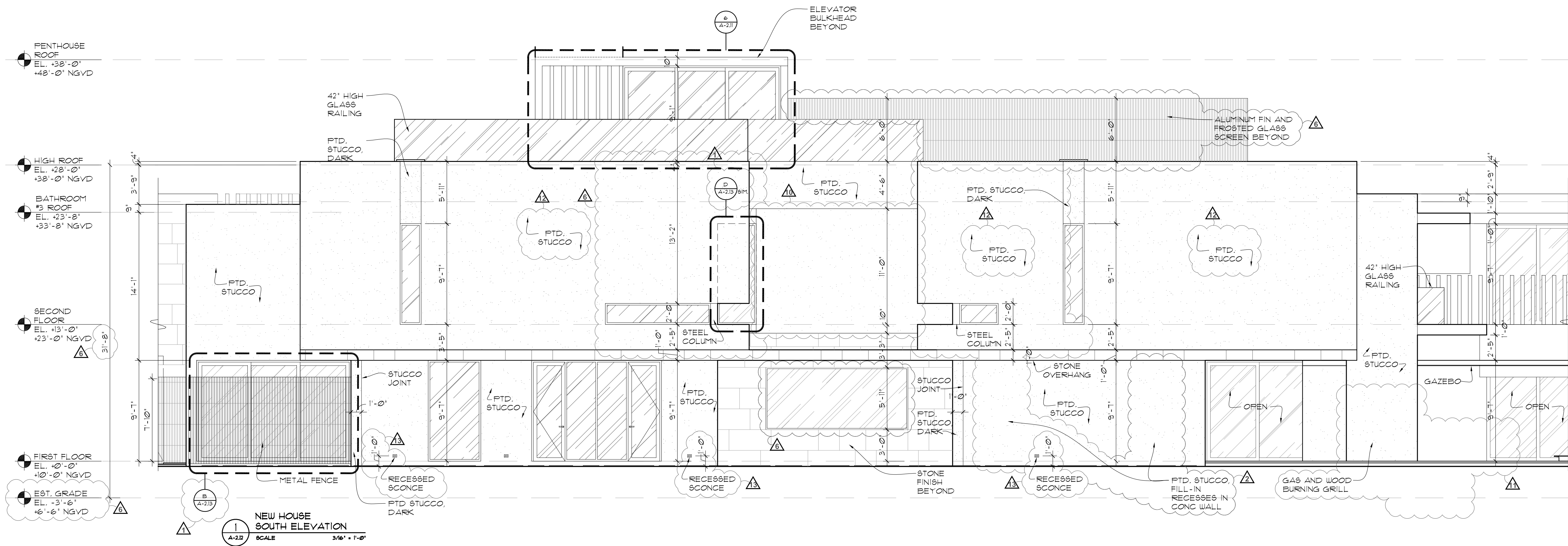


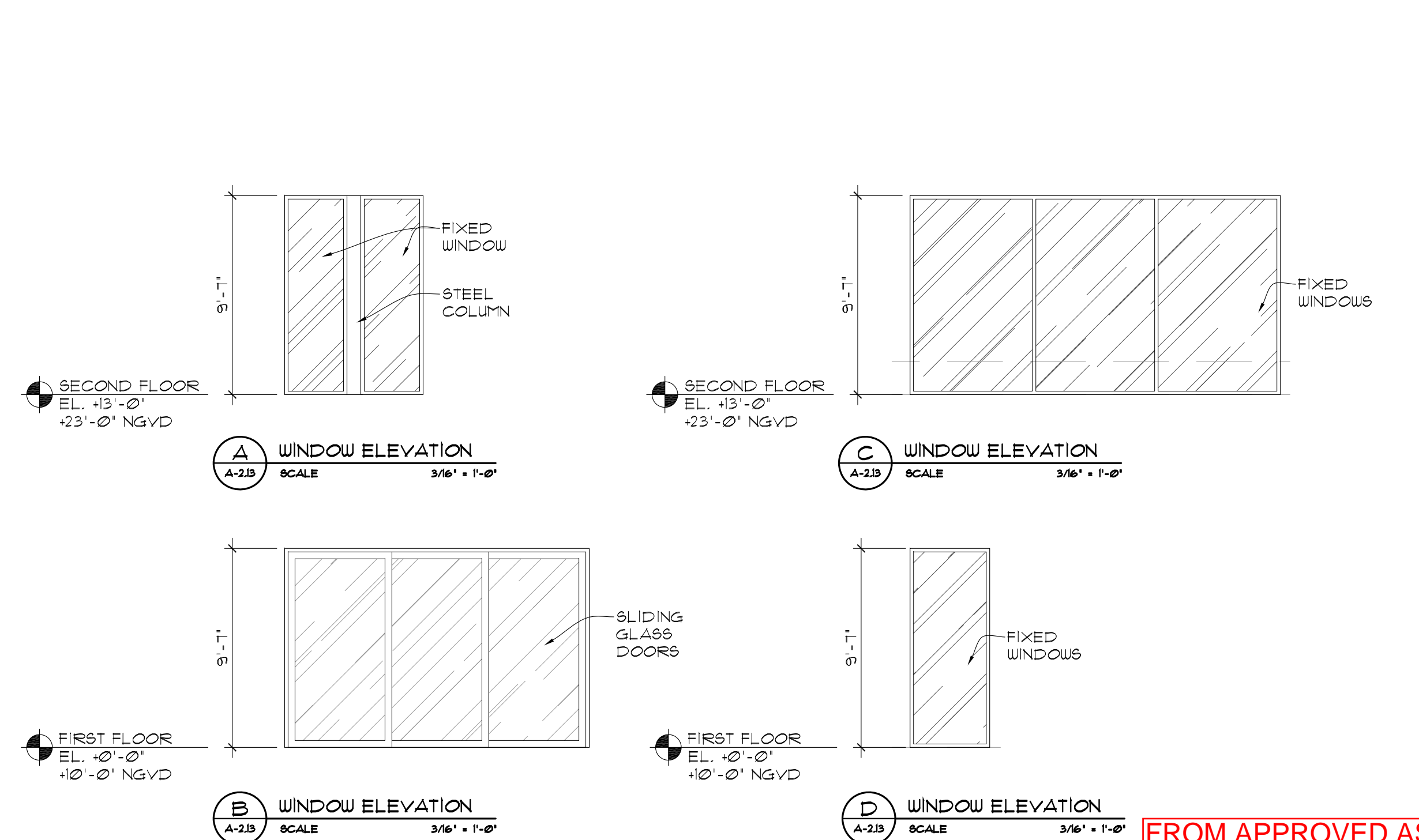
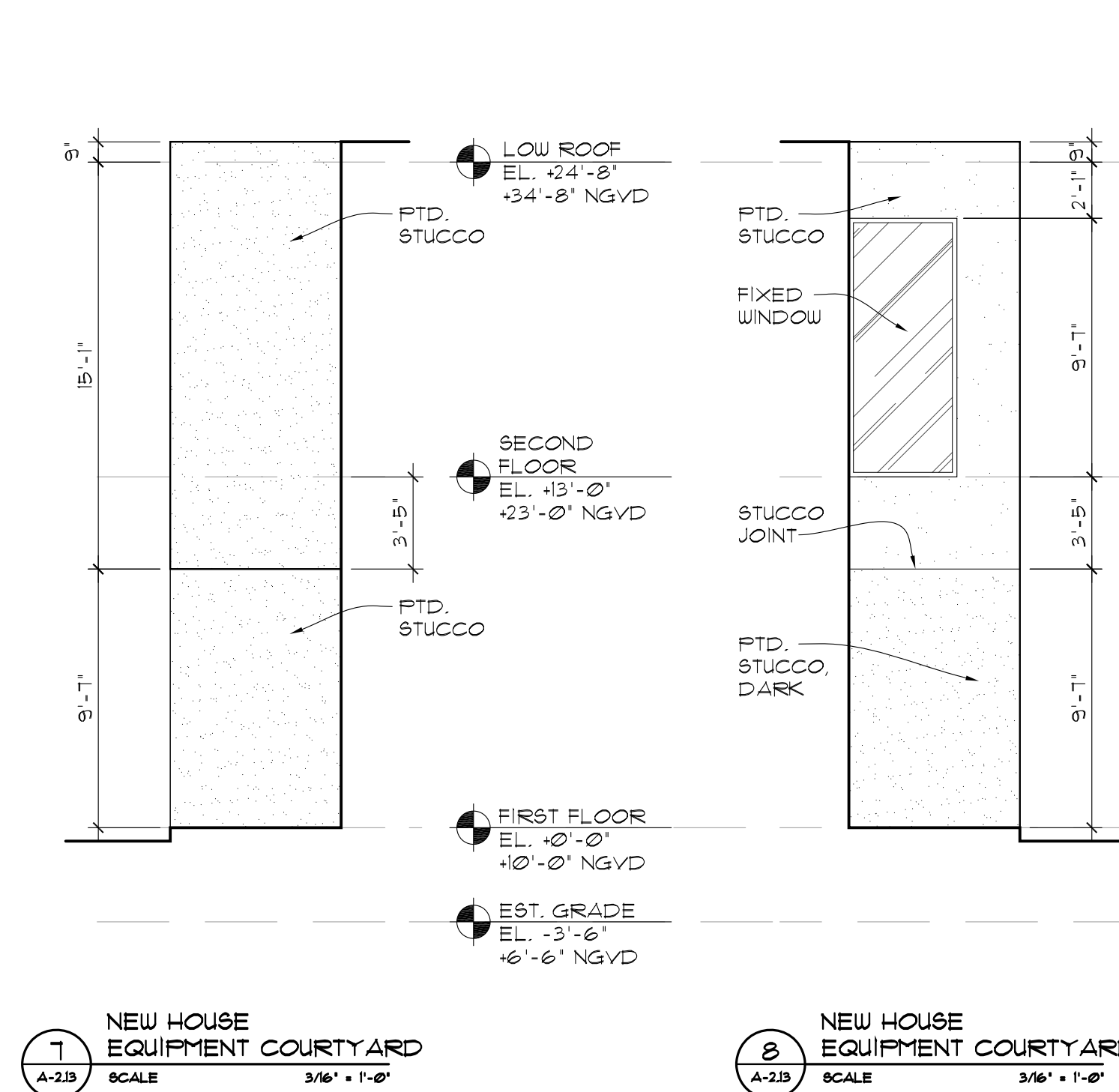
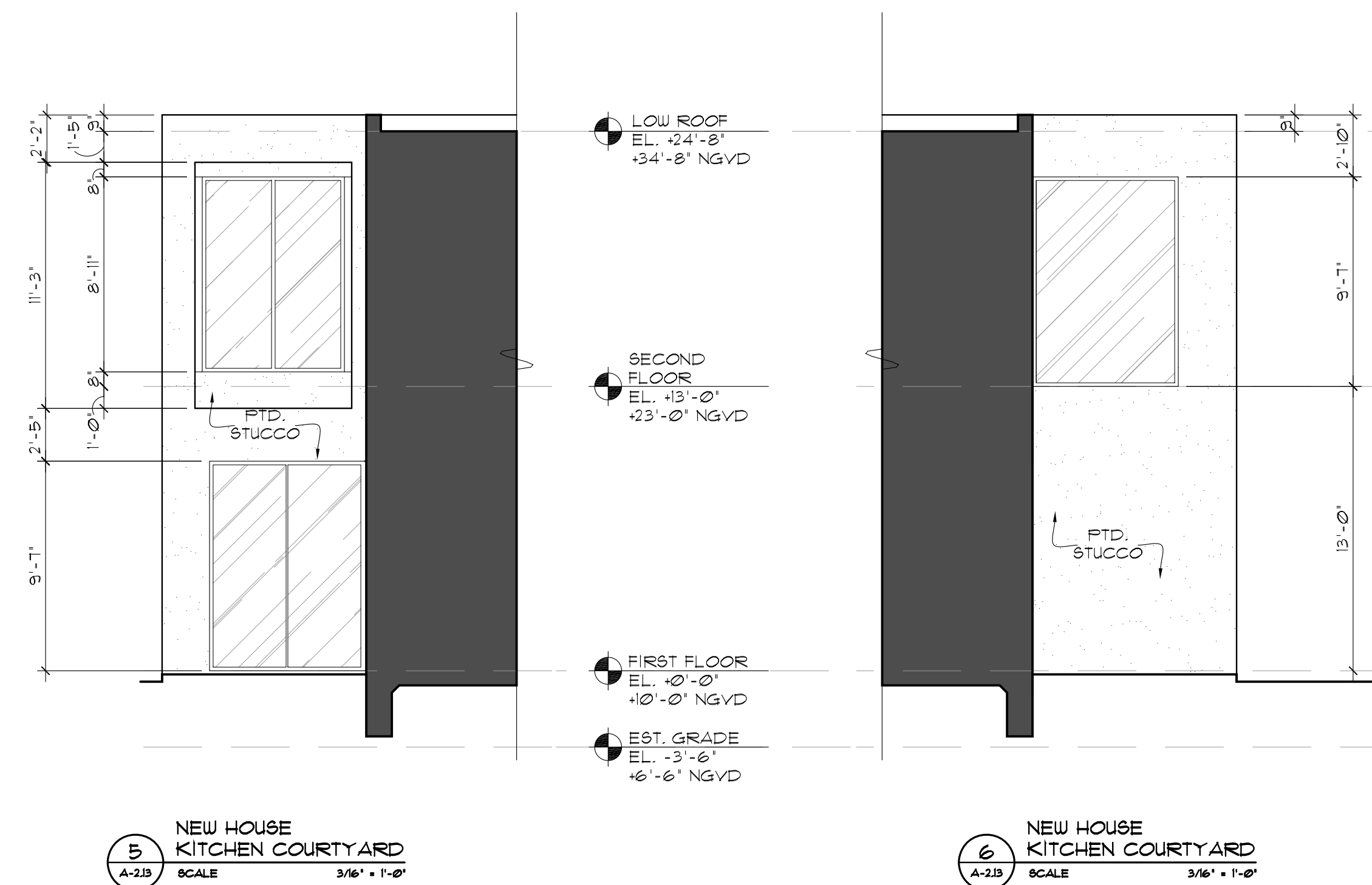
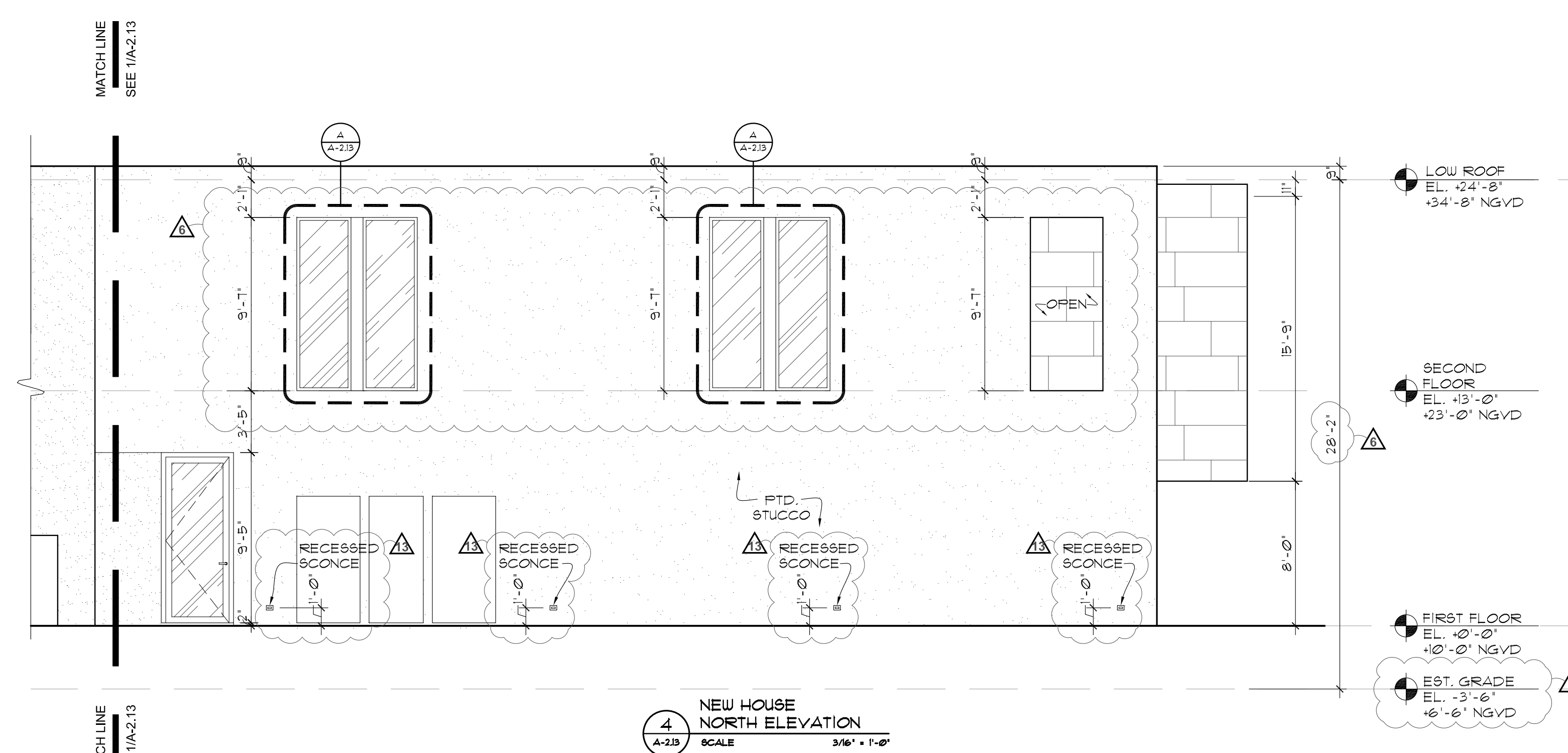
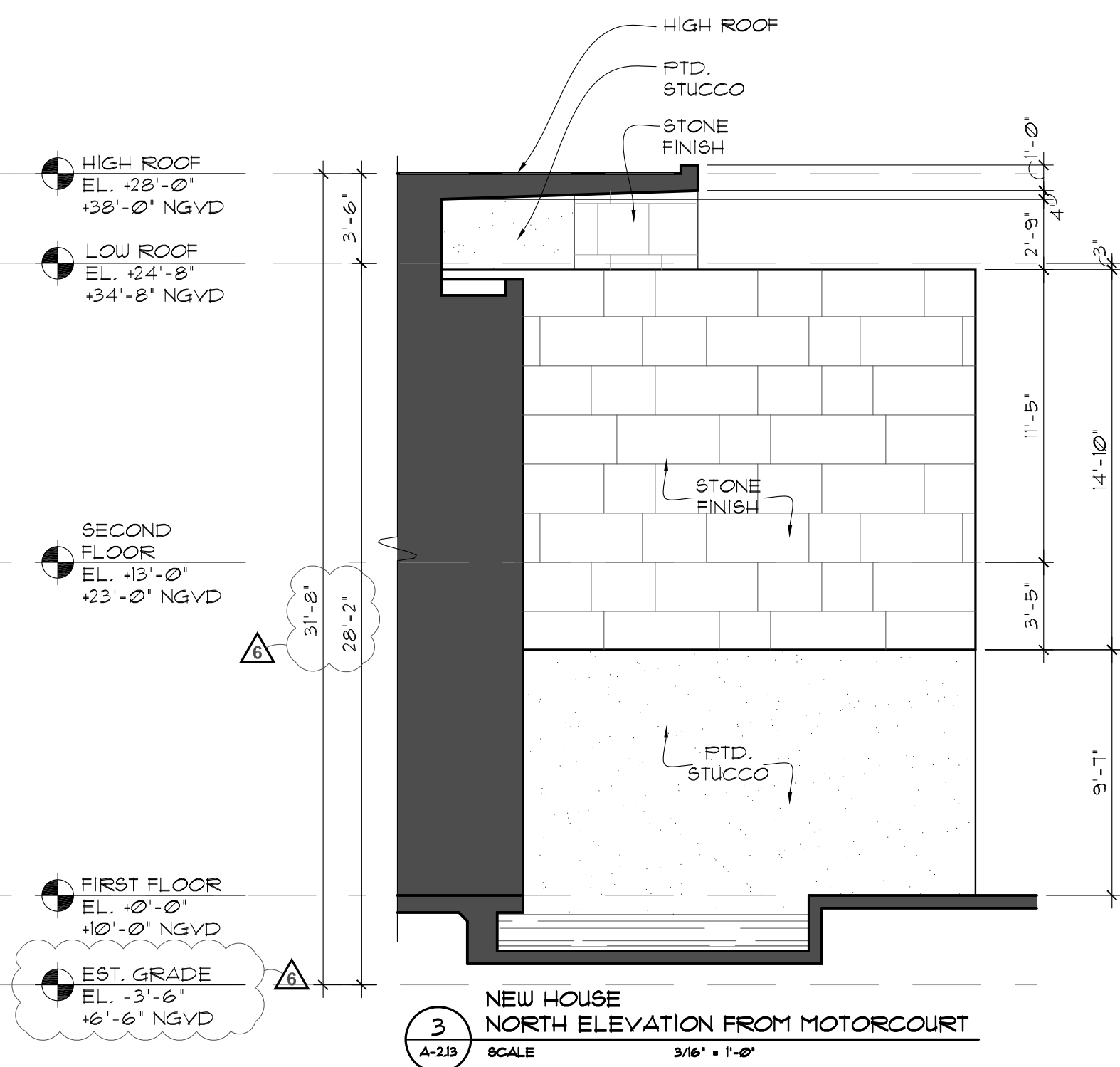
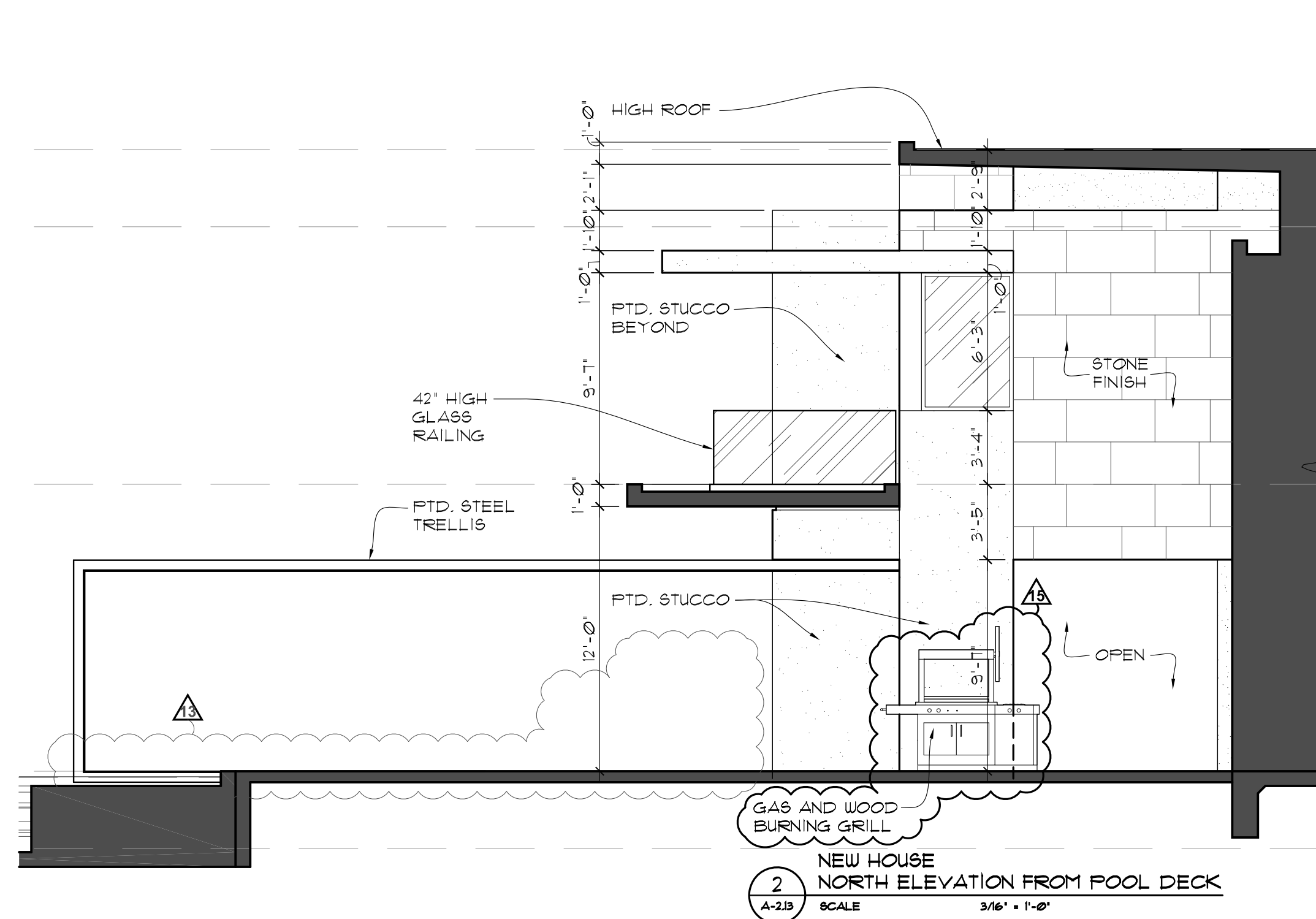
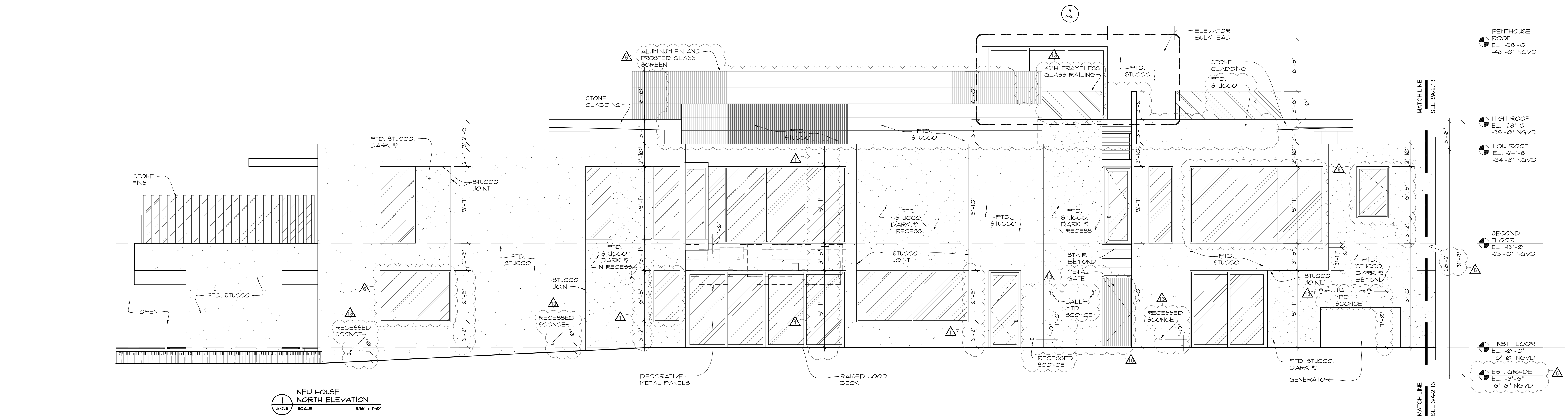
ROOF HEIGHT NOTE

