



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: _____

Building Address: 13135 FORSYTHE RD
City: Sykesville State: MD Zip Code: 21784
Suite/Apt. # _____ SDP/WP/BA #: _____
Census Tract: _____ Subdivision: _____
Section: _____ Area: _____ Lot: _____
Tax Map: _____ Parcel: _____ Grid: _____
Zoning: _____ Map Coordinates: _____ Lot Size: _____

Existing Use: Church
Proposed Use: Church
Estimated Construction Cost: \$ 36,000
Description of Work: termite damage repair
joist replacement

Occupant or Tenant: _____
Was tenant space previously occupied? Yes No
Contact Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Property Owner's Name: St. Barnabas Episcopal
Address: 13135 Forsythe Rd
City: Sykesville State: MD Zip Code: 21797
Phone: 410-489-2800 Fax: _____
Email: parish@stbarnabasmd.com

Applicant's Name & Mailing Address, (if other than stated herein)
Applicant's Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Contractor Company: Projects By Hand
Contact Person: Oliver Hand
Address: 4217 Bright Bay Way
City: Ellicott City State: MD Zip Code: 21042
License No.: _____
Phone: 410 499 0596 Fax: _____
Email: ophand@msn.com

Engineer/Architect Company: MORABITO Consultants
Responsible Design Prof.: Rob Miller
Address: 952 Ridgebrook Rd Suite 1700
City: Sparks State: MD Zip Code: 21152-9472
Phone: 410-467-2377 Fax: 410-467-4132
Email: rob.miller@morabitoconsultants.com

| Commercial Building Characteristics | Residential Building Characteristics |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Height: <u>25'</u> | <input type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse |
| No. of stories: <u>1</u> | Depth _____ Width _____ |
| Gross area, sq. ft./floor: <u>1300 sq ft</u> | 1 st floor: _____ |
| | 2 nd floor: _____ |
| Area of construction (sq. ft.): <u>5205 sq ft</u> | Basement: |
| Use group: <u>Church</u> | <input type="checkbox"/> Finished Basement |
| | <input type="checkbox"/> Unfinished Basement |
| | <input type="checkbox"/> Crawl Space |
| Construction type: | <input type="checkbox"/> Slab on Grade |
| <input type="checkbox"/> Reinforced Concrete | No. of Bedrooms: _____ |
| <input type="checkbox"/> Structural Steel | Multi-family Dwelling |
| <input checked="" type="checkbox"/> Masonry | No. of efficiency units: _____ |
| <input type="checkbox"/> Wood Frame | No. of 1 BR units: _____ |
| <input type="checkbox"/> State Certified Modular | No. of 2 BR units: _____ |
| | No. of 3 BR units: _____ |
| | Other Structure: _____ |
| | Dimensions: _____ |
| <input checked="" type="checkbox"/> Roadside Tree Project Permit | Footings: _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Roof: _____ |
| Roadside Tree Project Permit # | <input type="checkbox"/> State Certified Modular |
| | <input type="checkbox"/> Manufactured Home |

| Utilities | |
|--------------------------------------------------------------------------------------|--|
| Water Supply | |
| <input type="checkbox"/> Public | |
| <input checked="" type="checkbox"/> Private | |
| Sewage Disposal | |
| <input type="checkbox"/> Public | |
| <input checked="" type="checkbox"/> Private | |
| Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Gas: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Heating System | |
| <input checked="" type="checkbox"/> Electric <input checked="" type="checkbox"/> Oil | |
| <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas | |
| <input type="checkbox"/> Other: | |
| Sprinkler System: | |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Grading Permit Number: | |
| Building Shell Permit Number: | |

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature _____

Print Name _____

Email Address _____

Date _____

Title/Company _____

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

PLEASE WRITE NEATLY & LEGIBLY

-FOR OFFICE USE ONLY-

| AGENCY | DATE | SIGNATURE OF APPROVAL |
|----------------------|---------------|-----------------------|
| State Highways | | |
| Building Officials | | |
| PSZA (Zoning) | | |
| PSZA (Engineering) | | |
| Health | <u>8/5/15</u> | <u>H. Oswood</u> |

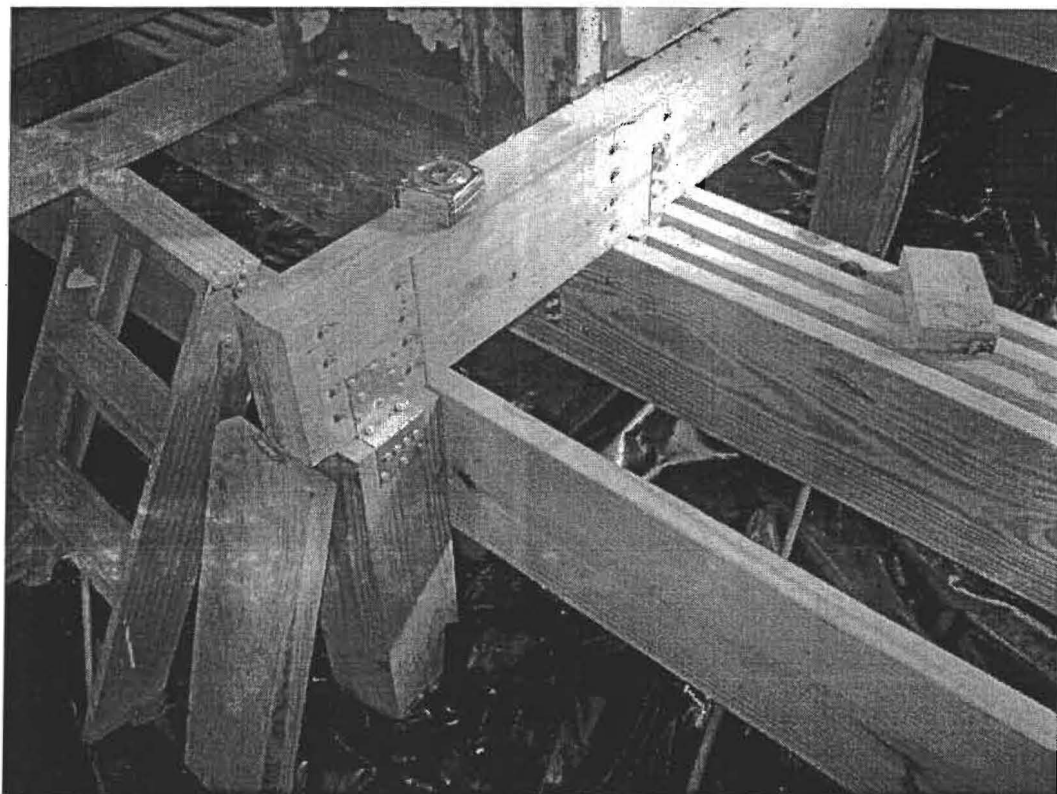
Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

| DPZ SETBACK INFORMATION |
|---------------------------------------------------------------------------------------|
| Front: _____ |
| Rear: _____ |
| Side: _____ |
| Side St.: _____ |
| All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Lot Coverage for New Town Zone: _____ |
| SDP/Red-line approval date: _____ |

| | |
|----------------|------------------|
| Filing Fee | \$ <u>200.00</u> |
| Permit Fee | \$ _____ |
| Tech Fee | \$ _____ |
| Excise Tax | \$ _____ |
| PSFS | \$ _____ |
| Guaranty Fund | \$ _____ |
| Add'l per Fee | \$ _____ |
| Total Fees | \$ _____ |
| Sub-Total Paid | \$ _____ |
| Balance Due | \$ _____ |
| Check | # _____ |

