West Fulton Fire Department Improvement Project
Hamlet of West Fulton, Schoharie County, NY

Environmental Review Record

Prepared by:
CSA Group
55 Broadway
New York, New York 10006

New York State Homes and Community Renewal
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

February 22, 2018

West Fulton Fire Department Improvement Project
Environmental Review Record

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Project Name:	West Fulton Fire Department Improvement Project
Project Location:	807 West Fulton Road, West Fulton, New York 12194
HTFC SHARS #:	N/A
Federal Agency:	US Department of Housing and Urban Development
Responsible Entity:	New York State Homes and Community Renewal
Responsible Agency's Certifying Officer:	Lori A. Shirley, Governor's Office of Storm Recovery, Certifying Officer
Project Sponsor:	County of Schoharie
Primary Contact:	Shane Nickle Senior Planner (518) 295-8770 shanenickle@co.schoharie.ny.us
Project NEPA Classification:	24 CFR 58.36 (Environmental Assessment)

Environmental Finding:	**X** Finding of No Significant Impact - The project will not result in a significant impact on the quality of the human environment.
	☐Finding of Significant Impact - The project may significantly affect the quality of the human environment.
Certification	The undersigned hereby certifies that New York State Homes and Community Renewal has conducted an environmental review of the project identified above and prepared the attached environmental review record in compliance with all applicable provisions of the National Environmental Policy Act of 1969, as amended (42 USC Sec. 4321 et seq.) and its implementing regulations at 24 CFR Part 58.
Signature	Lori A. Shirley

Environmental Assessment Prepared By:	Consultant: CSA Group, PC 55 Broadway New York, New York 10006

CERTIFICATION OF NEPA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2018 NYS CDBG-DR project, West Fulton Fire Department Improvement Project are:

Check the applicable classification.

☐ Exempt as defined in 24 CFR 58.34 (a).

☐ Categorically Excluded as defined in 24 CFR 58.35(b).

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and no activities are affected by federal environmental statues and executive orders [i.e., exempt under 58.34(a)(12)].

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and some activities are affected by federal environmental statues and executive orders.

☒ "Other" neither exempt (24 CFR 58.34(a)) nor categorically excluded (24 CFR 58.35).

☐ Part or all of the project is located in an area identified as a floodplain or wetland. For projects located in a floodplain or wetland, evidence of compliance with Executive Orders 11988 and/or 11990 is required.

For activities excluding those classified as "Other", attached is the appropriate Classification Checklist (Exhibit 2-4) that identifies each activity and the corresponding citation.

Lori A Shirley

_____ February 22, 2018_____

Signature of Certifying Officer Date

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

CERTIFICATION OF SEQRA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its West Fulton Fire Department Improvement Project constitute an:

Check the applicable classification:

- ☐ Type I Action (6NYCRR Section 617.4)
- ☐ Type II Action (6NYCRR Section 617.5)
- ☒ Unlisted Action (not Type I or Type II Action)

Check if applicable:

- ☐ Environmental Impact Statement (EIS) Prepared
  - ☐ Draft EIS
  - ☐ Final EIS

Lori A Shirley _____ February 22, 2018_____

Signature of Certifying Officer Date

Lori A. Shirley
Director, Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, Schoharie County, New York **(Figure 1)**. The parcel is open grass on the northern portion and wooded on the southern portion (**Figure 2).** Schoharie County is requesting $1,016,618.00 in CDBG-DR funding to improve, upgrade, and expand the current West Fulton Fire Department facility. The proposed improvements will enhance the Department's ability to deliver emergency response services, shelter survivors, and to distribute supplies during future storm events.

The existing fire station is a wood frame structure. The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms (**Figure 3)**. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The gravel parking area will be increased by 8,600 square feet (10 new spaces) and will be ADA compliant. A new 40KW backup generator will be installed on a concrete pad and fueled by two new 1,000-gallon underground propane tanks.

The building addition, parking area and generator pad will require earthwork in the form of excavation. No property acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:
During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

The project beneficiaries reside within the Town of Fulton, which includes Census Tract 740600. This project will be used as an evacuation site and shelter as well as an Emergency Response center. The design of this facility will include increased capacity for sheltering vulnerable/high risk populations, enhancing emergency services response and enhancing the communication capability for emergency services during future 100-year flood events.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The Town of Fulton was first settled in 1715. Today, the Town of Fulton with nearly 1,500 citizens, encompasses 65 square miles and includes the Hamlets of Breakabeen, Fultonham, Watsonville and West Fulton. The Town of Fulton population was 1,442 in the 2010 census. This number may

increase by several hundred people when second-home and part-time residents are present. The current median age in the Town is 49.4 years. Approximately 300 residents reside within the hamlet of West Fulton, which is situated in a hollow, surrounded by three hills.