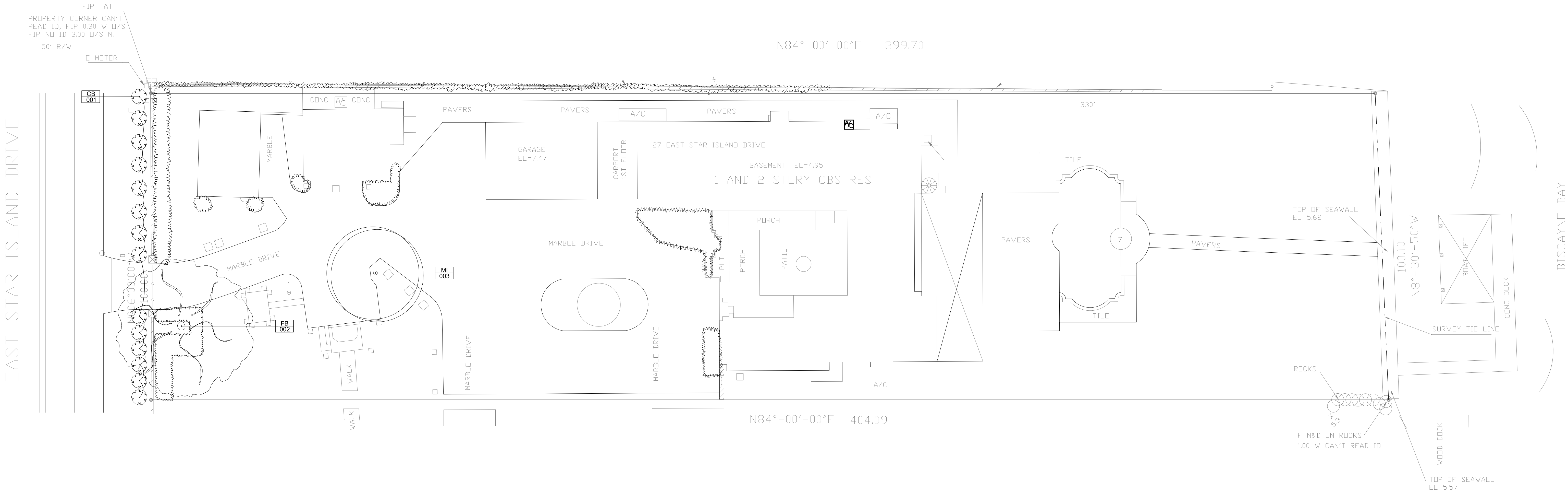
MAXIMUM ROOF HEIGHTS ARE MEASURED FROM ESTABLISHED GRADE; +6'-6" NGVD. SEE ROOF HEIGHTS ON 4/A-0.3 FOR ROOF ELEVATIONS RELATIVE TO ESTABLISHED GRADE.