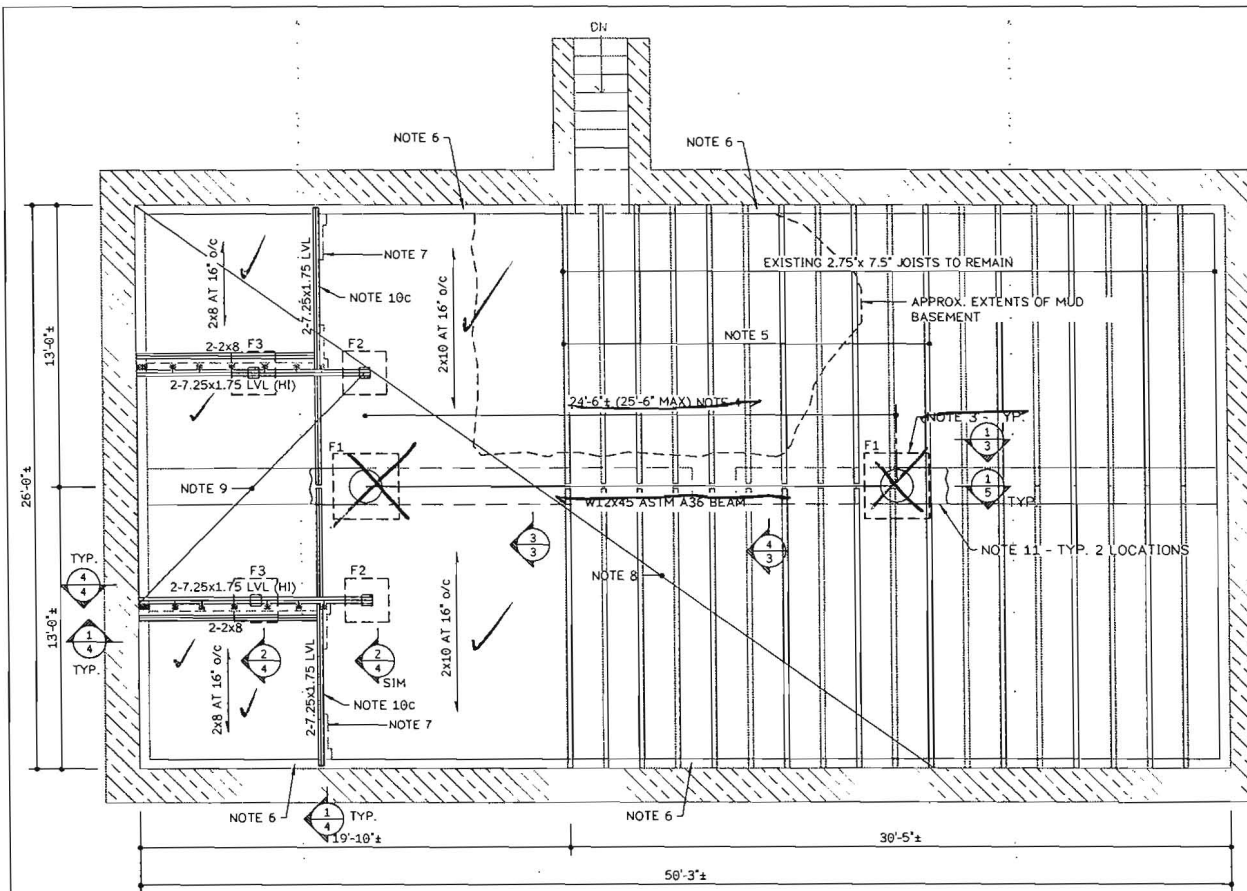
Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA

Date: 7/22/2015
Re: St. Barnabas Church Repairs
MC Job No. 14187
Site Visit #1
Page 2