The Town of Fulton is in Schoharie County and along the I-88 corridor. The primary industry of Schoharie County is agriculture. Farms are situated all over the County and farm stands and other agriculture related businesses are operated throughout the County. Many residents work in the Capital District, New York. The I-88 corridor is growing due to the short commute to Schenectady and Albany.

Standard Conditions for All Projects

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with the National Environmental Policy Act (NEPA) and other laws and Executive Orders.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires the recipient to comply with all federal state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.

Funding Information

Estimated Total HUD Funded Amount: $1,095,108.00.

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $1,095,108.00.

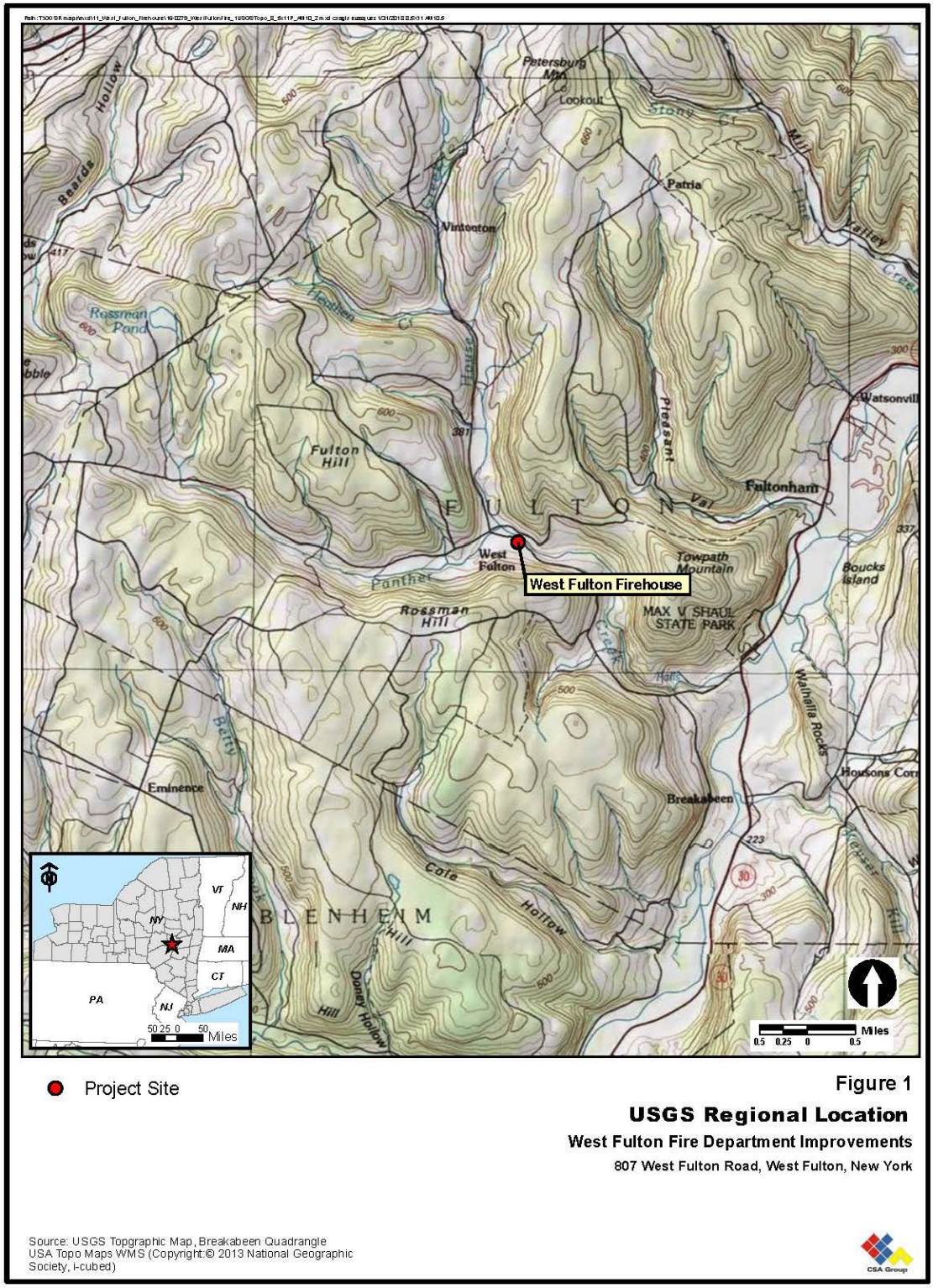


Figure 1. Site Location Map

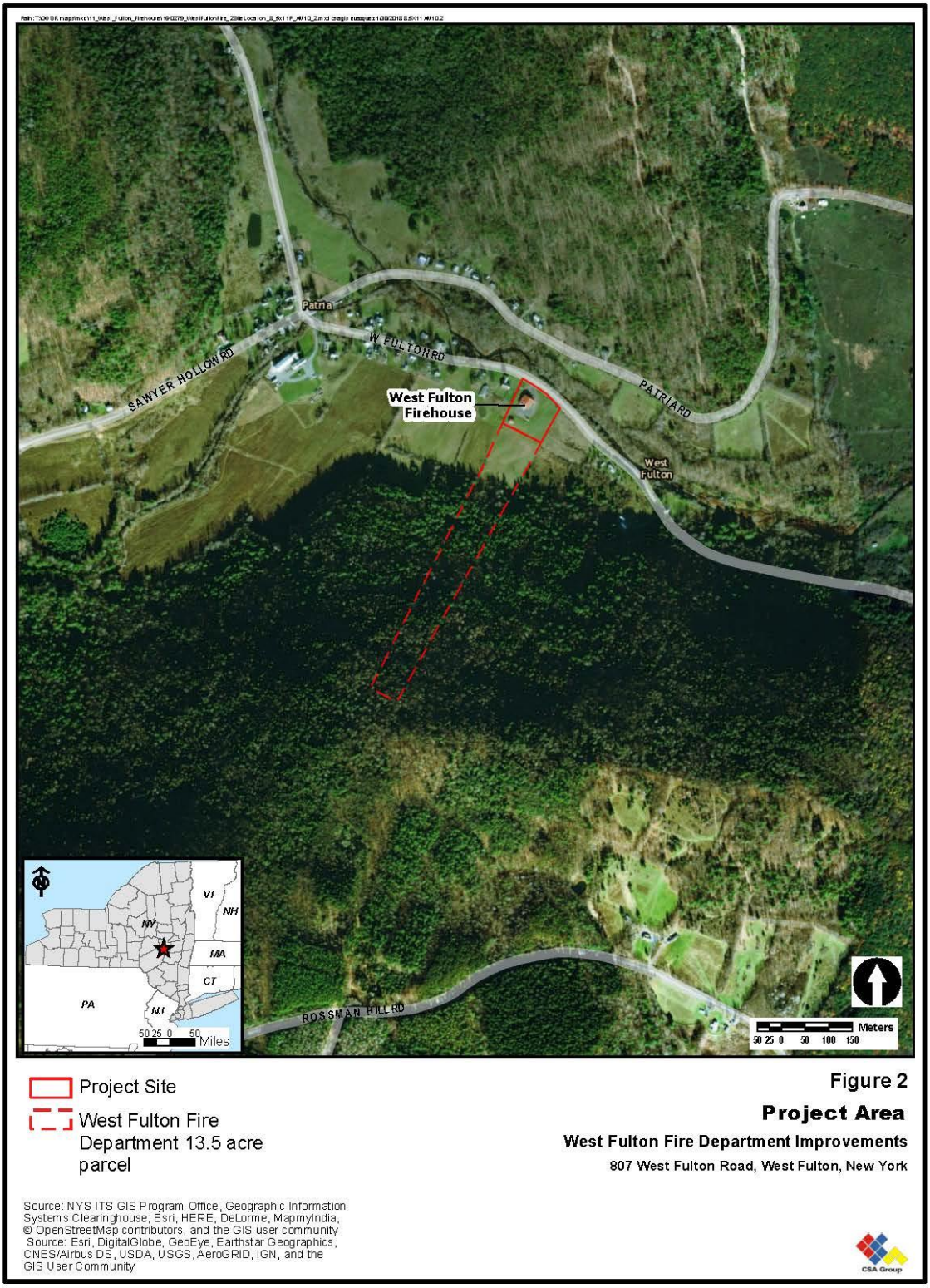


Figure 2. Project Location

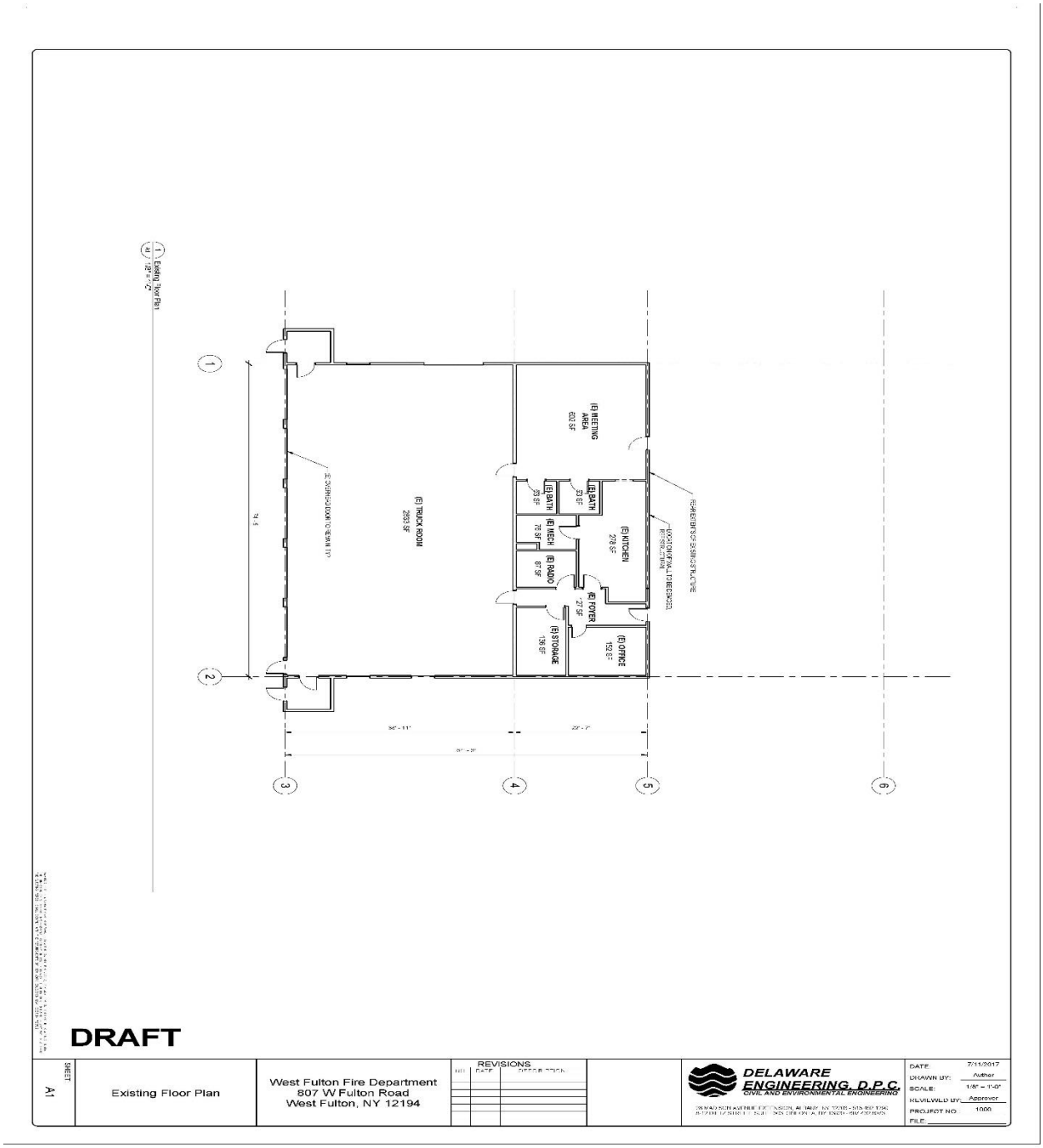


Figure 3. Existing Site Plan of the West Fulton Firehouse

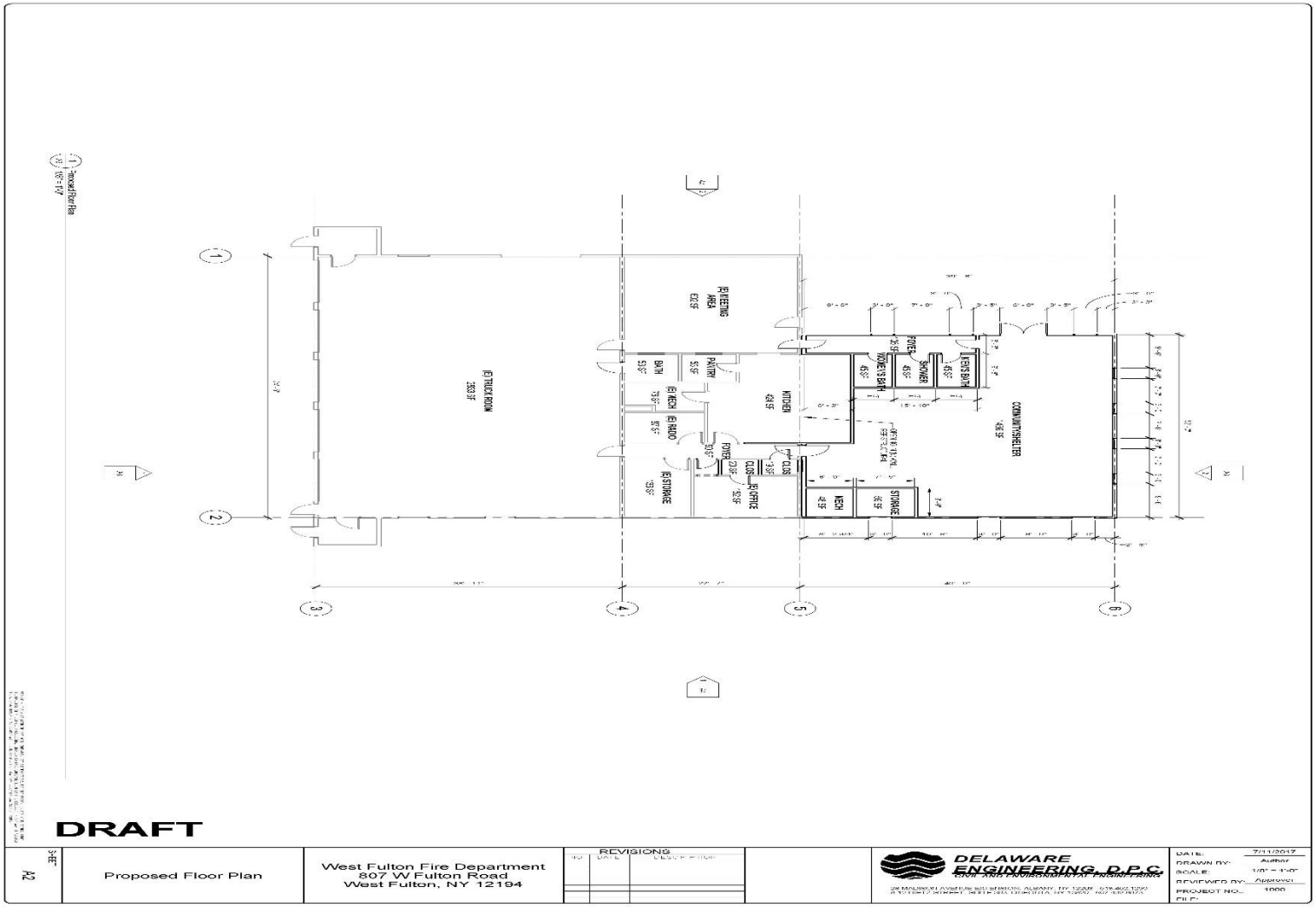


Figure 4. Proposed layout of expanded West Fulton Fire Station

Figure 5. West Fulton Fire Station Site Plan