A-1.32



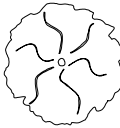
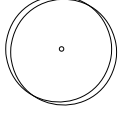







SCALE: 1/16" = 1'-0

PLANT SYMBOL LEGEND

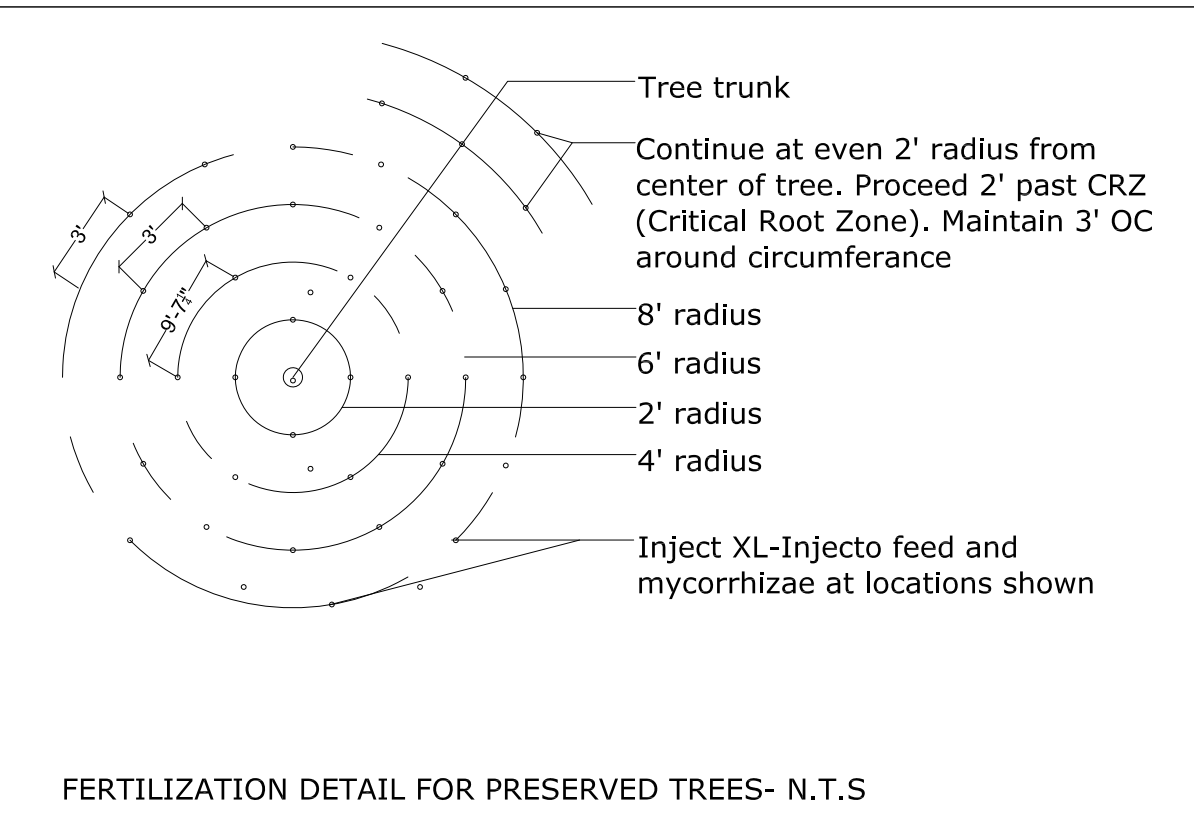
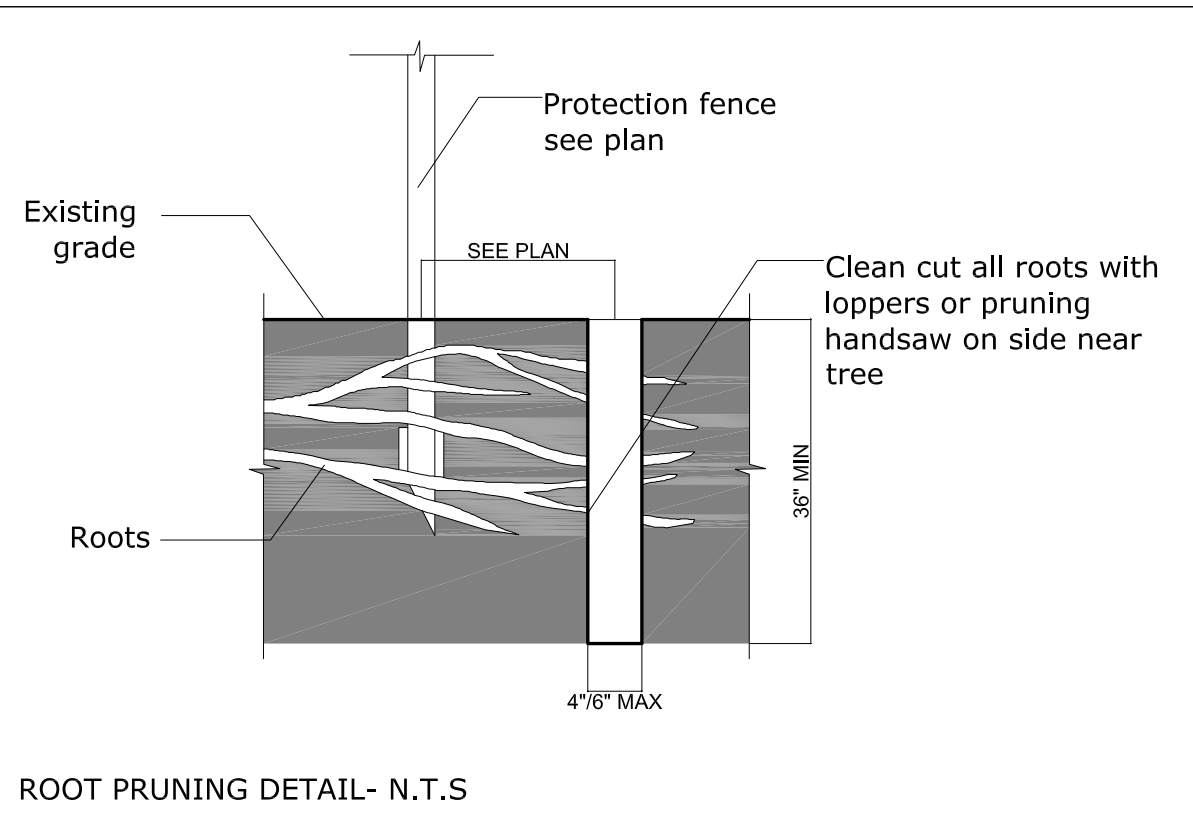
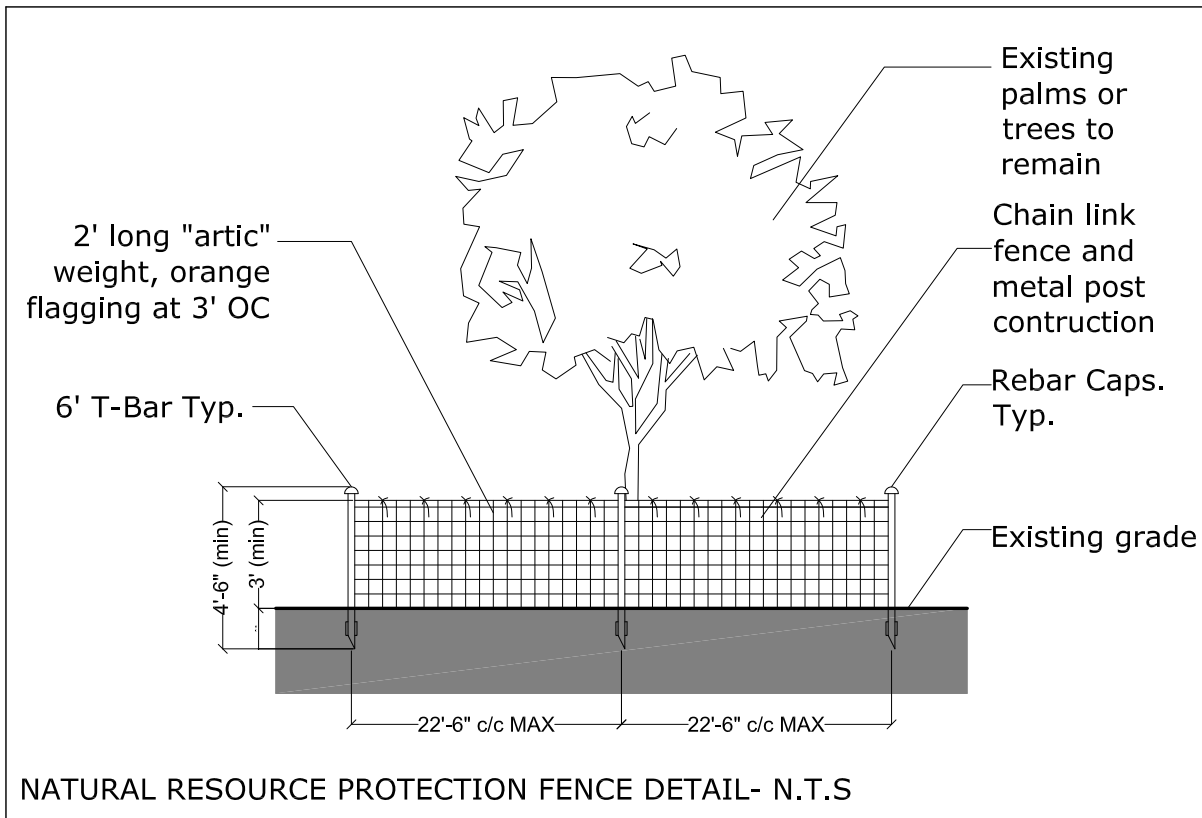
-  FICUS BENGHALENSIS
-  MAGNIFERA INDICA
-  CALOPHYLLUM BRASILIENSE

DISPOSITION TAG LEGEND

	EXISTING TREE TO BE REMOVED
--	-----------------------------

27 STAR ISLAND - TREE DISPOSITION SCHEDULE							
SYM	NUMBER	SCIENTIFIC NAME	COMMON NAME	HEIGHT	SPREAD	DBH	DISPOSITION
CB	1	Calophyllum brasiliense	Brazilian Beautyleaf	14'	4'	3"	REMOVE
FB	2	Ficus benghalensis	Banyan Fig	60'	50'	72"	REMOVE
MI	3	Magnifera indica	Mango Tree	30'	25'	21"	REMOVE

EXISTING TREES AND RELOCATION PLAN DETAILS



FOR THE FIRM:
GERARDO JAVIER DELGADO
R.L.A. 0001574
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date:
02-27-2015

revised:
03/06/19:
AS BUILTS

sheet no.

L.100

TREE DISPOSITION
PLAN

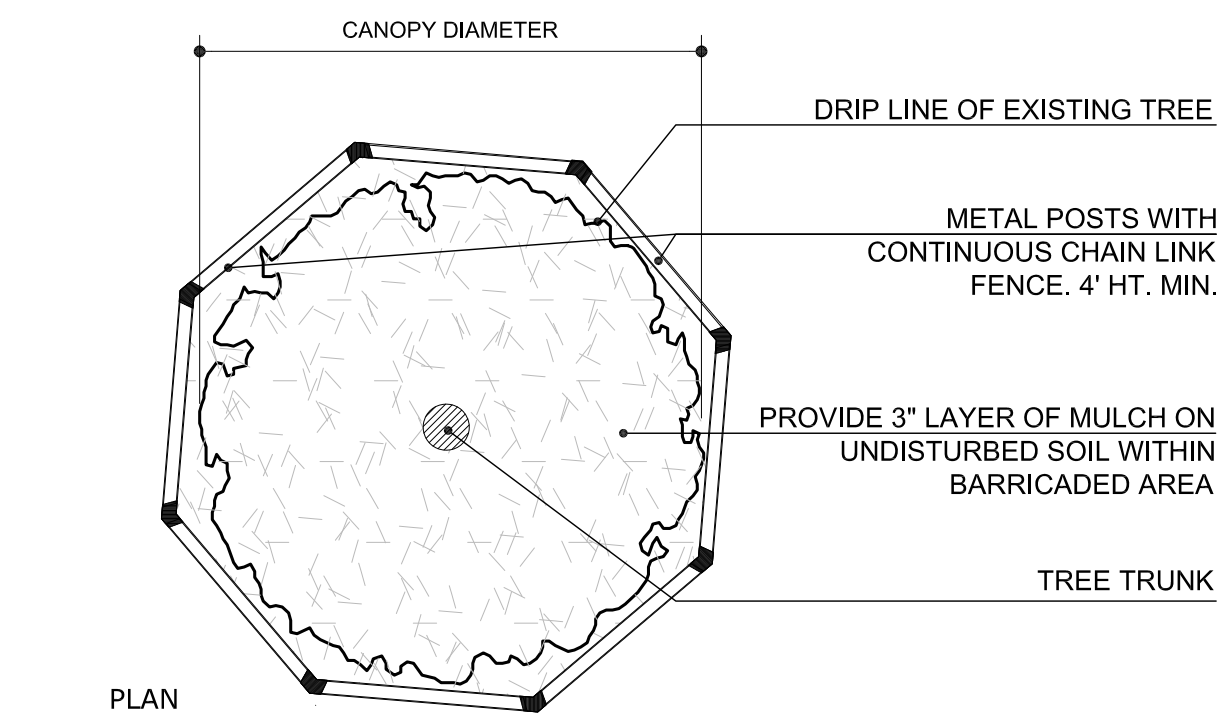
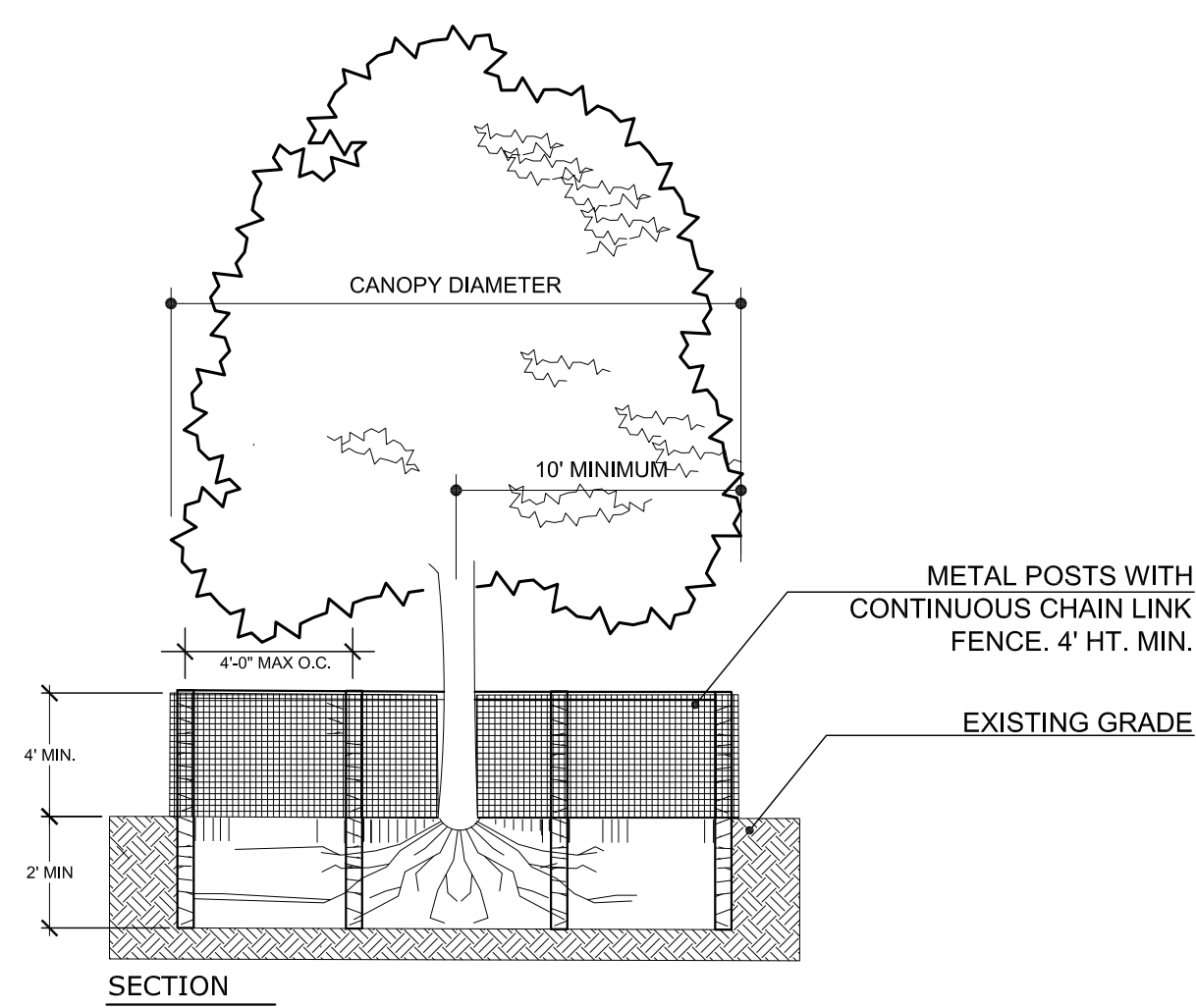
FROM APPROVED AS-BUILTS
FOR REFERENCE ONLY