| St. Barnabas - Termite Damage Repairs | | | | | |
|---------------------------------------|------------------------------------------|----------|---------|---------|--------|
| Location | Item | Quantity | Price | \$ | |
| Crawl Space | polythene vapor barrier (HD) | 1.00 | 199.00 | 199.00 | 199.00 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| Sanctuary Walls | Temp support items | 1.00 | 182.95 | 182.95 | 182.95 |
| | 6x6 post anchors (JSW) | 2.00 | 17.68 | 35.36 | 35.36 |
| | post anchor bolts, washers, nuts (HD) | 4.00 | 5.15 | 20.60 | 20.60 |
| | 6x6 x 8' PT Posts (JSW) | 1.00 | 22.31 | 22.31 | 22.31 |
| | 7 1/4" LVL's (ripped from 11 1/4" LVL's) | 48.00 | 4.70 | 225.60 | 225.60 |
| | Rip labor (JSW) | 1.00 | 30.00 | 30.00 | 30.00 |
| | HeadLOK screws for LVL's (50pk) (HD) | 3.00 | 39.98 | 119.94 | 119.94 |
| | Ledger lok screws (50pk) | 3.00 | 33.95 | 101.85 | 101.85 |
| | PT shims | 1.00 | 20.00 | 20.00 | 20.00 |
| | 12d Power nails (JSW) | 1.00 | 38.95 | 38.95 | 38.95 |
| | | | | | 0.00 |
| Sanctuary Floor | 6x6 x 8' PT Posts (sleeper wall) (JSW) | 2.00 | 22.31 | 44.62 | 44.62 |
| | 2x8 Joist Hangers (JSW) | 26.00 | 1.54 | 40.04 | 40.04 |
| | Joist Hanger hex screws (100 pk) (HD) | 4.00 | 9.97 | 39.88 | 39.88 |
| | corner hardware (HD) | 12.00 | 3.11 | 37.32 | 37.32 |
| | 2x8 PT joists x 12' - 0" (JSW) | 18.00 | 11.23 | 202.14 | 202.14 |
| | Roofing felt #30 (JSW) | 1.00 | 20.93 | 20.93 | 20.93 |
| | Wood Petrifier - 1gal | 1.00 | 77.06 | 77.06 | 77.06 |
| | subfloor adhesive (JSW) | 12.00 | 6.25 | 75.00 | 75.00 |
| | 3/4" ply or OSB subfloor (JSW) | 5.00 | 22.46 | 112.30 | 112.30 |
| | 8d Power nails for subfloor (JSW) | 1.00 | 40.00 | 40.00 | 40.00 |
| | | | | | 0.00 |
| Vesting & Sacristy Walls | 2x10 PT joists x 14' - 0" (JSW) | 4.00 | 16.99 | 67.96 | 67.96 |
| | 3/4" plywood for gussetts (JSW) | 1.00 | 38.90 | 38.90 | 38.90 |
| | | | | | 0.00 |
| Vesting & Sacristy Floors | 2x8 PT joists x 8' - 0" (JSW) | 20.00 | 7.42 | 148.40 | 148.40 |
| | 2x8 joist hangers - singles (JSW) | 16.00 | 1.54 | 24.64 | 24.64 |
| | 2x8 joist hangers - doubles (JSW) | 2.00 | 3.18 | 6.36 | 6.36 |
| | joist hanger screws (100pk) (HD) | 2.00 | 9.97 | 19.94 | 19.94 |
| | subfloor adhesive (JSW) | 12.00 | 6.25 | 75.00 | 75.00 |
| | 3/4" ply or OSB subfloor (JSW) | 5.00 | 22.46 | 112.30 | 112.30 |
| | mortar to repair ledge (HD) | 2.00 | 5.00 | 10.00 | 10.00 |
| | mudsill 2x6 x 8'-0" (HD) | 3.00 | 4.87 | 14.61 | 14.61 |
| | | | | | 0.00 |
| Sacristy | sink cabinets (Wolf - Saginaw) | 1.00 | 774.00 | 774.00 | |
| | wall cabinets (Wolf) | 1.00 | 1000.00 | 1000.00 | |
| | laminate countertop (Lowe's) | 1.00 | 108.00 | 108.00 | |
| | sink (Elkay - Home Depot) | 1.00 | 99.00 | 99.00 | |
| | | | | | 0.00 |
| Nave | 2x6 PT mudsills x 8'-0" (HD) | 6.00 | 4.87 | 29.22 | 29.22 |
| | 2x10 PT joists x 14'-0" (JSW) | 20.00 | 16.99 | 339.80 | 339.80 |
| | 2x10 PT joists x 8'-0" (blocking) (JSW) | 6.00 | 9.10 | 54.60 | 54.60 |
| | 3/4" plywood for end gussetts (JSW) | 5.00 | 38.90 | 194.50 | 194.50 |
| | 8d power nails (JSW) | 2.00 | 26.46 | 52.92 | 52.92 |
| | 12d power nails (JSW) | 2.00 | 38.95 | 77.90 | 77.90 |
| | 16d power nails (PBH Stock) | 1.00 | 45.00 | 45.00 | 45.00 |
| | Ledgerlok 3 5/8" screws 32/joist | 700.00 | 0.68 | 476.00 | 476.00 |
| | subfloor adhesive (JSW) | 24.00 | 6.25 | 150.00 | 150.00 |
| | 3/4" ply or OSB subfloor (JSW) | 10.00 | 22.46 | 224.60 | 224.60 |
| | | | | | |
| Hardwood Flooring | 3/4" pine flooring (JSW) | 520.00 | 3.19 | 1658.80 | |
| | roofing felt #30 216sq.ft/roll (JSW) | 3.00 | 20.93 | 62.79 | |
| | power flooring staples | 1.00 | 50.00 | 50.00 | |
| | base 1x8 fingered jointed primed | 150.00 | 2.31 | 346.50 | |
| | base cap | 150.00 | 0.87 | 130.50 | |
| | | | | | |
| Wall repairs | 1/2" drywall | 6.00 | 12.00 | 72.00 | |
| | tape | 1.00 | 10.00 | 10.00 | |
| | drywall screws etc | 1.00 | 25.00 | 25.00 | |
| | joint compound | 2.00 | 15.00 | 30.00 | |

| | | | | | | |
|----------------------------------|---------------------------------------|-------------|---------|-----------------|----------------|---------------|
| Paint | wall paint | 1.00 | 150.00 | 150.00 | | |
| | trim paint including primer | 1.00 | 100.00 | 100.00 | | |
| | pew paint | 1.00 | 300.00 | 300.00 | | |
| | | | | 0.00 | | |
| Overheads | Tapes | 2.00 | 23.11 | 46.22 | | |
| | Saw Blades | 6.00 | 10.00 | 60.00 | | |
| | Mileage | 50.00 | 9.20 | 460.00 | | |
| | Material Contingency 5% | 8000.00 | 0.05 | 400.00 | | |
| | Total Termite Repair Materials | | | 9731.31 | 3246.60 | 601.90 |
| Subcontractors | | | | | | |
| Foundations | Country Gentleman Landscape | 1.00 | 1280.00 | 1280.00 | 1280.00 | |
| Sub grade clearing | Country Gentleman Landscape | 1.00 | 1500.00 | 1500.00 | | |
| Sacristy Plumbing | Apple Plumbing | 1.00 | 2210.00 | 2210.00 | | |
| Sanctuary Electrical | Royal Electric | 1.00 | 4995.00 | 4995.00 | | |
| Termite Treatment | Western Pest | 1.00 | 325.00 | 325.00 | | |
| Hardwood Floor Sanding/Varnish | Mark Cleaver Hardwood Floors | 1.00 | 3100.00 | 3100.00 | | |
| | Suncontractor contingency 7.5% | 10000.00 | 0.08 | 750.00 | | |
| Structural Engineering | Morabito Engineers | 1.00 | 4000.00 | 4000.00 | | |
| | Total Subcontractors | | | 18160.00 | | |
| | GRAND TOTAL | | | 27891.31 | | |
| Parish Self Help | | | | | | |
| Structural demolition and repair | Hand; Baglin and company | | | | | |
| Trim repairs | Hand and company | | | | | |
| Hardwood Flooring | Peay | | | | | |
| Dispose Tree Joists | Mike (Wester Pest) | | | | | |
| Dispose Radiators | Dan (Country Gentleman) | | | | | |
| Pews to McEvoy Barn | McEvoy and company | | | | | |
| Painting pews | McEvoy and company | | | | | |
| Plaster repairs | Hand and company | | | | | |
| Sanctuary and Trim painting | McEvoy and Company | | | | | |
| | | | | | | |
| | | | | | | |
| BOILER ROOM REPAIR | | | | | | |
| Remove boiler and oil tank | Parker Fuel | 1.00 | 1000.00 | 1000.00 | | |
| Fill hole with concrete | S Wolf \$4500 - \$5000 | 1.00 | 5000.00 | 5000.00 | | |
| | TOTAL | 2.00 | | 6000.00 | | |
| | GRAND TOTAL | | | 33891.31 | | |



FIRST FLOOR FRAMING PLAN:
SCALE: 3/16" = 1'-0" (11x17 SHEET)

1. EXISTING STRUCTURAL CONDITIONS BASED ON VISUAL SURVEY PERFORMED BY OJR OFFICE ON 5/21/15.
2. IF CONTRACTOR FINDS CONDITIONS VARY FROM THOSE SHOWN WITHIN THESE PLANS AND DETAILS, CONTACT MORABITO CONSULTANTS FOR CONSULTATION BEFORE WORK BEGINS. REPAIRS SHALL NOT BE DEVIATED FROM THOSE SHOWN UNLESS WRITTEN APPROVAL IS GIVEN BY THE ENGINEER.
3. ALL FOOTINGS SHALL BEAR ON COMPETENT, WELL-COMPACTED SOIL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 1,500 PSF. BOTTOM OF FOOTING ELEVATIONS SHALL BE LOCATED A MAXIMUM OF 45 DEGREES (1-TO-1) FROM THE BOTTOM OF EXISTING BASEMENT EXCAVATION, MEASURED FROM HORIZONTAL.