Compliance with 24 CFR 58.5 and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	Based on HUD guidance in Fact Sheet #D1, the National Plan of Integrated Airport Systems (NPIAS) was reviewed for civilian, commercial service airports near the Project site, as projects within 2,500 feet of a civil airport require consultation with the appropriate civil airport operator. There are no civilian, public-use airports within 2,500 feet of the Project site. No military airports are within 15,000 feet of the Project site. (See **Appendix A**, **Figure 11**.) **Source: 2**
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The Project site is not situated within a Coastal Barrier Resources Area as defined by the state's Coastal Zone Management Program. (See **Appendix A**, **Figure 5**)
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The Project site is located in Zone X, outside the 100-year Special Flood Hazard Area (SFHA), as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel Numbers 36095C0280E and 36095C0290E, dated April 2, 2004. (**See Appendix A, Figure 3**). The Project will not require flood insurance.

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	The Project site is not included in the most recent listing of nonattainment or maintenance areas for any criteria pollutants including inhalable particulate matter (PM2.5) or the 2008 8-hour ozone standard, as defined by the US Environmental Protection Agency (EPA) Green Book Nonattainment Areas for Criteria Pollutants. The Project will not require an NYS Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit. The Project activities will not substantively affect air quality. The Project size is consistent with the New York State Implementation Plan (SIP) as it will not involve new sources. The proposed 40 KW emergency generator is subject to the stationary Reciprocating Internal Combustion Engine (RICE) Maximum Achievable Control Technology (MACT) regulations at 40 CFR 63 ZZZZ that govern emission limits and compliance requirements for existing and new stationary RICE. Any new compression ignition generator must comply with 40 CFR 60, Subpart IIII, and any new spark ignition generator must comply with 40 CFR 60, Subpart JJJJ. Compliance will be demonstrated by purchasing a generator certified to the limits in these regulations. As the emergency generator does not require a NYSDEC permit or registration, is not located at a major source of hazardous air pollutant emissions, and is not intended for use in demand response programs, the proposed Project will not exceed conformity thresholds, does not require notification, and will likely not result in direct or indirect adverse impacts to air quality. Therefore, the

		conformity determination requirements do not apply to the Proposed Project (See **Appendix B**, correspondence from NYSDEC). Air quality impacts will be short term and localized during construction, so no significant adverse impacts to air quality are anticipated. Implementation of standard best management practices (BMPs) will control dust and other emissions during construction. Air quality impacts will be short term and localized during construction, so no significant adverse impacts to air quality are anticipated. **Source: 3, 4**
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The Project site is not located within a coastal zone as defined by the state's Coastal Zone Management Program nor a Local Waterfront Revitalization Program. (See **Appendix A**, **Figure 4**)
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	The West Fulton Fire Department site is developed with typical fire department facilities including a large truck room, small meeting room, restrooms, radio room and limited storage. The facility is heated by an oil fired boiler. The fuel oil for the boiler is contained in two 275-gallon tanks located inside the truck bay. A new 40 KW emergency generator would replace the existing 10 KW diesel-fired generator. The new generator would be powered by propane. Propane would be stored in two 1,000 gallon underground tanks located near the southwest corner of the expansion area. The Project site is not situated in or near any documented hazardous waste sites (see **Appendix A, Figure 6**). The Proposed Project site is not located within 3,000 feet of any