RENOVATION AND ADDITION:
27 STAR ISLAND DRIVE
MIAMI BEACH, FL 33137

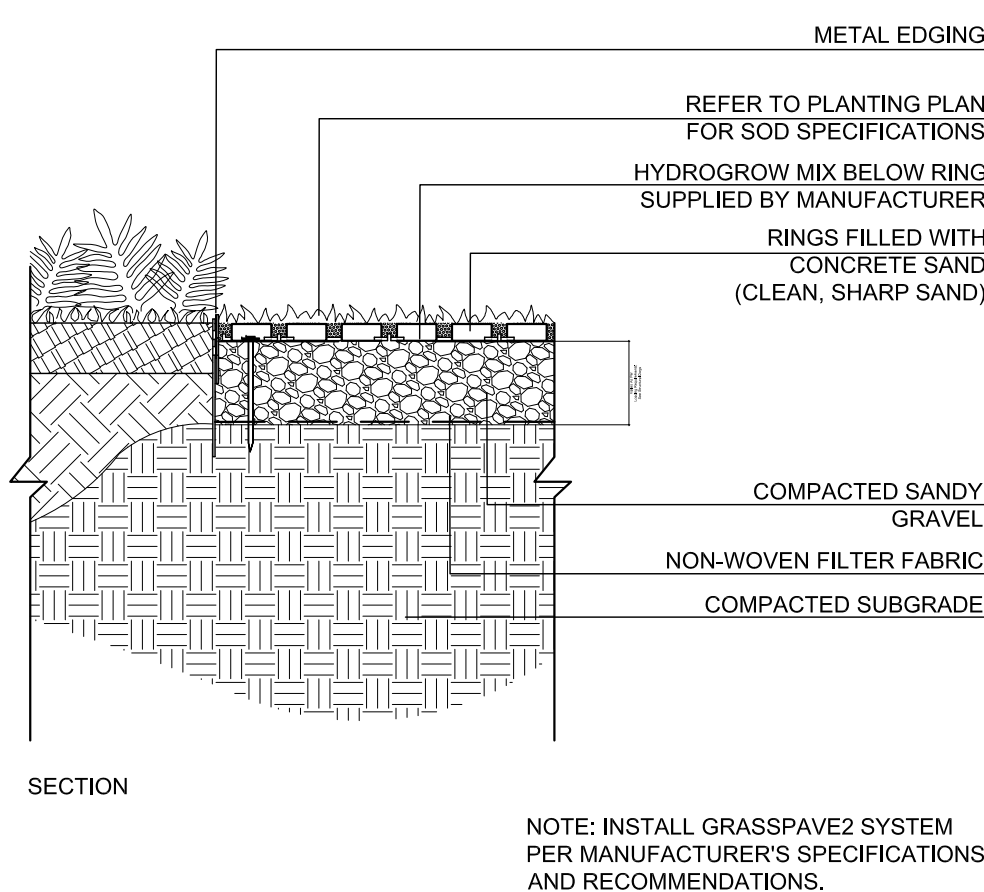
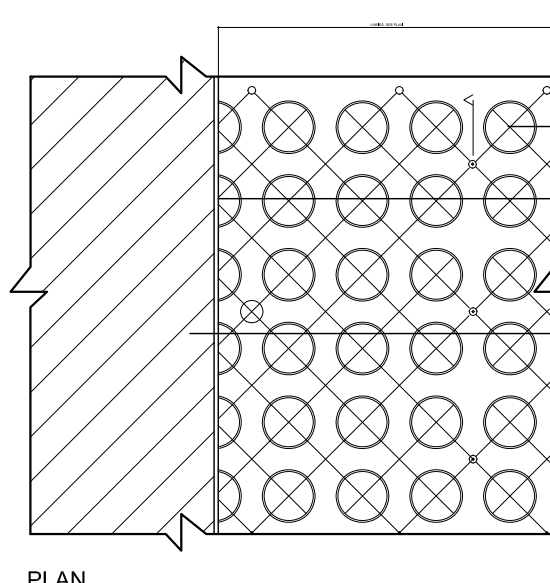
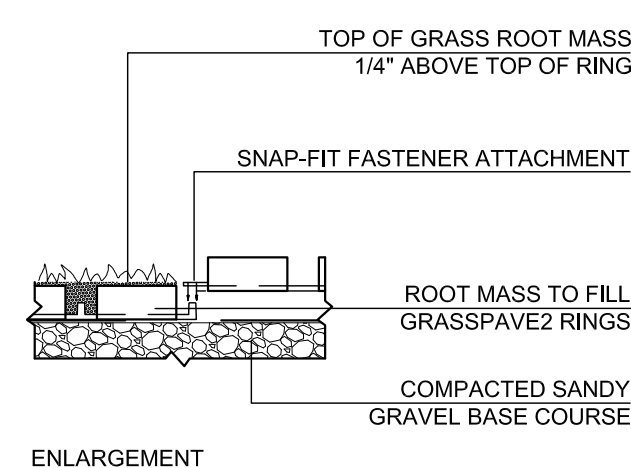
7580 NE 4th CT #105
MIAMI, FL 33138

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garden design
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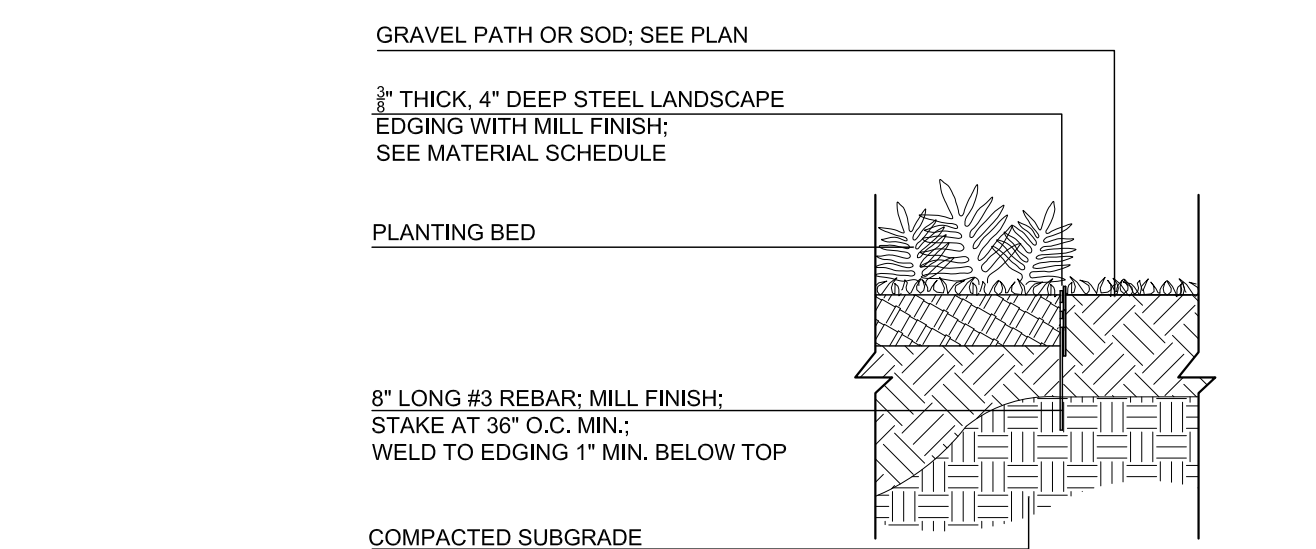
Phone: 305.576.6702
Fax: 305.576.6703



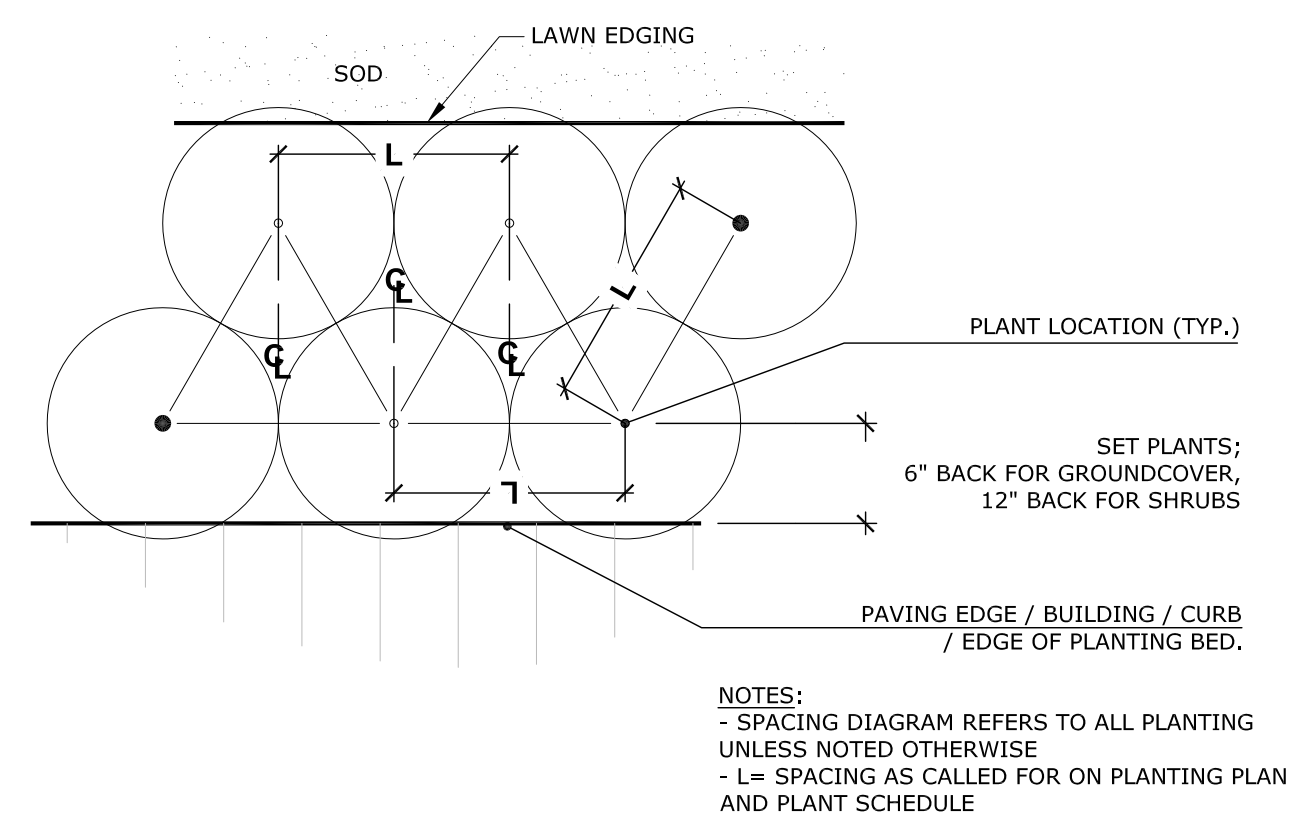
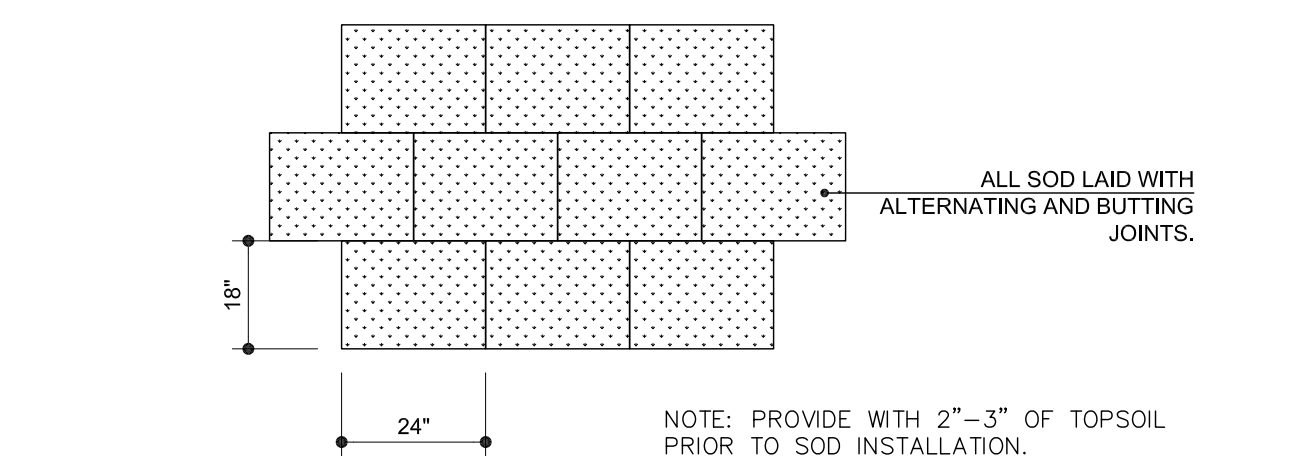
TREE / PALM PROTECTION DETAIL
SCALE: NTS