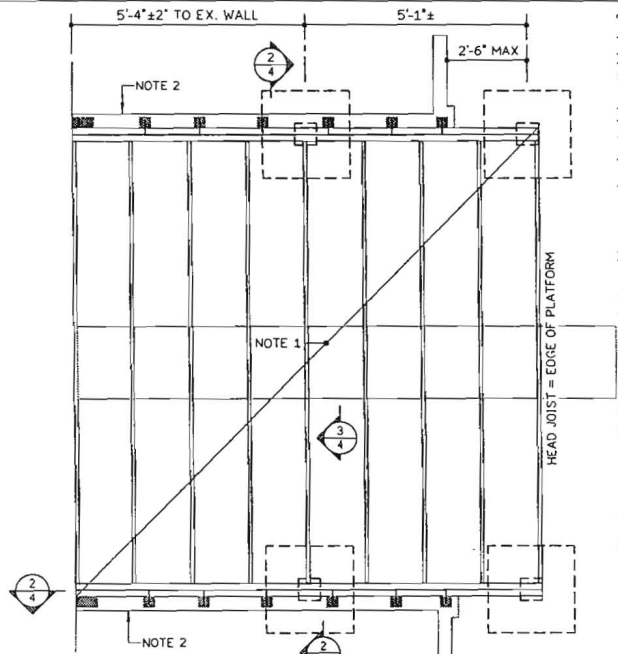
| FOOTING SCHEDULE (f _c = 4,000 psi) | | | | |
|-----------------------------------------------|---------|-----------|-------------|-------------|
| MARK | SIZE | THICKNESS | REINFORCING | PEDESTAL |
| F1 | 40" SQ. | 16" | 5#4 EA. WAY | - SEE (1/5) |
| F2 | 24" SQ. | 12" | 3#3 EA. WAY | - SEE (2/4) |
| F3 | 24" SQ. | 12" | 3#3 EA. WAY | |

4. EXISTING STONE MASONRY WALL TO BE ABANDONED AT THIS LOCATION. CAREFULLY DECONSTRUCT AS REQUIRED TO INSTALL NEW BEAM.
5. REMOVE AND RESET EXISTING JOISTS AS REQUIRED TO INSTALL NEW STEEL BEAM. MODIFY JOISTS ENDS AS SHOWN IN DETAILS
6. WHERE NEW JOISTS ARE INSTALLED AND EXISTING JOISTS ARE RESET, UNSTABLE MASONRY LEDGE AND DETERIORATED MUD SILL SHALL BE RECONSTRUCTED. ONLY TYPE S MORTAR SHALL BE USED TO REBUILD STONE MASONRY
7. EXISTING PLASTER PARTITION WALL TO REMAIN SHALL BE SUPPORTED BY SCABBING NEW DOUBLE LVL BEAMS TO EXISTING 3" STUDS PER DETAILS. NEW LVL'S TO BE SISTERED TOGETHER AND BE CONTINUOUS OVER NEW FOOTING SUPPORT
8. REPLACE EXISTING SUBFLOOR AS REQUIRED WITH 3/4" T&G PLYWOOD
9. SEE SHEET 2 FOR PLATFORM FRAMING PLAN ABOVE
10. SEQUENCE OF CONSTRUCTING FLOOR FRAMING AT NEW LVL BEAMS SHALL BE AS FOLLOWED:
 - a. INSTALL FOOTING F2 AND F3 WITH PT 6X6 POSTS
 - b. INSTALL NEW LVL BEAMS AND SCAB ONTO EXISTING SANCTUARY WALL STUDS. SEE DETAIL 2 ON SHEET 4
 - c. INSTALL DOUBLE LVL BEAM UNDER THE DOORWAY WALLS OF THE VESTING ROOM AND SACRISTY
 - d. REMOVE ALL TIMBER JOISTS
 - e. INSTALL REMAINDER OF FLOOR FRAMING
11. REBUILD EXISTING STONE BEARING WALL AT NEW FOOTINGS. TAKE CARE NOT TO DISTURB EXISTING WALL TO REMAIN
12. SEE SHEET 5 FOR ALTERNATE BASEMENT RETAINING WALL IN LIEU OF STEEL BEAM
13. SEE SHEET 2 FOR GENERAL CONSTRUCTION NOTES AND MINIMUM WOOD FASTENING SCHEDULE

MORABITO CONSULTANTS INC.
STRUCTURAL ENGINEERS
PARKING CONSULTANTS
952 RIDGEBROOK ROAD, SUITE 1700 (410) 467-2377
SPARKS, MARYLAND 21152-9472 FAX (410) 467-4132

PROJECT: STRUCTURAL REPAIRS AT
SAINT BARNABAS EPISCOPAL CHURCH
SYKESVILLE, MARYLAND

JOB # 14187
DATE: 6/16/2015
REVISED: _____
SHEET 1 OF 5



PLATFORM FRAMING PLAN: SCALE: 3/8" = 1'-0" (11x17 SHEET)

1. NEW PLATFORM DECK TO BE 3/4" PLYWOOD SHEATHING ON 2x8 JOISTS AT 16" o/c. PROVIDE SOLID BLOCKING AT 8'-0" o/c WITH 2 ROWS OF BLOCKING MINIMUM.
2. SEE DETAIL 2 ON SHEET 4 FOR LVL BEAM SUPPORTING EXISTING PLASTER WALL

MINIMUM WOOD FASTENING SCHEDULE

| CONNECTION | FASTENING | LOCATION |
|-------------------------------------|-------------------------------------------|--------------------------------------------------------------------------|
| WOOD JOISTS TO SILL AND SOLE PLATES | (3) 8d COMMON NAILS (2-1/2" x 0.131") | TOE NAIL |
| WOOD STRUCTURAL PANELS (FLOOR) | 8d DEFORMED SHANK NAILS (2-1/2" x 0.113") | FASTENERS SPACED AT 6" o/c AT EDGES AND 12" o/c AT INTERMEDIATE SUPPORTS |
| BLOCKING BETWEEN JOISTS | (3) 8d COMMON NAILS (2-1/2" x 0.131") | TOE NAIL |
| BUILT-UP BEAMS AND GIRDERS | 20d COMMON NAILS (4" x 0.192") AT 12" o/c | FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES |

GENERAL NOTES

CONTRACTOR RESPONSIBILITIES: THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTING. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIEDOWNS THAT MIGHT BE NECESSARY. SUCH MATERIAL IS NOT SHOWN ON THE DRAWINGS. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT AND SHALL REMAIN THE CONTRACTOR'S PROPERTY. THE ENGINEER HAS NO EXPERTISE IN, AND TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOBSITE SAFETY DURING CONSTRUCTION. PROCESSING AND/OR APPROVED SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OF SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED, SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OF ANY RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE ENGINEER IS NOT ENGAGED IN, AND DOES NOT SUPERVISE CONSTRUCTION.