		federally listed Superfund, Brownfield, Resource Conservation and Recovery Act (RCRA), Toxic Release Inventory (TRI), Toxic Substances Control Act (TSCA) or water discharger site. The project site is not situated on or within 3,000 feet of any site listed on the NYSDEC Remediation database including State Superfund, Brownfield Cleanup, Environmental Restoration and/or Voluntary Cleanup nor any toxic or solid waste landfill. No Bulk Storage facilities occur within 3,000 feet of the proposed project site, and no sites listed on the NYSDEC SPILLS database are found in the vicinity of the project area. (**See Appendix C for Supplemental Hazardous Waste Report**). **Asbestos and Lead-Based Paint** The West Fulton Fire Department building was constructed in 2003. Because of the age of the building an asbestos and lead-based paint assessment is not required. **Polychlorinated Biphenyls** PCBs were widely used in equipment, such as transformers, capacitors, and hydraulic equipment, until 1979 when the EPA regulated their use in this capacity. Since the structure was built in 2003, it is highly unlikely that equipment containing PCBs would occur on site. Therefore, a PCB inspection is not warranted. **Mold** Mold can also have an adverse effect on human health and is a very common problem in buildings that have been flooded or experienced water damage. The West Fulton Firehouse has not experience flooding, therefore, a mold assessment is not required. **Radon** According to the EPA, the Project site is in

		Radon Zone 1, where the predicted average indoor radon screening level is over 4 picoCuries per liter (pCi/L), a high potential for elevated indoor radon levels. A vapor barrier will be installed in the expansion area to prevent radon gas from entering the building. A post-construction vapor barrier will be applied to the existing firehouse building as part of the renovation. **Source: 7, 8, 9**
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	The US Fish and Wildlife Service (USFWS) online review process found one threatened species potentially associated with the project site– the threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). In addition, several migratory birds of concern that could be affected by the proposed Project were identified. GOSR subsequently provided the USFWS with a letter documenting the Endangered Species Act review and requesting informal consultation. Because there will be no tree removal associated with this Project, GOSR determined that this Project will have "*No Effect*" on endangered/threatened species, migratory birds, or critical habitat for species under USFWS jurisdiction. The USFWS acknowledged the "*no effect*" determination on November 13, 2017, and stated that no further ESA coordination or consultation will be required. In response to an inquiry to the New York Natural Heritage Program (NYNHP) regarding potential rare or state-listed animals or plants near the Project site, the New York Department of Environmental Conservation (NYDEC) stated that there are no records of concern for rare or state-listed animals or plants, or significant natural communities at the Project site or in its immediate vicinity

		(**see Appendix D**, for USFWS, NYSDEC, and NYNHP Correspondence).
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	The West Fulton Fire Department currently has a 10 KW diesel-fueled generator on site. The fuel tank for this generator holds approximately 30 gallons of diesel fuel. The generator will be replaced with a propane generator. The proposed generator will be managed in accordance with standards set forth by the U.S. Environmental Protection Agency (US EPA), the New York State Department of Environmental Conservation (NYSDEC) and other applicable agencies with jurisdiction. Fuel for the generator would be stored in two, 1,000 gallon individual underground storage tanks and would be installed within a concrete casing to mitigate HUD's Acceptable Separation Distance Requirements pursuant to 24 CFR Part 51, Subpart C. **Source 5, 6**
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	Soils on the approximately 2-acre development site consist of Tunkhannock and Chenango gravelly silt loams, 5 to 15 percent slopes which is classified as farmland of statewide importance (see **Appendix E)**. However, disturbance 0.25-acres of land to implement the proposed project falls under the Natural Resources Conservation Service small acreage exemption of three acres or less. According to Part 523.11 E of the Farmland Protection Policy Act (FPPA) Manual, an AD 1006 is not required for this Project, and it is exempt. **Source: 10**
Floodplain Management	Yes ☐ No ☒	The Project site is situated in Zone X outside the 100-year SFHA, as shown on the FEMA Flood Insurance Rate Map Community Panel Numbers 36095C0280E and 36095C0290E,

Executive Order 11988, particularly section 2(a); 24 CFR Part 55		dated April 2, 2004. (See **Appendix A, Figure 3**).
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800; Tribal notification for new ground disturbance.	Yes ☐ No ☒	Consultation with the New York State Historic Preservation Office (SHPO) and the Division for Historic Preservation (DHP) in the Office of Parks, Recreation and Historic Preservation (OPRHP) in accordance with Section 106 of the National Historic Preservation Act of 1966 was initiated through the Cultural Resource Information System. In a letter dated November 14, 2017, the SHPO indicated that there will be No Historic Properties Affected by the Project. (See **Appendix F**, SHPO Correspondence.) The Mohawk Nation, St. Regis Mohawk Tribe, and Stockbridge-Munsee Community, Band of Mohicans were contacted as possible consulting parties. Each was sent a letter on November 9, 2017, with the site description, photographs, site plan, and map. Only the Stockbridge-Munsee Community, Band of Mohicans replied. They declined further consultation. (See **Appendix G**, Tribal Correspondence)
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	The Project involves the expansion and renovation of an existing Firehouse which has occupied the site for over fifteen years. The Proposed Project is not a noise-sensitive use, and the policies of 24 CFR 51.101(a)(3) do not apply to any action or emergency assistance under disaster assistance provisions or appropriations that are provided to save lives and protect public health and safety. The land surrounding the existing firehouse is largely vacant, no noise-sensitive receptors are present or proposed at the Project site.

Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	The Project site is not within the boundary of a Sole Source Aquifer (SSA) Designated Area. (See **Appendix A**, **Figure 7**). The closest SSA is Schenectady-Niskayuna SSA which is approximately 30 miles northeast of the Project site.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	According to the National Wetland Inventory and NYSDEC mapping, there are no federal or state jurisdictional wetlands within one mile of the site. The closet mapped feature is Panther Creek, a riverine perennial stream situated across West Fulton Road, approximately 300 feet north of the firehouse. No work is proposed north of the firehouse and the Proposed Project will not impact this feature (see **Appendix A**, **Figure 8**).
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	The National Park Service lists Schoharie Creek, which is situated approximately two and a half miles east of the Project site, under its National Rivers Inventory as a river segment that "*has one or more outstandingly remarkable values*." Thus, Schoharie Creek is a potential candidate for inclusion in the National Wild and Scenic River System. The Proposed Project will not affect Schoharie Creek. (See **Appendix A**, **Figure 9)**

ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	Since the Proposed Project involves the expansion of the existing West Fulton Firehouse with no potential adverse impacts, there are no disproportionate adverse impacts anticipated. The Proposed Project will follow local ordinances, therefore, no adverse impacts on the surrounding community are anticipated. The Project site is not within in a potential Environmental Justice (EJ) area, as defined by

		NYSDEC based on data from the 2010 U.S. Census (See **Appendix A**, **Figure 10)**. The Project will not raise EJ issues and will have no potential for new or continued disproportionately high and adverse human health and environmental effects on minority or low-income populations. In fact, the Proposed Project meets the national objective criteria under 24CFR 570.483(b)(1) for activities benefiting low and moderate income persons since the majority (53.8%) of persons living in the Town of Fulton are considered to be low income. **Source 11**

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits or approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	1	The Project will not require the acquisition of new land. The parcel is owned by Schoharie County and is a certified Red Cross Shelter. There is no current zoning. The Project is consistent with goals and funding priorities identified in the New York Rising Community Reconstruction (NYRCR) Towns of Fulton and Blenheim Plan, including expansion of the West Fulton Fire Department to more effectively operate as the Town's EOC. The development will incorporate resiliency measures under the NYS Building Code and those in the Resiliency Tool Kit. **Source: 11**
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	3	The 13.5 acre parcel slopes from an elevation of approximately 1,325 above mean sea level (AMSL) feet at it southern end to approximately 1,144 AMSL at its northern end (where the firehouse currently sits). Overland drainage would tend to follow natural contours and drain into Panther Creek located approximately 350 feet north of the firehouse (see **Appendix A, Figure 8**). The site will require

		excavation to a depth of approximately five feet to construct the building and parking lot additions. Soils underlying the two-acre development site consist of both Tunkhannock and Chenango gravelly silt loams, 5 to 15 percent slopes. The Tunkhannock and Chenango series are in the same family and consist of very deep, well to somewhat excessively drained soils formed in water-sorted glacial material. Tunkhannock soil was derived from reddish sandstone, siltstone, and shale while the Chenango series formed on outwash plains, kames, eskers, terraces, and alluvial fans. In the Tunkhannock series, depth to bedrock is 3 1/2 to 10 feet or more; in the Chenango series depth to bedrock is greater than 60 inches. The only new impervious surface to be created on the project site would be the 2,080-square foot addition and the small concrete pad to hold the new generator. The parking lot will be composed of gravel which will allow for the permeation of water.
Hazards and Nuisances including Site Safety and Noise	2	The Project site is not in a 100- or a 500-year flood hazard area. No other known natural hazards, including earthquake fault zones, landslide zones, or hazardous terrain, are at or near the Project site. The Project will generate noise during construction that will be minimized through compliance with local noise ordinances, including time-of-day work limitations. Exterior construction activities will take place during normal working hours and will employ commonly accepted engineering and administrative controls that will minimize noise impacts to neighbors. Interior construction activities will have negligible impact to neighbors.
Energy Consumption	2	The Project would result in some additional energy consumption; however, the expanded facility will use more modern and energy-saving building materials and practices. No impacts will occur to existing nearby suppliers.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	There will be a temporary minor increase in employment during construction and no increase in long-term employment.
Demographic Character Changes, Displacement	2	The Project site would be used as an EOC. No population changes will result, there will be no demographic, character, or displacement impacts.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	Because the Project involves no changes in population, there will be no impact on demand for educational or cultural facilities.
Commercial Facilities	2	Because the Project involves no changes in population, there will be no impact on demand for commercial facilities.
Health Care and Social Services	2	Because the Project involves no changes in population, there will be no impact on demand for health care and social services.
Solid Waste Disposal / Recycling	2	Construction may result in a temporary increase in solid waste. Construction debris would be collected on-site and disposed of or recycled as appropriate. There will be no increase in solid waste disposal or recycling from operation of the expanded firehouse since it will be used as an EOC.
Waste Water / Sanitary Sewers	2	Wastewater and sewage generated by the Proposed Project will be accommodated by existing septic system. The Project will not place additional demand on a public sewer system.
Water Supply	2	The West Fulton Fire Department currently obtains water from an on-site well located east of the existing building. No changes to water supply will occur as a result of the proposed project, this source will continue to be utilized following project completion.