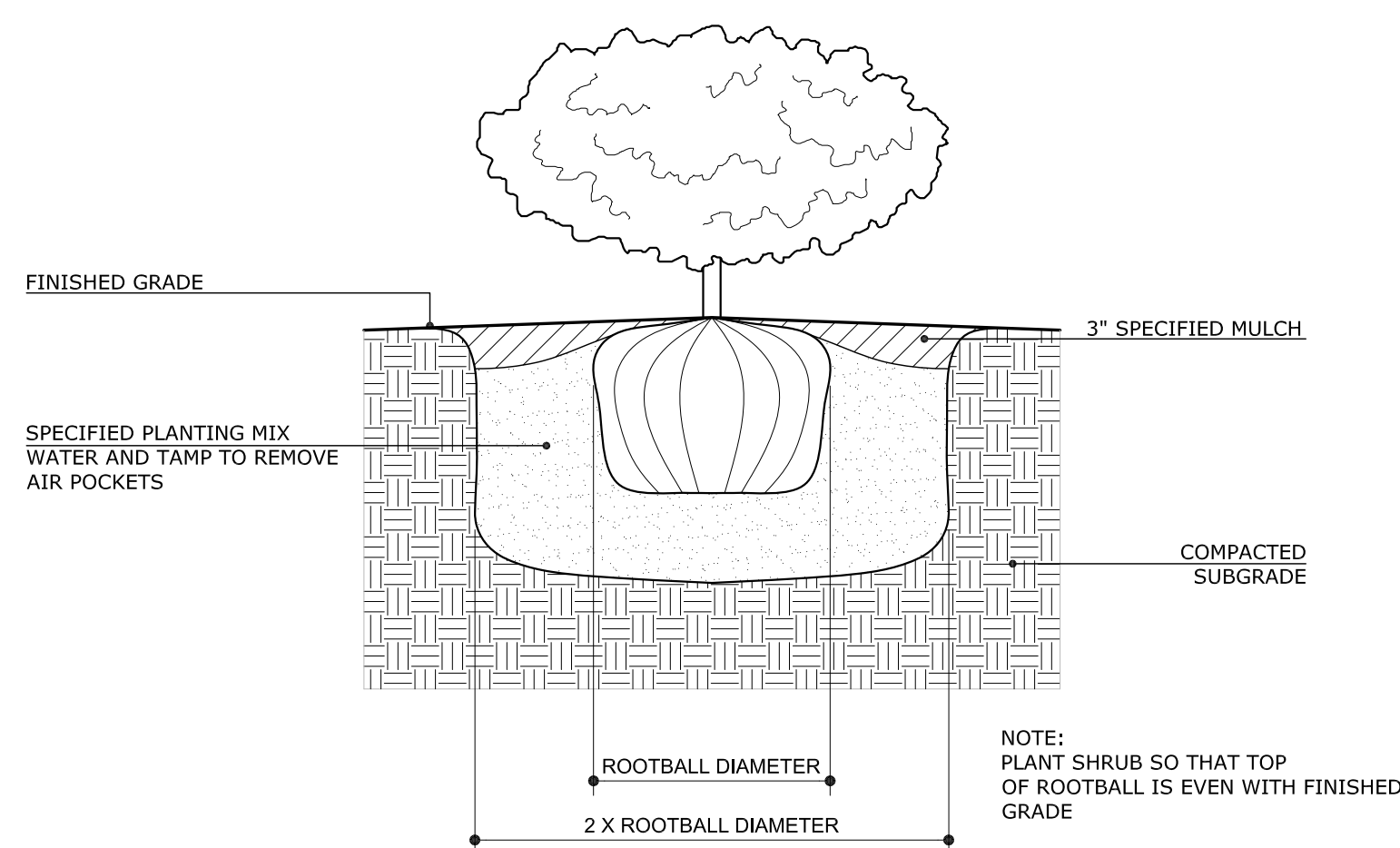
GRASSPAVE DETAIL, TYPE 1
SCALE: NTS



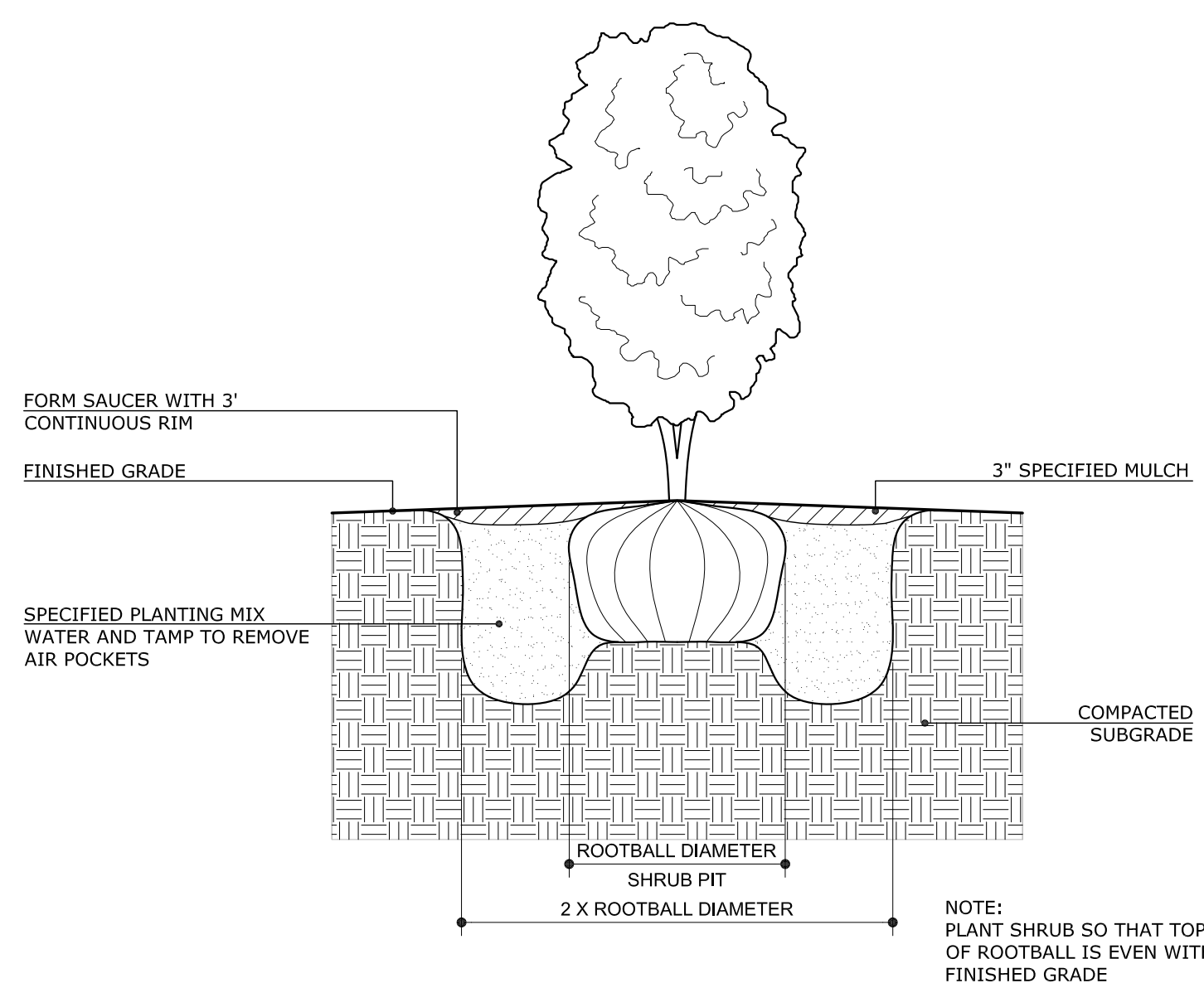
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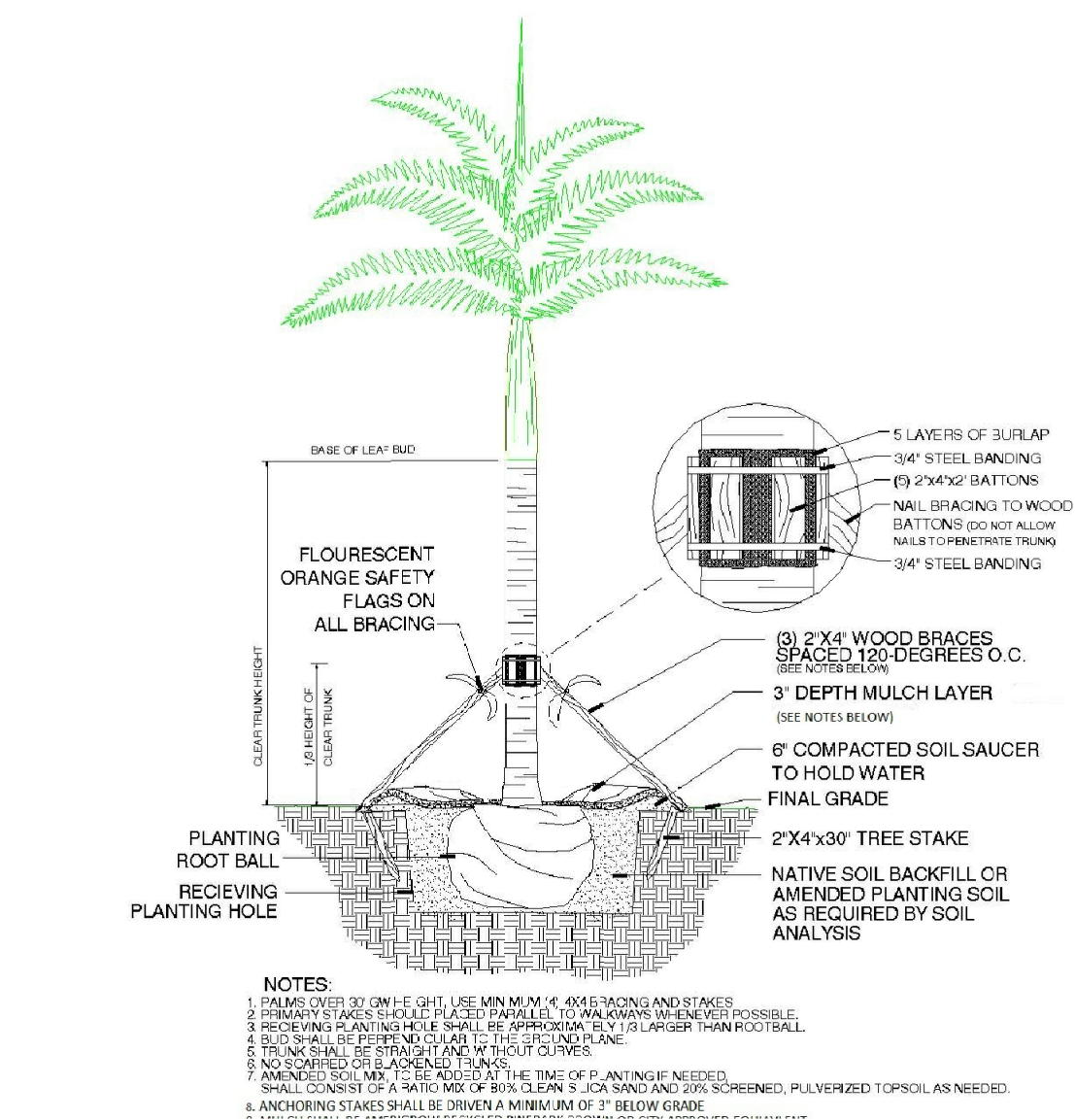
SHRUB AND GROUND COVER SPACING DETAIL
SCALE: NTS



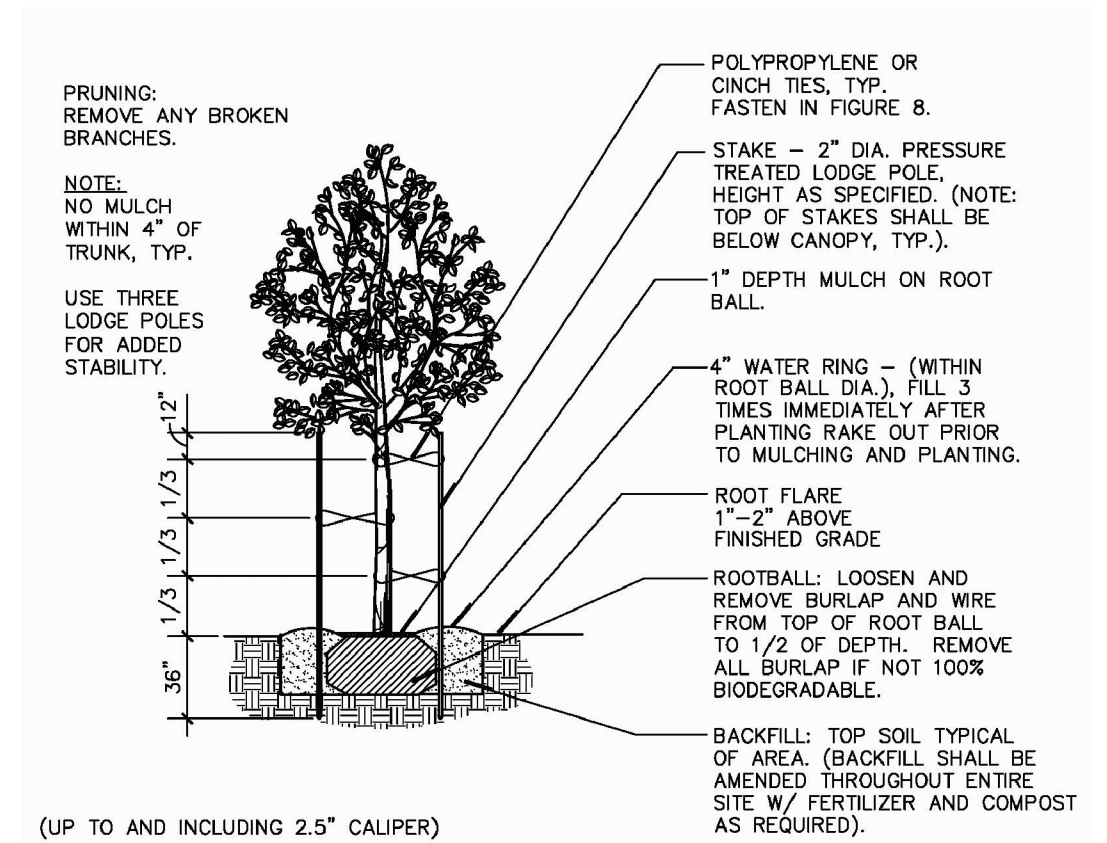
GROUNDCOVER PLANTING DETAIL
SCALE: NTS



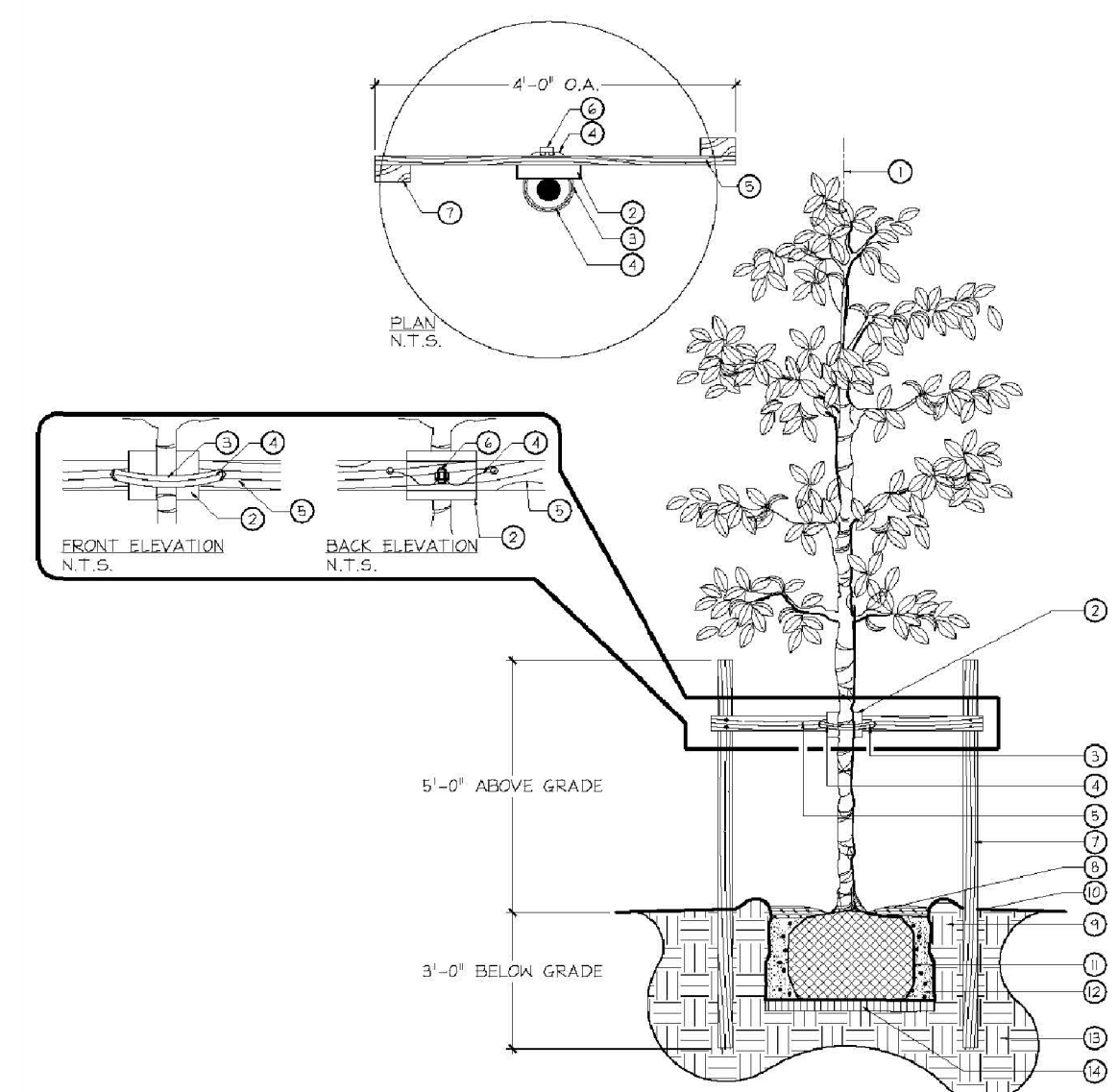
SHRUB PLANTING DETAIL
SCALE: NTS



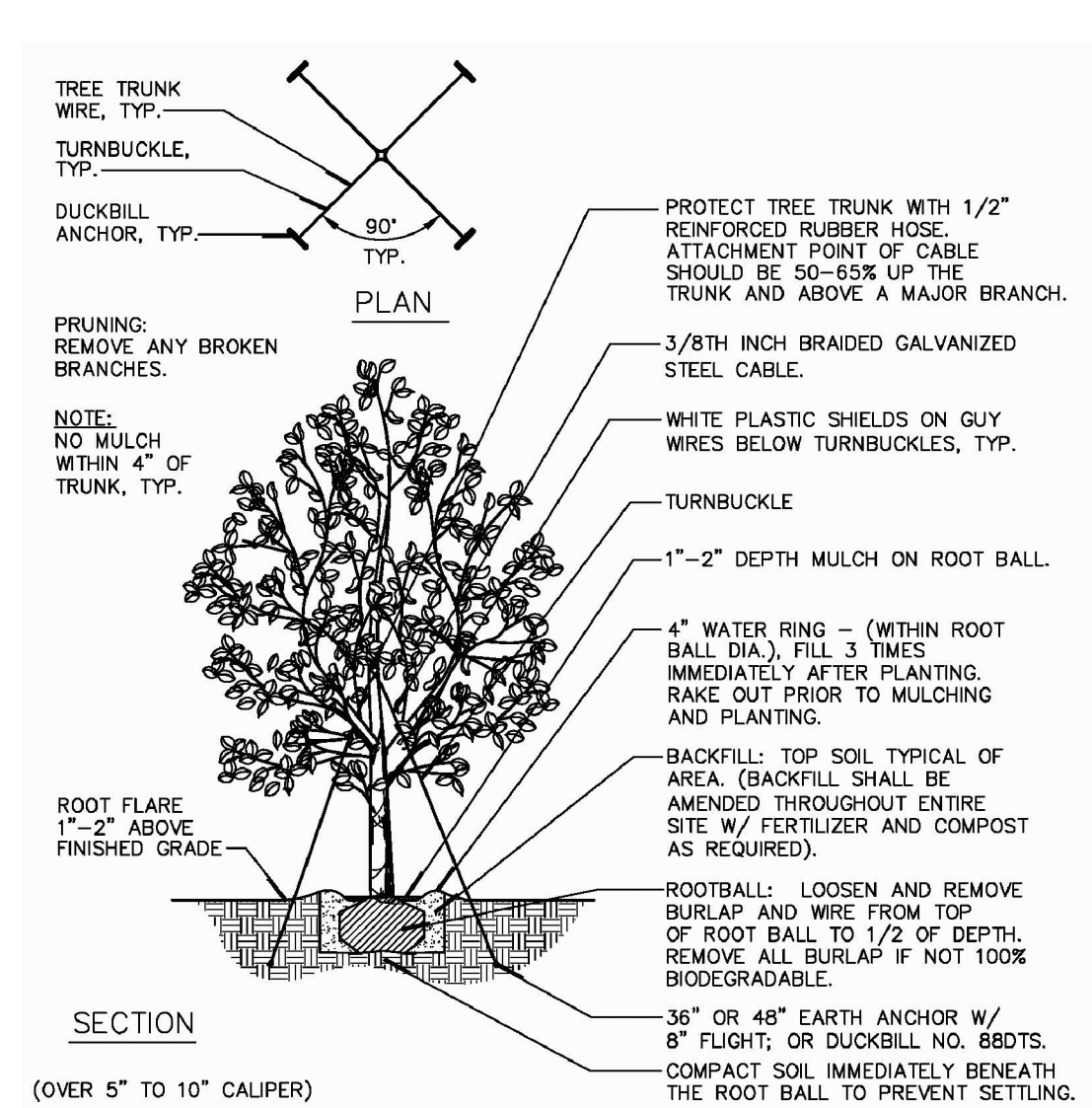
PALM TREE STAKING PLANTING DETAIL
SCALE: NTS