STRUCTURAL LUMBER:

STRUCTURAL WOOD JOISTS SHALL BE NO.1/NO. 2 HEM-FIR WITH A MAXIMUM WATER CONTENT OF 19% AND THE FOLLOWING MINIMUM PROPERTIES:

Fb = 1100 PSI Fc = 405 PSI
 Ft = 575 PSI Fc = 809 PSI
 Fv = 145 PSI E=1,600,000 PSI

LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
 E = 2,090,000 PSI
 Fb = 2,600 PSI

STRUCTURAL FLOOR SHEATHING SHALL BE 5/8" OR 3/4" EXPOSURE 1, APA GROUP 1 RATED STURD-I-FLOOR, GLUED AND NAILED TO WOOD JOISTS. WHERE WOOD JOISTS FRAME INTO BEAMS, USE 16 GAUGE STANDARD JOIST HANGERS AND 10d NAILS. PROVIDE SOLID WOOD BLOCKING OR 16 GAUGE DIAGONAL X-BRIDGING BETWEEN ALL FLOOR JOISTS OR TRUSSES AT 8'-0" o/c. ALL LUMBER, BLOCKING, FURRING AND OTHER WOOD IN CONTACT WITH CONCRETE, MASONRY, THE GROUND OR EXPOSED TO THE WEATHER SHALL BE PRESSURE TREATED WITH WATER BORNE PRESERVATIVES IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS' INSTITUTE STANDARD AWPA-PS. LUMBER SHALL BE KILN DRIED TO 15% MOISTURE CONTENT AFTER TREATMENT. COAT ALL CUT SURFACES OF TREATED LUMBER WITH AN APPROVED PRESERVATIVE. ALL CONNECTIONS OF BEAMS TO BEAMS, BEAMS TO COLUMNS, BRACING TO STRUCTURE AND COLUMNS TO FOUNDATIONS SHALL BE ACCOMPLISHED USING STEEL CONNECTIONS OF TYPES SHOWN ON THESE DRAWINGS. COMMON, BOX, SINKER NAILS, LAG SCREWS, AND WOOD SCREWS LESS THAN OR EQUAL TO 3/8" IN DIAMETER SHALL CONFORM TO ASTM 1667 TABLE S1.1 "LOW TO MEDIUM CARBON STEEL NAILS AND SPIKES". HARDENED

STEEL NAILS (MEDIUM CARBON STEEL) SHALL CONFORM TO ASTM 1667 TABLE S1.2 "MEDIUM CARBON STEEL NAILS - HARDENED". ALL SMALL DIAMETER FOOD FASTENERS (D <= 3/8") SHALL HAVE MANUFACTURER'S DOCUMENTATION TO PROVE TENSILE AND BENDING YIELD STRENGTH MEETS OR EXCEEDS THE REQUIREMENTS IN ASTM F 1667. ALL CONNECTIONS INCLUDING PLATES, DOWELS, BOLTS, SCREWS, AND NAILS EXPOSED TO THE WEATHER SHALL BE GALVANIZED. ALL CONNECTIONS TO PRESSURE TREATED WOOD SHALL BE GALVANIZED PER ASTM A-653M, DESIGNATION G185 COATING.

CONCRETE: ALL CONCRETE WORK SHALL CONFORM TO ALL THE PROVISIONS OF THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318). 28-DAY CONCRETE STRENGTH SHALL BE NO LESS THAN 4,000 PSI. THE MAXIMUM WATER CEMENT RATIO W/C SHALL NOT EXCEED 0.56 FOR ALL CONCRETE. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOAD FOR 28 DAYS. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED FOR COMPLETION OF WORK.

STRUCTURAL STEEL: STRUCTURAL STEEL PLATES, ANGLES, CHANNELS, BARS, AND ROLLED S, M, AND HP SHAPES SHALL CONFORM TO ASTM A-36. ROLLED WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-36.

PROVIDE 2 MILS OF ONE OF THE FOLLOWING SHOP PAINTS: NO. 769 GRAY PRIMER MANUFACTURED BY RUST-OLEUM CORPORATION; NO. 769 GRAY PRIMER MANUFACTURED BY TNEC COMPANY AND WETSALL PRIMER MANUFACTURED BY FARBOIL COMPANY. ALTERNATIVELY, THE STRUCTURAL STEEL MAY BE HOT-DIPPED GALVANIZED

INSPECTION: ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE CONTRACTOR SHALL HIRE AN EXPERIENCED QUALIFIED INSPECTOR TO PERFORM ALL REQUIRED INSPECTION WORK. INSPECTION SHALL CONSIST OF VISUAL OBSERVATIONS OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS PART OF THIS PRESENT CONTRACT WITH THE ARCHITECT/OWNER. UNDER THIS PRESENT CONTRACT, THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. HOWEVER, SUCH VISITS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHOULD IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT. HOWEVER, IF DESIRED, MORABITO CONSULTANTS, INC. MAY BE HIRED UNDER A SEPARATE CONTRACT TO PERFORM THIS INSPECTION WORK.

EXISTING CONDITIONS: IN AS MUCH AS THE REMODELING

AND/OR REHABILITATION OF AN EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED WITHOUT EXPENDING GREAT SUMS OF ADDITIONAL MONEY, OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE OWNER AGREES THAT, EXCEPT FOR NEGLIGENCE ON THE PART OF MORABITO CONSULTANTS, THE OWNER WILL HOLD HARMLESS AND INDEMNIFY MORABITO CONSULTANTS FOR AND AGAINST ANY AND ALL CLAIMS, DAMAGES, AWARDS, AND COSTS OF DEFENSE ARISING OUT OF DEFICIENCIES IN THE ORIGINAL BUILDING STRUCTURE.

DESIGN WITHOUT CONSTRUCTION REVIEW: IT IS AGREED THAT IF MORABITO CONSULTANTS, INC.'S PROFESSIONAL SERVICES DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTOR'S WORK OR PERFORMANCE, THEN THE OWNER WILL DEFEND, INDEMNIFY AND HOLD HARMLESS MORABITO CONSULTANTS, INC., FROM ANY CLAIM OR SUIT WHATSOEVER, INCLUDING BUT NOT LIMITED TO ALL PAYMENTS, EXPENSES OR COSTS INVOLVED, ARISING FROM OR ALLEGED TO HAVE ARISEN FROM THE CONTRACTOR'S PERFORMANCE OR THE FAILURE OF THE CONTRACTOR'S WORK TO CONFORM TO THE DESIGN INTENT AND THE CONTRACT DOCUMENTS. MORABITO CONSULTANTS, INC., AGREES TO BE RESPONSIBLE FOR ITS OWN OR ITS EMPLOYEES' NEGLIGENT ACTS, ERRORS OR OMISSIONS.