SMALL TREE PLANTING STAKING DETAIL
SCALE: NTS



MEDIUM TREE PLANTING / STAKING DETAIL
SCALE: NTS



LARGE TREE PLANTING STAKING DETAIL

SCALE: NTS

- [illegible]

FOR THE FIRM _____
GERARDO JAVIER DELGADO
R.L.A. 0001574

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1234

date:
02-27-2015

revised:
03/06/20:
AS BUILTS

sheet no.
L.301
PLANTING DETAILS

PLANTING DETAILS

Phone: 305.576.6702
Fax: 305.576.6703

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7580 NE 4th CT #105
MIAMI, FL 33138

RENOVATION AND ADDITION:
227 STAR ISLAND DRIVE
MIAMI BEACH FL 33137

seal

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GENERAL LANDSCAPE NOTES:

IRRIGATION

1. Description of work:

a. Extent of Irrigation system is shown on drawings.
2. Quality Assurance:

b. Manufacturer qualifications: Provide irrigation system as a complete unit produced by a single acceptable manufacturer, including heads, valves, piping circuits, controls, and accessories unless otherwise noted on drawings.
3. Submittals:

a. Product Data: Submit Manufacturer's technical data and installation instructions for irrigation system.

b. Shop Drawings: Submit shop drawings for landscape irrigation system including plan layout and details illustrating location and type of heads, valves, piping circuits, controls, and accessories.
4. Execution:

a. System Design:

i. Location of Heads: Design location on drawings is approximate. Make minor adjustments as necessary to avoid plantings and other obstructions.

b. Trenching and backfilling:

i. General: Excavate straight and true with bottom uniformly sloped to low points.

ii. Trench depth: Excavate trenches to a depth of 3" below invert unless otherwise indicated.

iii. Minimum cover: Provide a minimum of cover of 16" for main line and 12" for lateral lines over top of installed piping. Drip lines shall be installed over soil and under mulch.

iv. Backfill: Backfill with clean material from excavation. Remove organic material as well as rocks and debris larger than 1" diameter. Place acceptable backfill material in 6" lifts, compacting each lift.

c. Testing:

i. General: Notify Landscape Architect in writing when testing will be conducted. Conduct tests in presence of Landscape architect.

ii. Hydrostatic test: Test water piping and valves before backfilling trenches, to a hydrostatic pressure of not less than 100 psi. Piping may be tested in sections to expedite work. Remove and repair piping, connections, valves which do not pass hydrostatic testing.

iii. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place, and sprinkler heads adjusted to final position.

d. Record Drawings

i. The Contractor shall maintain one record set of blueprint of the irrigation system in good condition at the site and mark on them the exact 'record' in red marks. The Contractor shall make a daily record of all work installed during each day. Drawings shall indicate the exact location of check valves, gate valves, wire locations, head layout, automatic valves, quick couplers, all irrigation and drainage piping, etc., shall be shown on prints. Locations should be shown by the triangular system of measurements from easily identified permanent features, such as buildings, curbs, fences, walks, etc. Drawings shall show approved substitutions if any, of material including manufacturer's name and catalogue number. Drawings shall be to scale and all information shall be recorded in a neat, orderly way.

5. Landscaping

1. Scope of work

a. The work consists of furnishing all labor, materials, equipment, tools, transportation, and any other appurtenances necessary for the completion of this project as shown on the drawings, as included in the plant list, and as herein specified.

b. Work shall include maintenance and watering of all planting areas of this drawing set until certification of acceptability by the owner and/or the Landscape Architect.

c. Protection of existing structures, all existing buildings, walks, walls, paving, piping, and other items of construction and planting already completed or established shall be protected from damage by the contractor unless otherwise specified. All damage resulting from negligence shall be repaired or replaced to the satisfaction of the owner and costs by contractor.

2. Transplanting/ Relocating Trees

a. General: Transplanting shall consist of on-site transplanting of existing plant materials from proposed construction areas to permanent positions as noted on drawings.

b. Materials to be transplanted shall be root pruned a minimum of six weeks prior to re-location. Contractor shall maintain transplanted materials during construction period by watering, weeding, mowing, spraying, fertilizing, pruning, and other horticultural practices.

c. Owner and/or Landscape Architect shall regularly inspect the relocated materials to ensure that all horticultural practices are being adhered to. Owner shall submit a written report to landscape contractor notifying him of any deficiencies found during the maintenance period.

d. Any loss of plant materials due to the negligence of the Landscape Contractor shall result in the replacement of the material at no additional cost to the owner. Said plant materials shall be replaced with the same species of equal size.

e. Transplanting Operations: The landscape contractor shall take all precautions to minimize shock of root pruning and transplanting in accordance with nursery trade procedures including the following:

i. Root prune one third of ball at a time

ii. Thin out the interior crown of dicots, in a similar sequence, to compensate for root loss, leaving the entire canopy intact.

iii. Leave monocot leaves alone, allowing plant to balance itself. Protect growing point as required.

iv. After root pruning, backfill with good organic rooting medium. Fertilize with organic fertilizer to promote root growth and use 'Root Stimulator and Starter' by Green Light or approved equal.

v. Mulch to reduce weeds, discourage foot traffic and its compacting effect, conserve moisture and minimize temperature fluctuation.

vi. Brace trunk and leave in place until trees are windform (+/- 1 Year).

vii. At the time of planting, fill air pockets to keep roots, especially feeder roots moist, alive and healthy. Use soil needle for watering new transplant. Direct fine spray at foliage to help harden off new leaves.

3. Materials

a. General samples of materials as listed below shall be submitted for approval, on the site or as otherwise determined by the owner or Landscape Architect, at least fourteen (14) working days prior to its intended delivery to the site. Upon approval of samples, delivery of materials may begin.

i. Mulch - One (1) Cubic foot

ii. Root Stimulator - One (1) container

iii. Fertilizer - One (1) Container

iv. Topsoil - One (1) Cubic Yard

v. Plants - One (1) of each variety

vi. Planting mix - One (1) Cubic Yard

4. Tree protection

5. The Landscape Architect reserves the right to reject planting mix utilized that fails to meet the specification at any time during execution of work.

6. Planting mix shall be 70/30 mix. 70% crushed oolitic limestone or sand, and 30% organic material (composed of 15% decomposed wood chips and 15% everglades peat).

a. Plant species and size shall conform to those indicated on the drawings and cited herein. All sizes shown for plant material on the plan are to be considered as minimums.

b. All plants shall be Florida grade No.1 or better, graded in accordance with Grades and Standards for Nursery plants, published by the State of Florida, Department of

- Agriculture. Trees and shrubs shall have pronounced symmetry of foliar crown. Plants judged to be not in accordance with these standards will be rejected, and shall be immediately removed from the site of the work.
- c. All quantities indicated on the plant list are intended as a guide for the bidders and does not relieve the bidder of his responsibility to do a comprehensive plant take off. Should a discrepancy occur between the bidder's take off and the plant list quantity, the Landscape Architect is to be notified for clarification prior to final bid acceptance
- d. Commercial Fertilizer:

i. Commercial fertilizer shall be a complete formula; it shall be uniform in composition, dry and free flowing. This fertilizer shall be delivered to the site in the original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

ii. Fertilizer shall be organic in material containing nitrogen, phosphoric acid and potash in equal percentages of plant food by weight, in the following form:
7. Containerized material (i.e. shrubs, vines, ground covers) shall receive a granular such as 'Tri-nite' or approved equal.
8. Specimens shall receive time-released fertilizer, such as osmocote, or approved equal.

a. This instruction shall supersede other notes regarding fertilizers on the drawings or details.

i. Mulch: Pine chips

ii. 'Florimulch' free of weed retardant. Certified by the Florida Department of Agriculture.

iii. Mulch material shall be moistened at the time of application. All trees, shrubs, and ground cover beds shall receive a minimum of 2" of small pine bark chips immediately after planting.

b. Sod:

c. Grass species: *Zoysia spp*

d. American Sod Producers Association (ASAP) Grade: Nursery grown or approved. Field grown sod is not acceptable.

e. Furnished in pads: 18" x 24". 1" thick excluding top growth and thatch.

f. Not stretched, broken or torn.

g. Uniformly mowed height when harvested.

i. Inspected and found free of diseases, nematodes, pests, and pest larvae.

ii. Uniform in color, leaf texture, and density.

iii. Do not deliver more sod than can be installed within 24 hours.

iv. Begin installation of sod after preceding work (i.e. earth work, underground sprinkler system, soil preparation, installation of trees, shrubs and ground covers, etc.)

v. Installation:

9. Transplant sod within 48 hours after harvesting

10. Contractor shall sod all areas that are not paved or planted as designated on the drawings herein

11. Begin sodding at bottom of slopes

12. Lay first row of sod in straight line with long dimension of pads parallel to slope contours

13. Lay all rows with alternating and abutting joints.

14. Do not stretch or overlap rows

15. Roll sod, except pegged areas, with roller weighing no more than 100lbs per foot of roller width. During rolling, all depressions caused by settlement of rolling shall be filled with additional soil, and the surface shall be re-graded and rolled until presenting a smooth and even finish that is up to the required grade.

i. Soil Preparation:

16. Prepare loose bed four (4) inches deep. Apply fertilizer at rate of twenty (20) pounds per one thousand (1000) square feet. Application shall be uniform, utilizing approved mechanical spreaders. Mix fertilizer thoroughly with the soil to a depth of three (3) inches. Hand rake until all bumps and depressions are removed.

i. Watering:

17. Water sod and soil to depth of 6" within four hours after rolling.

18. Keep sod moist during first week after planting.

19. After first week, supplement rainfall to produce a total of 2" per day.

20. It is the contractor's responsibility to water all plant material.

i. Trees:

ii. Trees and palms shall be freshly dug, balled and burlapped. All plant material shall be free of broken or damaged root balls, or root bound conditions. Plant materials shall be sounds, healthy, vigorous, free from plant disease, insect pests or their eggs, and shall have healthy, normal root systems.

iii. Trees are noted on plans and herein as approved by the Landscape Architect.

iv. Landscape architect shall tag all trees. Tags shall not be removed: absence of tag at delivery to project site will be grounds for rejection of the tree.

v. Substitutions in plant species or sizes shall be made only after written authorization by the Landscape Architect.

vi. The height and or width of trees shall be measured from the top of the root ball to the top of canopy. This measurement shall not include the immediate terminal growth.

vii. Plants larger in size than those specified in the plant list may be used if approve by the owner and/or Landscape Architect. If the use of larger plants is approved, the ball of earth or spread of roots shall be increased in proportion to the size of the plant.

viii. Plants shall be subject to inspection and approval at the place of growth, or upon delivery to the site, as determined by the owner and/or Landscape Architect, for quality, size, and variety; such approval shall not impair the right of inspection and rejection at the site during progress of the work or after completion for size and condition of balls or roots, latent defects or injuries. Rejected plants shall be removed immediately from the site. Notice requesting inspection shall be submitted in writing at least one (1) week prior to anticipated date.

vi. Caliper measurement (DBH, 54" above crown of root ball), height and spread measurements, root ball dimensions, and container size when applicable, shall conform to the applicable standards established within reference documents cited herein, and the requirements for this project.

21. Execution

a. Inspection

i. In the event of discrepancy, immediately notify Landscape Architect.

ii. Do not proceed with installation of materials or plants in areas of discrepancy until all such discrepancies have been fully resolved to the satisfaction of the owner and/or Landscape Architect.

b. Preparation

i. Verify locations of all utilities, conduits, supply lines and cables, including but not limited to: electrical, gas (lines and tanks), water, sanitary sewer, storm water lines, cable and telephone. Properly maintain and protect existing utilities.

ii. Stake or mark with paint the proposed location of all trees and palms to be planted.

iii. Excavate plant beds.

iv. Provide plant materials, fertilizer, sod, planting mix, and incidental materials as specified.

v. Set Plants, backfill, and guy or brace plants as required.

vi. Complete incidental work related to planting operations, and as specified.

c. Application

i. Finish sub-grade: upon acceptance of rough grading elevations, establish fine sub-grade with smooth and even finish. Remove rocks exceeding one (1) inch diameter, sticks, debris, deleterious material, grass and soil clods, and vegetation.

d. Planting:

i. Excavation:

22. Excavations identified as having potential utility or service line conflicts shall be excavated with hand tools to determine the location of, and avoid damage to, such utilities.

23. Excavate tree and palm planting pits a minimum of 24" greater in diameter than the root ball, and minimum of 12" deeper than vertical depth of the root ball. Test soil for quality of percolation.

- If drainage is inadequate, create underground seepage/drainage. Notify Landscape Architect for approval. Budget should allocate an allowance to cover this possibility and should be part of the original bid.
24. Barricade or mark excavations to prevent hazards to mechanical equipment, vehicles, and pedestrians.

i. Planting:

25. Set trees in vertical position with the top of the root ball flush with the adjacent, finish grade. After settlement, the plant crown will stand one (1) to two (2) inches above grade.

26. Set plant in upright position in center of planting pit and place specified planting mix under and around the root ball. For burlapped root balls, cut top 1/3 of burlap away from root ball, and turn down into the side of the planting pit, before placing planting mix around the root ball.

27. Proper "Jetting in" shall be assured to eliminate air pockets around the roots. 'Jet stick' or equal is recommended.

28. Prune trees, removing no more than 1/3 of twigs and branches, while maintaining the uniform character and shape of the tree. Remove all dead, diseased, rubbing, and dying branches. All plant material shall meet specifications after pruning.

29. Earth shall be banked at edge of each planting pit to form a watering saucer approximately 6" in depth. Flush planting soil into place with slow hose stream until air pockets are eliminated around root ball, and pit is filled with Planting Mix to top of root ball.

30. Place mulch in loose measure 2" min. layer within each watering saucer.

31. If planting is performed after sod placement, proper protection shall be provided and damage resulting from planting operations shall be repaired promptly.

32. Tree Guying: For materials to 12' in height, a minimum of four woven anchor strap lines each at ninety degrees from and connected to tree trunk, and anchored below grade with pressure treated stakes. Secure tree against movement in wind.

33. Tree Bracing: For materials greater than 12' in height, a minimum of three 2x4 appearance grade braces, set at 60 degrees to the ground plane, equidistant around the trunk of the tree, and secured into the ground plane with one, 12" #4 rebar or ½" galvanized pipe passing through each such 2x4 brace, driven into the ground, and set flush with the top of the brace. Secure each angled brace to one 12" long 2x4 vertical block over four layers of burlap. Secure blocks with two metal or plastic straps, one 3" from the top and one 3" from the bottom of each block. Nail brace to block with four 16d nails. See planting details sheet L.60a for additional information and bracing details.

34. There will be no plant material planted into root balls of trees and palms.

35. Shrubs and ground covers shall be evenly spaced in accordance with the drawing and as indicated on the plant list. Cultivate all planting areas to a minimum depth of 6", remove and dispose of all debris. Till into top 4" the planting soil mix as specified. Thoroughly water all plants after installation.
36. Warranty:

i. Contractor is responsibly to maintenance on all Landscape materials, including sod, for no less than ninety (90) days after acceptance by owner.

ii. After ninety (90) days, contractor must visit the site once every month for twelve (9) months, and shall provide the Owner with a written letter notifying the owner of any wrong doing, negligence, or issues that might affect the Owner's warranty.

iii. Contactor shall warranty all landscape material for no less than (12) months after final acceptance by the Owner.
37. Certificates:

i. Grass species, and location of field from which sod is cut.

ii. Compliance with state and federal quarantine restrictions.

a. Manufacturer's certificate of fertilizer and herbicide composition.

b. Certificates from suppliers stating that the delivered planting mix, delivered plant materials, and fertilizer comply with requirements specified.

c. Certificates of inspections: Shipments or orders of plant material shall be properly inspected at nursery or growing site by authorized federal and state authorities; include certificates with shipment.

GENERAL SUBMITTALS:

1. Shop Drawings, Product data, Mock-ups, or Samples for the following:

a. Fence/gates - Sample, 2' with all members and connections

b. Electrical Fixtures - Product Data, and foundation details (Shall be included in contractor's bid)

c. Furniture - Product Data

d. Landscape Materials - Samples per documents herein

e. Geotextile materials - Sample

f. Landscape Irrigation Data - Shop Drawings and Product Data

g. Root barriers - Product Data

h. Concrete mix and colors - Design Mix sample and Product Sample. Create on site a mock up 6'x6' of the finished concrete slab and do not destroy or remove from the job site until completion of all slabs on grade and acceptance by owner and Landscape Architect.

i. Storm drainage materials - Product Data

j. Caulks and sealants - Product Data

k. Stain and paint - Sample

l. Steel edging - Product Data

m. Fertilizer - Product Data

n. Root stimulators - Product Data

o. Fill material for rough and fine grading - Product data and Sample

p. Tree bracing details - Shop Drawings

q. Decorative gravel - Sample

r. Water features - Shop Drawings

s. Ipe deck fasteners and hardware, Ipe products - Sample

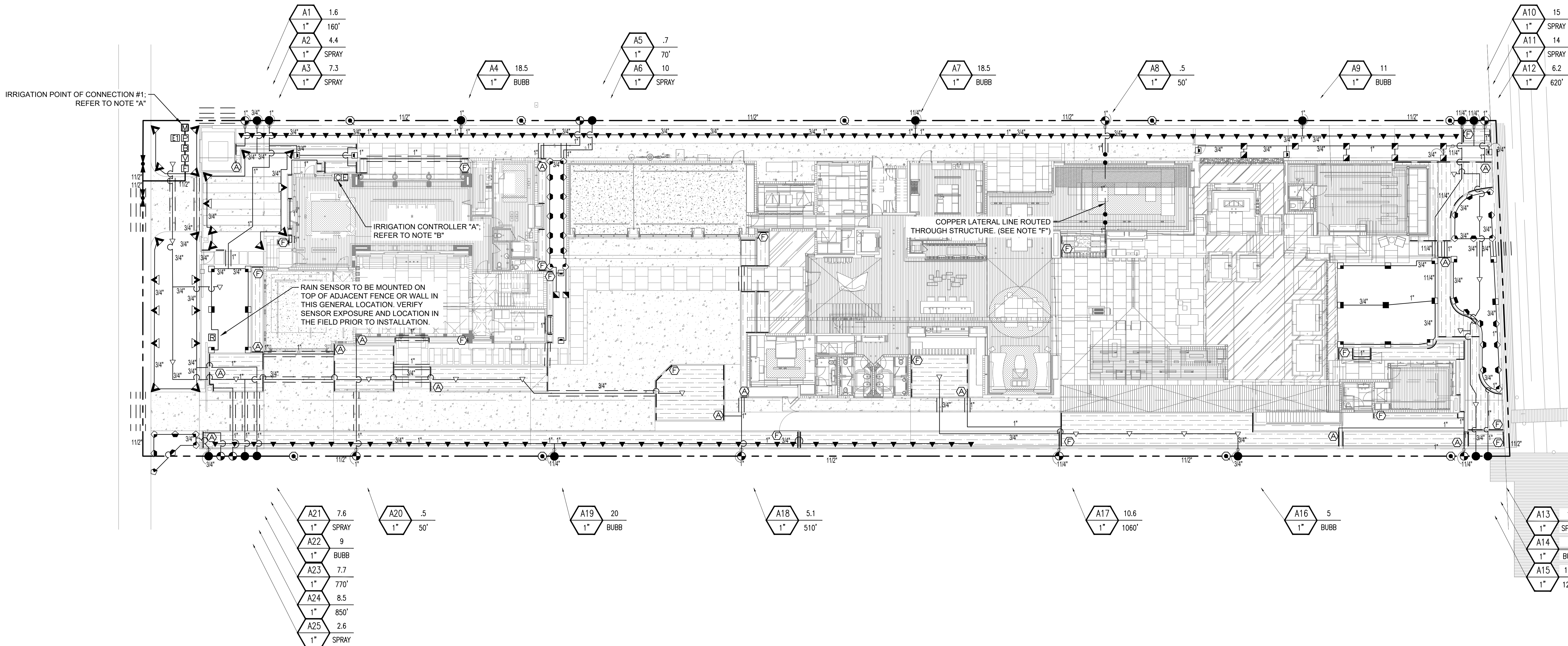
t. Grasspave - Product Data and Sample

u. Sand stabilizer - Product Data


2. Soil mixture documentation and certification

3. Nursery certification for all plant materials.

4. All mock ups, samples, shop drawings shall be a part of the original contract cost.



SCALE: 1/16" = 1'-0

WATER PRESSURE LOSS CALCULATIONS					
WATER METER NUMBER		1	WATER METER SIZE (Inches)		1.50
HYDRAULIC GRADE LINE (FT)		0	WATER METER ELEVATION (FT)		0
ELEVATION DIFFERENCE (FT)		0	STATIC PRESSURE (PSI)		48.0
REMOTE CONTROL VALVE #		A19	REMOTE CONTROL VALVE SIZE (In.)		1.00
R.C.V. DEMAND (GPM)		20	TOTAL DEMAND (GPM)		20
HIGHEST HEAD SERVED (FT)		0	STATIC PRESSURE AT HIGHEST HEAD		0.0
 sweeney + associates IRRIGATION DESIGN AND CONSULTING		PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY SWEENEY & ASSOCIATES, INC. UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.			
SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
1.50	SERVICE LINE (50 FT OF TYPE K COPPER)	20	1	0.92	PSI
1.50	WATER METER (XXXX TYPE)	20	2	0.80	PSI
1.50	BACKFLOW PREVENTER (RIP TYPE)	20	3	12.00	PSI
1.50	FILTRATION (WYE FILTER)	20	4	1.00	PSI
1.50	BFD ASSEMBLY PIPING (BRASS W/ 4 ELLS)	20	6	1.10	PSI
1.00	MASTER CONTROL VALVE	20	7	2.90	PSI
1.00	FLOW SENSOR	20	8	1.00	PSI
1.50	ISOLATION VALVES (BALL TYPE)	20	9	1.00	PSI
1.50	250 FEET OF MAINLINE SCH. 40 PVC	20	10	2.85	PSI
1.50	5 - 90 DEGREE ELBOWS	20	13	0.97	PSI
1.00	REMOTE CONTROL VALVE ASSEMBLY	20	14	2.90	PSI
10%	LATERAL LINE LOSSES	20	15	3.00	PSI
20%	FITTING LOSS IN ADDITION TO ELBOWS SHOWN	N/A	16	0.57	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)		18	31.0	PSI	
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)		19	30.0	PSI	
TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)		20	61.0	PSI	
STATIC WATER PRESSURE (FROM ABOVE)		21	48.0	PSI	
RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)		22	-13.0	PSI	
SET PRV OR MCV AT #20 PLUS 10 PSI		23	N/A	PSI	
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)		24	33.0	PSI	

NOTE A:
POINT OF CONNECTION (POC) #1 SHALL BE A 1 1/2" DOMESTIC WATER METER WITH A 1 1/2" SERVICE LINE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION, WATER TYPE, METER SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. MEASUREMENT OF THE STATIC (NO WATER MOVING) WATER PRESSURE IS ACCEPTABLE FOR POTABLE WATER SYSTEMS WHERE NO PUMP HAS BEEN INDICATED ON THESE PLANS. WHEN USING RECYCLED WATER, OR ON POTABLE WATER SYSTEMS REQUIRING A PUMP, ONLY THE MEASUREMENT OF DYNAMIC (WATER MOVING THROUGH THE METER) WATER PRESSURE, SHALL BE ACCEPTABLE. THE DYNAMIC WATER PRESSURE SHALL BE MEASURED AT THE MAXIMUM SYSTEM DEMAND AS INDICATED BELOW. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWINGS IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION AS SHOWN HEREIN, ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

MIN. REQ. PRESSURE AT POC: 70 PSI (STATIC)
DESIGN WATER PRESSURE: 61 PSI
MAXIMUM SYSTEM DEMAND: 20 GPM
PRESSURE BOOST REQUIRED: 33 PSI
RESIDUAL WATER PRESSURE: 20 PSI

NOTE B:
CONTROLLER "A" SHALL BE OF THE BRAND, MODEL AND STATION SIZE AS INDICATED ON THE IRRIGATION MATERIALS LEGEND. THE CONTROLLER SHALL BE INSTALLED IN THE APPROXIMATE LOCATION SHOWN. THE CONTRACTOR SHALL COORDINATE THE REQUIRED ELECTRICAL POWER SUPPLY AT THIS LOCATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE. FINAL LOCATION OF CONTROLLER AND ELECTRICAL POINT OF CONNECTION SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE F:
LATERAL LINE PIPING WITHIN BUILDING SHALL BE A TYPE K COPPER AND IS SHOWN FOR CLARITY ONLY. ACTUAL DESIGN AND ROUTING SHALL BE COMPLETED BY PLUMBING ENGINEER AND INSTALLED BY PLUMBING CONTRACTOR. EACH STUB-OUT WITHIN EACH PLANTER SHALL HAVE A COPPER FEMALE ADAPTER FOR THE LANDSCAPE CONTRACTOR CONNECTION. ALL PIPING THROUGH BUILDING TO EXTERIOR AND THROUGH BUILDING TO UPPER FLOOR SHALL BE PROVIDED BY PLUMBER.

NOTE G:
ARTIFICIAL SOD AREAS TO HAVE IRRIGATION HEAD CAPPED OFF

eneadesign
garden design
www.enea.ch
REG. No: LC26000339
Phone: 305.576.6702
Fax: 305.576.6703

7550 NE 4th CT #105
MIAMI, FL 33138

RENOVATION AND ADDITION:
27 STAR ISLAND DRIVE
MIAMI BEACH, FL 33137

seal

FOR THE FIRM:
GERARDO JAVIER DELGADO
R.L.A. 0001574

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


sheet no.
L.400
IRRIGATION PLAN

FROM APPROVED AS-BUILTS
FOR REFERENCE ONLY

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE. SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE IF APPLICABLE.
14. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.

IRRIGATION CONTROLLER RUN TIMES																		
POC or Controller																		
A	ETo / Month (Inches):		3.02	3.64	4.57	5.50	5.61	5.49	5.67	5.35	4.75	4.21	3.46	3.02	54.29			
	ETo / Day (Inches):		0.10	0.13	0.15	0.18	0.18	0.18	0.18	0.17	0.16	0.14	0.12	0.10	0.15			
	Irrigation Days / Week:		7	7	7	7	7	7	7	7	7	7	7	7				
Plant / Irrig. Type		AKc	Pr Rate	IE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Turf		0.80	0.40	0.80	14.6	19.5	22.1	27.5	27.1	27.5	27.4	25.9	23.8	20.4	17.3	14.6	Min./Day/Zone	
MP Rotators		Number of Zones:	2	29.2	39.0	44.2	55.0	54.3	54.9	54.9	51.8	47.5	40.7	34.6	29.2		Total Min./Day	
Turf		0.80	1.74	0.63	4.3	5.7	6.5	8.1	8.0	8.1	8.1	7.6	7.0	6.0	5.1	4.3	Min./Day/Zone	
Spray		Number of Zones:	5	21.5	28.7	32.5	40.5	39.9	40.4	40.4	38.1	34.9	30.0	25.5	21.5		Total Min./Day	
Shrubs		0.40	0.72	0.90	3.6	4.8	5.5	6.8	6.7	6.8	6.8	6.4	5.9	5.0	4.3	3.6	Min./Day/Zone	
Drip Tubing		Number of Zones:	10	36.1	46.1	54.6	67.9	67.0	67.8	67.7	63.9	56.6	50.3	42.7	36.1		Total Min./Day	
Shrubs		0.40	1.14	0.90	2.3	3.0	3.4	4.3	4.2	4.3	4.3	4.0	3.7	3.2	2.7	2.3	Min./Day/Zone	
Bubblers		Number of Zones:	3	6.8	9.1	10.3	12.9	12.7	12.8	12.8	12.1	11.1	9.5	8.1	6.8		Total Min./Day	
Trees		1.00	1.14	0.90	5.7	7.6	8.6	10.7	10.6	10.7	10.7	10.1	9.3	7.9	6.7	5.7	Min./Day/Zone	
Bubblers		Number of Zones:	5	28.5	38.0	43.1	53.6	52.9	53.5	53.5	50.5	46.3	39.7	33.7	28.5		Total Min./Day	
Total Number of Zones:		25	122	163	185	230	227	229	229	216	198	170	145	122	Total Min./Day			
Total Controller Run Time in Hours:			2.04	2.72	3.08	3.83	3.78	3.82	3.82	3.61	3.31	2.84	2.41	2.04	Total Hrs./Day			
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
Note: These schedules are intended only for compliance with local municipal codes and the water efficient landscape ordinance. These calculations represent the MAXIMUM REASONABLE run times and are used to ensure that all irrigation may be completed during the specific watering window allowed. These schedules do not include rainfall, site soil types, specific exposures (shade versus sun), actual irrigation days, or specific slope position. It is solely the responsibility of the irrigation contractor to program the controller as required to apply the correct amount of irrigation water for the landscape. All smart controllers shall be programmed using the specified ET or weather sensing equipment, satellite provided ET data, soil moisture sensors, and rain shut off devices as required. Contractor shall provide a controller schedule inside the controller cabinet prior to final turnover of the project to the owner.																		