OWNERSHIP OF DOCUMENTS: THE CONTRACTOR ACKNOWLEDGES THESE PLANS AND SPECIFICATIONS PREPARED BY MORABITO CONSULTANTS, INC., AS INSTRUMENTS OF PROFESSIONAL SERVICE. NEVERTHELESS, THE PLANS AND SPECIFICATIONS PREPARED UNDER THIS AGREEMENT SHALL REMAIN THE PROPERTY OF MORABITO CONSULTANTS, INC. UPON COMPLETION OF THE WORK. THE CONTRACTOR AGREES TO HOLD HARMLESS AND INDEMNIFY MORABITO CONSULTANTS, INC., AGAINST ALL DAMAGES, CLAIMS, AND LOSSES, INCLUDING DEFENSE COSTS, ARISING OUT OF ANY REUSE OF THE PLANS AND SPECIFICATIONS WITHOUT THE WRITTEN AUTHORIZATION OF MORABITO CONSULTANTS, INC.

DESIGN DATA:

Fy = 36 KSI
 Fc = 4 KSI

LIVE LOADS:

FIRST FLOOR = 60 PSF

DEAD LOADS:

PLASTER PARTITIONS = 20 PSF

GEOTECHNICAL:

PRESUMPTIVE ALLOWABLE BEARING PRESSURE = 1500 PSF



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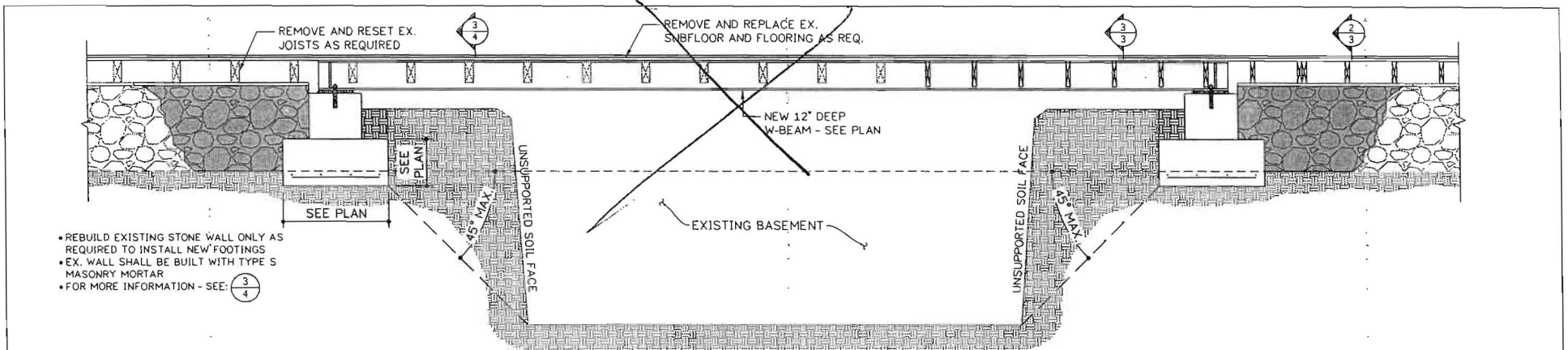
STRUCTURAL ENGINEERS
 PARKING CONSULTANTS

952 RIDGEBROOK ROAD, SUITE 1700 (410) 467-2377
 SPARKS, MARYLAND 21152-9472 FAX (410) 467-4132

PROJECT:

STRUCTURAL REPAIRS AT
 SAINT BARNABAS EPISCOPAL CHURCH
 SYKESVILLE, MARYLAND

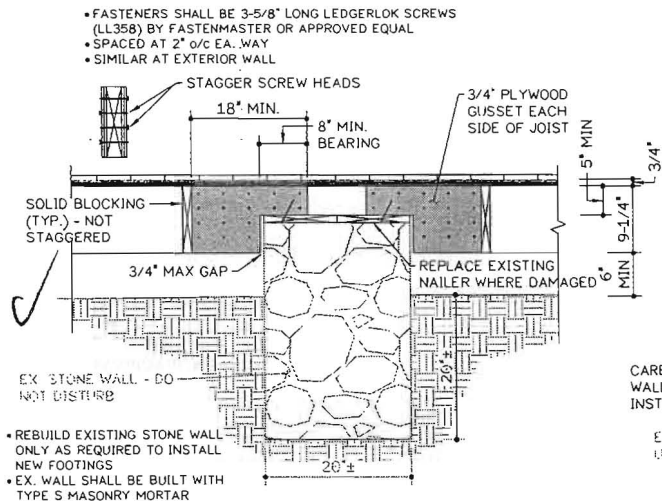
JOB # 14187
 DATE: 6/16/2015
 REVISED: _____
 SHEET 2 OF 5



- REBUILD EXISTING STONE WALL ONLY AS REQUIRED TO INSTALL NEW FOOTINGS
- EX. WALL SHALL BE BUILT WITH TYPE S MASONRY MORTAR
- FOR MORE INFORMATION - SEE: 3
4

① SECTION THRU BASEMENT

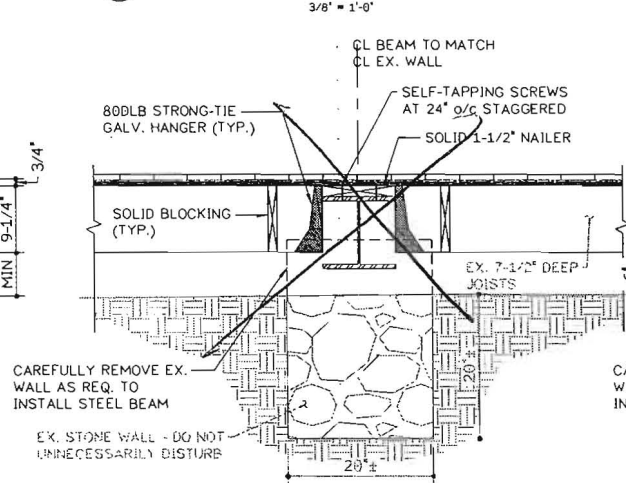
3/8" = 1'-0"



- REBUILD EXISTING STONE WALL ONLY AS REQUIRED TO INSTALL NEW FOOTINGS
- EX. WALL SHALL BE BUILT WITH TYPE S MASONRY MORTAR

② SECTION AT NEW JOISTS

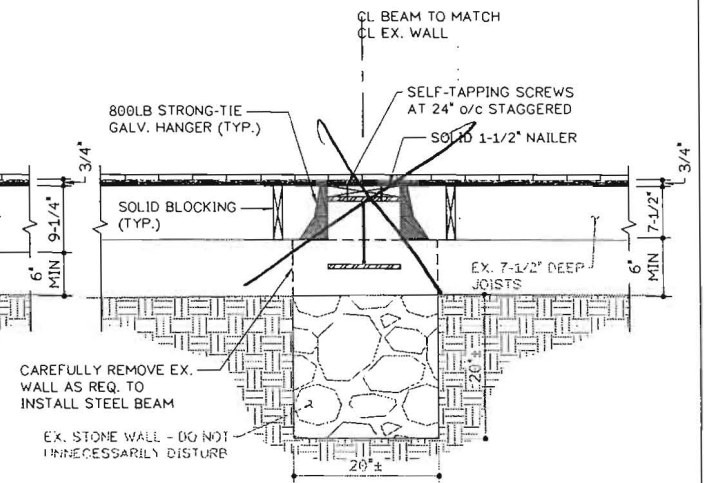
3/4" = 1'-0"



- CAREFULLY REMOVE EX. WALL AS REQ. TO INSTALL STEEL BEAM
- EX. STONE WALL - DO NOT UNNECESSARILY DISTURB

③ SECTION AT NEW JOISTS

3/4" = 1'-0"



- CAREFULLY REMOVE EX. WALL AS REQ. TO INSTALL STEEL BEAM
- EX. STONE WALL - DO NOT UNNECESSARILY DISTURB

④ SECTION AT EX. JOISTS

3/4" = 1'-0"



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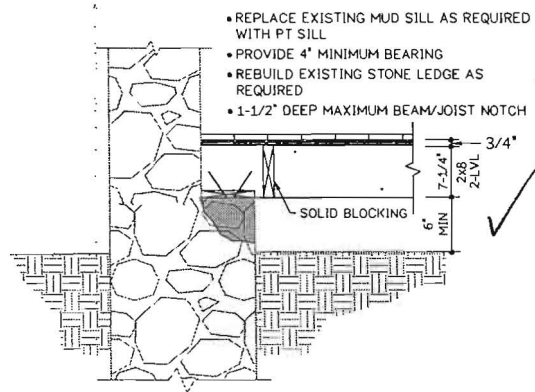
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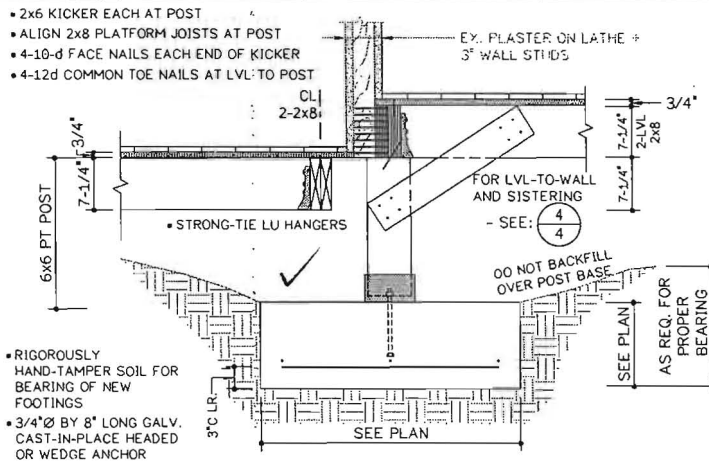
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SHEET 3 OF 5



① BEARING AT EX. WALL

3/4" = 1'-0"

- REPLACE EXISTING MUD SILL AS REQUIRED WITH PT SILL
- PROVIDE 4" MINIMUM BEARING
- REBUILD EXISTING STONE LEDGE AS REQUIRED
- 1-1/2" DEEP MAXIMUM BEAM/JOIST NOTCH

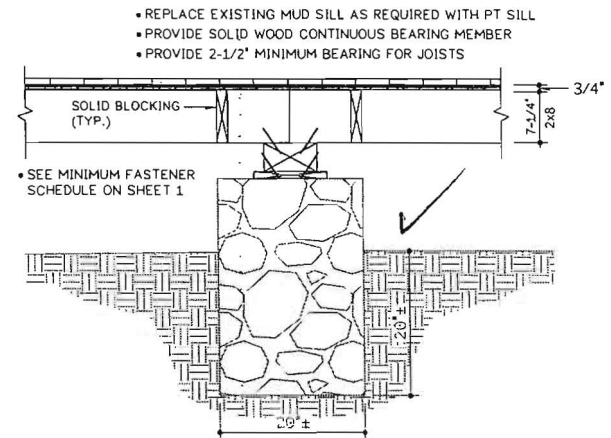


② SECTION AT NEW LVL

3/4" = 1'-0"

- 2x6 KICKER EACH AT POST
- ALIGN 2x8 PLATFORM JOISTS AT POST
- 4-10-d FACE NAILS EACH END OF KICKER
- 4-12d COMMON TOE NAILS AT LVL TO POST

- RIGOROUSLY HAND-TAMPER SOIL FOR BEARING OF NEW FOOTINGS
- 3/4" Ø BY 8" LONG GALV. CAST-IN-PLACE HEADED OR WEDGE ANCHOR

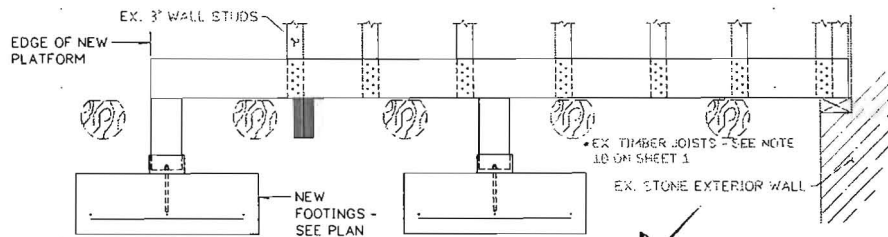


③ SECTION AT PLATFORM

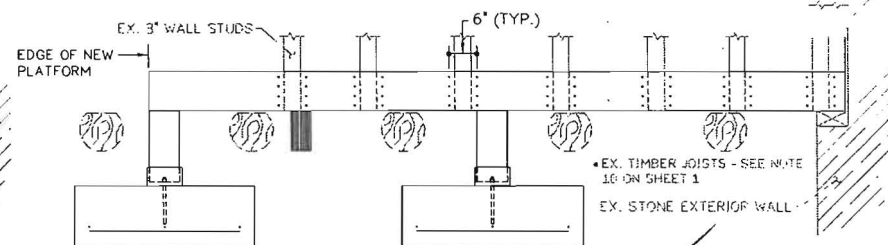
3/4" = 1'-0"

- REPLACE EXISTING MUD SILL AS REQUIRED WITH PT SILL
- PROVIDE SOLID WOOD CONTINUOUS BEARING MEMBER
- PROVIDE 2-1/2" MINIMUM BEARING FOR JOISTS