IRRIGATION MATERIAL LEGEND								
SYMBOL		MANUFACTURER	MODEL NO. / DESCRIPTION	FLOW RATE (GPM)	PSI	RADIUS	P.R. (TRI.)	DETAIL
Q	T H F							
		RAIN BIRD	1806 6" POP-UP TURF HEAD WITH 8Q18T/8H18F "U SERIES" NOZZLES	.26, .52	30	8 FT	1.83 IN./HR.	A
		RAIN BIRD	1806 6" POP-UP TURF HEAD WITH 15Q1/15T/15H/15F "U SERIES" NOZZLES	.92, 1.85, 3.70	30	15 FT	1.83 IN./HR.	A
		RAIN BIRD	1806 6" POP-UP TURF HEAD WITH LC5/RC5/15SSST NOZZLE	.61, 1.21	30	4X15 FT 4X30 FT	1.95 IN./HR.	A
		HUNTER	PROS-06 6" POP-UP TURF HEAD WITH A MP2000-90(Q/T/H)360 ADJUSTABLE NOZZLE	.40, .74	40	20 FT	0.45 IN./HR.	A
		RAIN BIRD	1806 6" POP-UP BUBBLER HEAD WITH A HUNTER MSBN-50Q NOZZLE, PROVIDE ONE PER SPECIMEN PLANT.	.50	30	5 FT	2.00 IN./HR.	A
		RAIN BIRD	1806 6" POP-UP BUBBLER HEAD WITH A RAIN BIRD 5Q-B STREAM BUBBLER NOZZLE. EACH SYMBOL REPRESENTS TWO (2) BUBBLERS PER TREE OR PALM. PLACE BUBBLERS AT EDGE OF ROOT BALL ON OPPOSITE SIDES OF TREE OR PALM. TYPICAL ADJUST BUBBLER STREAMS TO WET THE ROOT BALL AND AMENDED SOIL WITHOUT HITTING THE TRUNK OF THE TREE OR PALM.	.50 (1.0 TOTAL)	30	5 FT	N/A	A,B
		RAIN BIRD	XFS-06-12 SUBSURFACE DRIP TUBING (COPPER EXTERIOR COLOR) WITH 0.80 GPH. PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE EQUIPPED WITH COPPER CHIP TECHNOLOGY TO PREVENT ROOT INTRUSION INTO THE DRIP EMITTER. DRIP TUBING SHALL BE INSTALLED 2" BELOW FINISHED SOIL GRADE (NOT COUNTING MULCH) AND IN PARALLEL ROWS A MAXIMUM OF 16" ON CENTER. THE PERIMETER ROW OF DRIP TUBING SHALL BE INSTALLED A MAXIMUM OF 4" FROM THE EDGE OF ANY HARDSCAPE OR TURF EDGE. ALL SUBSEQUENT INTERIOR ROWS SHALL BE ADJUSTED TO PROVIDE AN EVEN SPACING ACROSS THE PLANTER WITHOUT EXCEEDING 16" MAXIMUM SPACING. INSTALL 9" PVC COATED GALVANIZED TUBING STAKES A MAXIMUM OF FIVE (5) FEET ON CENTER ALONG THE LENGTH OF THE TUBING. TUBING STAKES SHALL BE MODEL #G0TS140900 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684. THE HATCH PATTERN SYMBOLS ON THE PLANS REPRESENT THE APPROXIMATE DIRECTION AND SPACING OF THE DRIP TUBING ROWS. SEE ACTUAL SPACING REQUIREMENTS ABOVE AND IN DETAILS.					D,E
		RAIN BIRD	CONNECTION BETWEEN XFS DRIP TUBING AND PVC SUPPLY AND DISCHARGE HEADERS SHALL BE MADE USING XF DRIP LINE BARBED FITTINGS, SCH. 40 PVC THREADED FITTINGS, SCH. 80 NIPPLES AND FLEXIBLE NIPPLES. WHEN THE CONNECTION IS AT THE END RUN OF THE TUBING USE A 1/2" SCH. 40 PVC THREADED 90° ELBOW. A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE. A 1/2" X 6" MPT X FIPT FLEXIBLE NIPPLE, AND A XFF-MA-050 17mm BARB X 1/2" MPT ADAPTER FITTING. WHEN THE CONNECTION IS IN THE MIDDLE OF THE TUBING RUN USE A 1/2" SCH. 40 PVC THREADED TEE FITTING. A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE. A 1/2" X 6" MPT X FIPT FLEXIBLE NIPPLE, AND TWO (2) XFF-MA-050 17mm BARB X 1/2" MPT ADAPTERS. ALL END RUNS OF TUBING SHALL BE CONNECTED WITH A PVC DISCHARGE HEADER. FLEXIBLE NIPPLES SHALL BE MODEL WGFN050600 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684.					D,E
		RAIN BIRD	XF SERIES 17mm BARBED FITTINGS FOR ALL CONNECTIONS BETWEEN DRIP TUBING (TUBING-TO-TUBING ONLY). ALL BARBED DRIP TUBING FITTINGS SHALL BE INSTALLED USING A FITNS-TOOL FOR PROPER INSERTION OF THE FITTING INTO THE TUBING. NO HEATING OF TUBING SHALL BE ALLOWED.					D,E
		AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS SHALL BE PVC LATERAL LINE PIPE (AS SHOWN BELOW), 1 1/4" MINIMUM SIZE WITH SCH. 40 PVC FITTINGS.					D,E
		RAIN BIRD	WHERE VINES ARE PLANTED ON WALLS, FENCES OR COLUMNS WITHIN THE DRIP TUBING ZONES, ADDITIONAL DRIP EMITTERS SHALL BE REQUIRED FOR THESE VINE PLANTINGS. THE CONTRACTOR SHALL INSTALL TWO (2) XB-10PC 1 GPH DRIP EMITTERS PER VINE PLANTING. THESE ADDITIONAL EMITTERS SHALL BE PUNCHED DIRECTLY INTO THE DRIP TUBING. EMITTERS SHALL BE INSTALLED USING A XM-TOOL EMITTER INSTALLATION TOOL. EACH DRIP EMITTER SHALL BE INSTALLED WITH AN 18" LENGTH OF XQ-14" DISTRIBUTION TUBING. A TS-025 TUBING STAKE AND A DBC-025 DIFFUSER BUG CAP. LOCATE EMITTER OUTLETS DIRECTLY OVER THE ROOT BALL OF THE VINE PLANTING.					E,F
		LASCO	1/2" SCH. 40 PVC BALL VALVE WITH SLIP ENDS AND A LASCO MHT-105 3/4" MHT X 1/2" SPIGOT ADAPTER WITH A LASCO FHT-301 HOSE THREAD CAP, FOR USE AS A DRIP TUBING FLUSH VALVE. SEE PLANS FOR LOCATIONS. INSTALL INSIDE A 10" ROUND VALVE BOX.					E,G
		RAIN BIRD	ARV050 AIR/VACUUM RELIEF VALVE INSTALLED WITH A XFD-TFA-075 BARB X BARB X 3/4" FIPT TEE FITTING AND A AND A 3/4" X 1/2" SCH. 40 PVC THREADED REDUCER BUSHING. INSTALL AIR RELIEF ASSEMBLY AT THE HIGH POINT OF EACH PLANTER. SEE PLANS FOR APPROXIMATE LOCATION AND QUANTITY OF ARV'S PER DRIP ZONE. USING AN AIR RELIEF LATERAL CONSTRUCTED OF XFD "BLANK" XF TUBING, CONNECT AIR RELIEF VALVE TO ALL DRIP LINE LATERALS WITHIN THE ELEVATED AREA. MULTIPLE ARV'S MAY BE REQUIRED PER DRIP TUBING ZONE, SEE PLANS. INSTALL INSIDE A 7" ROUND VALVE BOX.					E,H
		P.O.C.	1 1/2" POTABLE (DOMESTIC) WATER METER WITH 1 1/2" SERVICE LINE. VERIFY METER SIZE, LOCATION AND WATER PRESSURE IN FIELD.					N/A
		WILKINS	975XLS, 1 1/2" R/P BACK FLOW PREVENTION DEVICE WITH WYE STRAINER. INSTALL WITH BRASS NIPPLES, UNIONS AND FITTINGS, SIZED PER DEVICE					I
		HOOVER	(BID ALTERNATE) HOOVER IRRIGATION BOOSTER PUMP MOD# HCF-1 5PDV-230/1-Y INSTALL PER MANUFACTURERS RECOMMENDATION. CONTACT KEVIN CAVIOLI AT HOOVER PUMPS @ 954-275-6731 CONTRACTOR SHALL VERIFY EXISTING POWER SUPPLY AND WATER PRESSURE PRIOR TO ORDERING PUMP (NOTE THAT THE BOOSTER PUMP HAS BEEN PROVIDED AS AN OPTION IF THE STATIC WATER PRESSURE IS LESS THAN 70 PSI. CONTACT THE IRRIGATION CONSULTANT IF THE WATER PRESSURE AT THE SITE IS FOUND TO BE DIFFERENT THAN THE 70 PSI NOTED ON THE PLANS FOR DIRECTION ON HOW TO PROCEED. TESTING OF THE WATER PRESSURE SHALL BE DONE PRIOR TO START OF WORK)					U
		RAIN BIRD	100-PEB-PRS-D 1" NORMALLY CLOSED, PRESSURE REGULATING, PLASTIC MASTER CONTROL VALVE. WIRE MCV TO THE CONTROLLER USING A SEPARATE PILOT AND GROUND WIRE. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					J
		CST	FSI-T10-001 1" PVC TEE, HDPE IMPELLER TYPE FLOW SENSOR, WIRE TO CONTROLLER USING TWO (2) #14UF AWG WIRES INSIDE A 1" SCH. 40 PVC (GRAY) ELECTRICAL CONDUIT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSIDE A STANDARD RECTANGULAR VALVE BOX. CONTACT CREATIVE SENSOR TECHNOLOGY'S REPRESENTATIVE, GENTILE & ASSOCIATES (STEVEN KIM) AT (760) 214-5734 FOR FURTHER INFORMATION.					K
		LASCO	V17101N-SCH 1 1/2" SLO-CLOSE SCH. 80 PVC, TRUE-JOIN BALL VALVE WITH SOLVENT WELD SOCKET CONNECTIONS, LINE SIZE PER MAINLINE. INSTALL INSIDE A 10" ROUND VALVE BOX.					L
		RAIN BIRD	44LR 1" QUICK COUPLER VALVE WITH LOCKING VINYL COVER AND A LASCO G13S-218 SWING JOINT. INSTALL INSIDE A 10" ROUND VALVE BOX.					M
		RAIN BIRD	100-PEB-PRS-D PRESSURE REGULATING, PLASTIC REMOTE CONTROL VALVE (RCV), SIZE AS SHOWN (1" SIZE), SET PRS-D PRESSURE REGULATOR TO PROVIDE THE OPERATING PRESSURE OF THE SPRINKLER/ BUBBLER HEAD TO THE HIGHEST OR FARTHEST HEAD ON THE CONTROL VALVE ZONE. INSTALL THE RCV INSIDE A STANDARD RECTANGULAR VALVE BOX.					N
		RAIN BIRD	100-PEB PLASTIC DRIP REMOTE CONTROL VALVE, SIZE AS SHOWN (1" SIZE). INSTALL A DISC FILTER AND AN INLINE PRESSURE REGULATOR ON THE DOWNSTREAM SIDE OF EACH DRIP REMOTE CONTROL VALVE (DRCV). FOR 1" DRCV'S INSTALL A RAIN BIRD LCRBY-100D DISC FILTER AND A SENNINGER 1" PMR-40-MF PRESSURE REGULATOR.					O
		RAIN MASTER	EGP32i-S EAGLE PLUS 32 STATION CONTROLLER WITH INTERNET COMMUNICATIONS CARD (i CENTRAL), COMPLETE WITH A WALL MOUNT ENCLOSURE. CONTROLLER IS COMPLETE WITH TWO (2) YEARS OF iCENTRAL INTERNET BASED CENTRAL CONTROL. CONTRACTOR TO REGISTER iCENTRAL SOFTWARE AND FULLY PROGRAM THE CONTROLLER FOR AUTOMATIC PROGRAM ADJUSTMENT WITH RAINMASTER WEATHER DATA DOWNLOAD. CONTRACTOR TO PROVIDE PROOF OF REGISTRATION AND PROGRAMMING TO THE OWNER. IF NECESSARY, PROVIDE AN ANTENNA FOR PROPER COMMUNICATION.					P
		RAIN MASTER	RS-500 WIRED RAIN SENSOR, MOUNT IN RGVSS ENCLOSURE ON TOP OF FENCE OR WALL. WIRE TO THE CONTROLLER IN CONDUIT PAINTED TO MATCH WALL COLOR IN EXPOSED LOCATIONS.					V
		N/A	120 VOLT ELECTRICAL POWER FOR CONTROLLER, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
		N/A	230 VOLT (SINGLE/THREE) PHASE ELECTRICAL POWER FOR BOOSTER PUMP SYSTEM, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
		AS APPROVED	PVC PIPE 3/4" - 1 1/4" CL. 200, SOLVENT WELD WITH SCH. 40 PVC FITTINGS, AS LATERAL LINES INSTALLED 12" BELOW FINISHED GRADE					Q
		AS APPROVED	PVC PIPE 1 1/2" SCH. 40, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES INSTALLED 18" BELOW FINISHED GRADE					Q
		AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED (2" MINIMUM SIZE) INSTALL ALL PIPE AND WIRE UNDER PAVING, HARDSCAPE, ETC. (OR AS DIRECTED BY OWNERS AUTHORIZED REPRESENTATIVE) INSIDE SLEEVES. SLEEVES UNDER PEDESTRIAN PAVING SHALL BE INSTALLED 24" BELOW FINISHED GRADE. SLEEVES UNDER VEHICULAR PAVING SHALL BE INSTALLED 36" BELOW FINISHED GRADE.					R
		AS APPROVED	TYPE 'K' COPPER PIPING ROUTED BETWEEN PLANTERS, AND THROUGH BUILDING AND GARAGES. COPPER PIPING SHALL BE DESIGNED BY THE PLUMBING ENGINEER AND BE SHOWN ON THE PLUMBING PLANS. MAINLINE SOLVENT CEMENT SHALL BE LOW VOC, "GRAY-HEAVY BODY" CEMENT. LATERAL LINE SOLVENT CEMENT SHALL BE LOW VOC, "RED HOT BLUE GLUE" CEMENT. USE DAUBERS SIZED AT LEAST ONE-HALF THE SIZE OF THE LARGEST PIPE BEING JOINED. ALL SOLVENT CEMENTED JOINTS SHALL BE MADE PER THE PIPE AND FITTING MANUFACTURER'S RECOMMENDATIONS.					N/A
		AS APPROVED	CONNECTION POINT BETWEEN COPPER PIPING (PROVIDED BY PLUMBER) AND PVC IRRIGATION PIPING. COPPER PIPE STUB-OUT SHALL HAVE A LINE SIZED SWEAT X FIPT COPPER ADAPTER PROVIDED FOR CONNECTION TO THE IRRIGATION PIPING. USE A LINE SIZED X 6" SCH. 80 T.O.E. PVC NIPPLE AND A LINE SIZED PVC COUPLING FOR THE CONNECTION. VERIFY LOCATION, SIZE AND STUB-OUTS OF COPPER PIPING IN THE FIELD PRIOR TO STARTING WORK.					N/A
		LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GRAY IN COLOR, AND SIZED TO MATCH THE THR MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE, DARK GRAY IN COLOR, WITH MOLDED THREADS.					N/A
		CHRISTY'S	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE LOW VOC "PURPLE PRIMER". MAINLINE SOLVENT CEMENT SHALL BE LOW VOC, "GRAY-HEAVY BODY" CEMENT. LATERAL LINE SOLVENT CEMENT SHALL BE LOW VOC, "RED HOT BLUE GLUE" CEMENT. USE DAUBERS SIZED AT LEAST ONE-HALF THE SIZE OF THE LARGEST PIPE BEING JOINED. ALL SOLVENT CEMENTED JOINTS SHALL BE MADE PER THE PIPE AND FITTING MANUFACTURER'S RECOMMENDATIONS.					N/A
		AS APPROVED	1" SCH. 40 PVC, GRAY ELECTRICAL CONDUIT FOR FLOW SENSOR, PROVIDE. PULL BOX AT A MAXIMUM OF 200 FEET ON CENTER FOR A 3 FOOT WIRE LOOP OR ANY SPLICES. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					N/A
		PAIGE ELECTRIC	P7079D POLYETHYLENE INSULATED, SOLID COPPER CONDUCTOR IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED). PILOT WIRES SHALL BE RED IN COLOR, COMMON GROUND WIRE SHALL BE WHITE IN COLOR, SPARE WIRES SHALL BE YELLOW IN COLOR. WHERE MULTIPLE CONTROLLERS ARE USED ON THE PROJECT, EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR FOR PILOT WIRES. THE CONTRACTOR SHALL ROUTE TWO (2) SPARE CONTROL WIRES (YELLOW) FROM THE CONTROLLER ALONG THE MAINLINE IN ALL DIRECTIONS AWAY FROM THE CONTROLLER. LOOP SPARE WIRES UP AND INTO EACH VALVE BOX ALONG THE MAINLINE, PROVIDING A 3 FOOT MINIMUM LOOP.					N/A
		3M	DBR/Y-6 DIRECT BURIAL (U.L. APPROVED) WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE SPLICES AND CONNECTIONS					S
		RAIN BIRD	ALL VALVE BOXES SHALL BE VB SERIES, PLASTIC TYPE WITH OVERLAPPING LIDS. COVERS FOR BOXES IN TURF AREAS SHALL BE GREEN AND COVERS FOR VALVE BOXES IN SHRUB AREAS SHALL BE BLACK. ALL BOXES SHALL BE SECURED WITH A RAIN BIRD VB-LOCK-P PENTA HEAD BOLT, WASHER AND CLIP. BOXES SHALL BE AS SHOWN BELOW:					T
DESCRIPTION		TURF AREAS (GREEN)		SHRUB AREAS (BLACK)				
7" ROUND BOXES		VB-7RND		VB-7RND BK				
10" ROUND BOXES		VB-10RND		VB-10RND-B BODY AND VB-10RND BK LID				
STANDARD RECTANGULAR BOXES		VB-STD		VB-STD-B BODY AND VB-STD BK LID				
JUMBO RECTANGULAR BOXES		VB-JMB		VB-JMB-B BODY AND VB-JMB BK LID				