- SEE MINIMUM FASTENER SCHEDULE ON SHEET 1



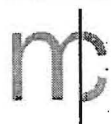
- STEP 1:
FASTEN 1-PLY OF NEW LVL BEAM TO EXISTING WALL STUDS AS SHOWN
- STAGGER FASTENER ROWS
 - PROVIDE 1" MINIMUM EDGE AND END DISTANCES
 - SPACING OF FASTENERS SHALL BE UNIFORM AND NO LESS THAN 3/4"
 - FASTENERS SHALL BE 6" LONG HEADLOK SCREWS (HLGM6) BY FASTENMASTER OR APPROVED EQUAL



- STEP 2:
FASTEN 2ND PLY OF NEW LVL BEAM TO 1ST PLY AS SHOWN
- FASTENER ROWS SPACED 6" APART CENTERED OVER EX. STUD
 - PROVIDE 1" MINIMUM EDGE AND END DISTANCES
 - SPACING OF FASTENERS SHALL BE UNIFORM AND NO LESS THAN 1.5"
 - FASTENERS SHALL BE 3-5/8" LONG LEDGERLOK SCREWS (LL358) BY FASTENMASTER OR APPROVED EQUAL

④ TYPICAL LVL SISTERING

NOT TO SCALE



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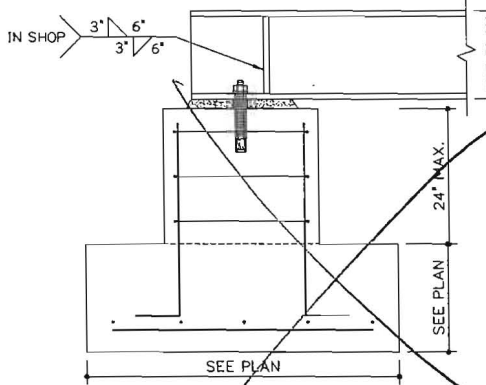
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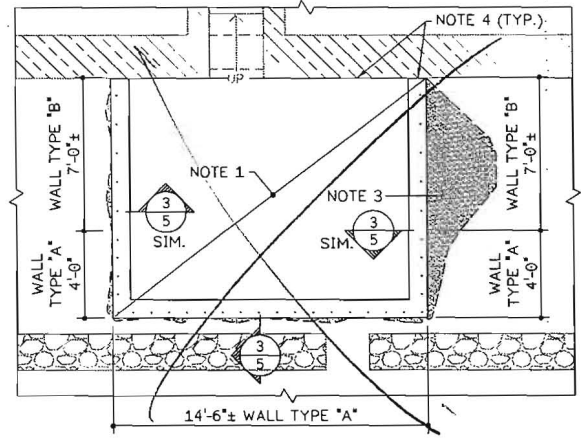
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- 1/4" STIFFENER - ONE SIDE OF WEB
- 24"Ø OR 24" SQUARE REINFORCED CONCRETE PEDESTAL (TYP.)
- (4)#6 DOWELS
- (3)#3 TIES
- PROVIDE (2) 3/4"Ø BY 8" EMBEDMENT WEDGE ANCHORS - 1 EA. SIDE OF WEB
- USE 3"Ø WASHERS AS REQUIRED TO SHIM/SET BEAM ELEVATION
- PROVIDE 16" MINIMUM BEAM BEARING LENGTH ON 1"± THICK 4,000 PSI NON-SHRINK GROUT FILL WIDTH OF BEAM

① TYPICAL FOOTING AT STEEL BEAM

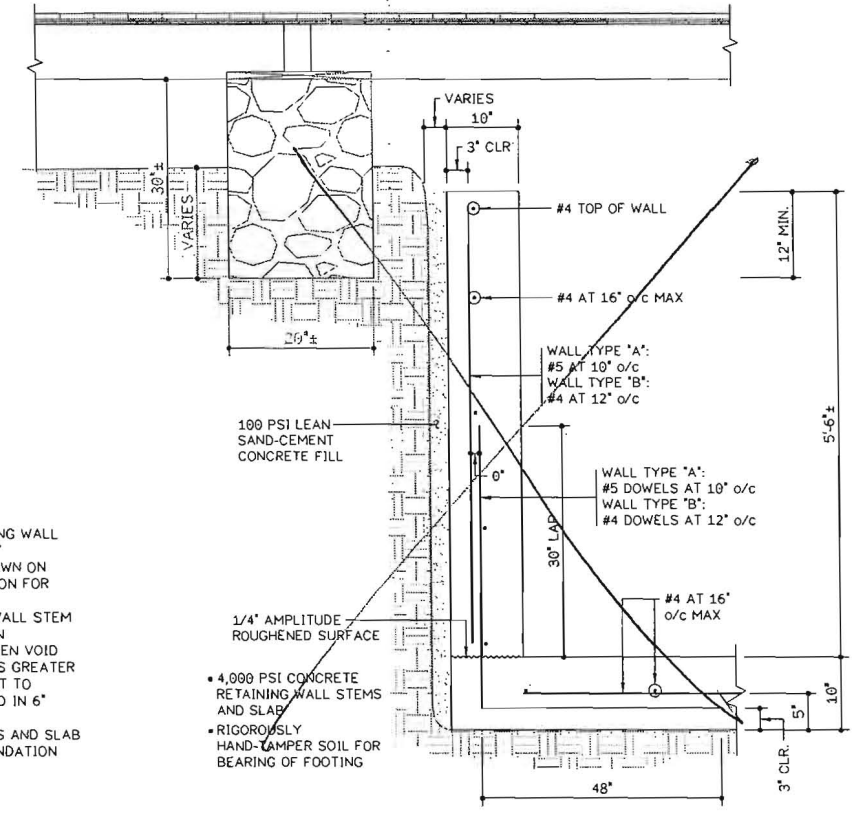
3/4" = 1'-0"



1. NEW 10" BASEMENT SLAB/RETAINING WALL TOE WITH #4 AT 16" o/c EACH WAY
2. RETAINING WALL STEM TYPES SHOWN ON PLAN. SEE RETAINING WALL SECTION FOR REINFORCING
3. FILL VOIDS BETWEEN RETAINING WALL STEM AND SOIL FACE WITH 100 PSI LEAN SAND-CEMENT CONCRETE FILL. WHEN VOID WIDTH BETWEEN STEM AND SOIL IS GREATER THAN 24", CONTRACTOR MAY ELECT TO PROVIDE 3/8" PEA GRAVEL, PLACED IN 6" HAND-COMPACTED LIFTS
4. CAST NEW RETAINING WALL STEMS AND SLAB DIRECTLY AGAINST EXISTING FOUNDATION WALL

② ALTERNATE BASEMENT RETAINING WALL

3/16" = 1'-0"



③ ALTERNATIVE RETAINING WALL SECTION

3/4" = 1'-0"

MORABITO CONSULTANTS INC.
 STRUCTURAL ENGINEERS
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 SHEET 5 OF 5