Public Safety - Police, Fire and Emergency Medical	1	Because the Project involves no changes in population, there will be no impact on demand for police, fire, or emergency medical services. Use of the Project facility by emergency services during flooding will benefit residents of the Hamlet of West Fulton.
Parks, Open Space and Recreation	2	Because the Project involves no changes in population, there will be no impact on demand for parks, open space, or other recreational facilities.
Transportation and Accessibility	2	Because the Project involves no changes in population, there will be no impact on use of transportation infrastructure.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	The Proposed Project involves construction of an addition to the existing West Fulton Firehouse, expansion of the parking area by 10 spaces and installation of a new 40 KW generator. Planned activities are expected to impact less than 0.25 acres of land immediately adjacent to the existing firehouse. This land fronts West Fulton Road in an existing rural area and contains no unique natural features.
Vegetation, Wildlife	2	The USFWS on-line review process indicated that the proposed endangered NLEB may occur in the vicinity of the project area and that several migratory birds of concern that could be affected by the Proposed Project. However, no trees will be removed as part of the Project, and on November 13, 2017, the USFWS acknowledged receipt of a determination of no effect and/or no impact and stated that no further ESA coordination or consultation is required. (See **Appendix C**, USFWS, NYSDEC, and NYNHP Correspondence)**.**
Other Factors	2	No additional factors will be impacted by the project, and no additional impacts will occur.

Additional Studies Performed:
Asbestos sampling revealed no contamination at the site.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

1. New York State. 2013. State of New York Action Plan for Community Development Block Grant Program Disaster Recovery (Action Plan, issued April 25, 2013, amended July 3, 2013) New York State. 2013.

2. Housing and Urban Development (HUD) in Fact Sheet #D1, the National Plan of Integrated Airport Systems https://www.michigan.gov/documents/mshda/ mshda_cd_nsp2_air_accident_315724_7.pdf

3. United States Environmental Protection Agency. Green Book Nonattainment Areas (updated December 31, 2017) Internet Website: http://www.epa.gov/oaqps001/greenbk/ancl.html. (accessed January 30, 2018).

4. U.S. Environmental Protection Agency. 2016. Stationary Internal Combustion Engines. Internet Website: https://www.epa.gov/stationary-engines. Last updated June 28, 2017.

5. HUD Exchange, Explosive and Flammable Facilities https://www.hudexchange.info/environmentalreview/explosive-and-flammable-facilities/

6. HUD Exchange, Acceptable Separation Guidebook https://www.hudexchange.info/resources/documents/Acceptable-Separation-Distance-Guidebook.pdf

7. New York State Department of Environmental Conservation Bulk Storage Database Search. Internet Website: http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=4. (accessed January 30, 2018).

8. New York State Department of Environmental Conservation Environmental Site Remediation Database Search. Internet Website: http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3. (accessed January 30, 2018)

9. United States Department of Housing and Urban Development. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Edition). Internet Website: http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines.

10. United States Department of Agriculture. Natural Resources Conservation Service. Internet Website: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. (accessed January 31, 2018)

11. NYRCR Towns of Fulton and Blenheim Planning Committee. 2014. NYRCR Tioga, NY Rising Community Reconstruction Plan. March 2015 http://www.schohariecounty-ny.gov/CountyWebSite/Planning/NYRCR%20Towns%20of%20Fulton%20and%20Blenheim.pdf

Map Sources are included on maps.

List of Appendices

Appendix A	Figures
Appendix B	NYSDEC Correspondence
Appendix C	Hazardous Waste Supplemental Report
Appendix D	USFWS, NYSDEC, and NYNHP Correspondence
Appendix E	Soil Information
Appendix F	SHPO Correspondence
Appendix G	Tribal Correspondence

List of Permits Obtained or Required:
A building permit by the Town of Fulton

List of Other Approvals Obtained or Required:
State Environmental Quality Review Act (SEQRA) Unlisted evaluation.

List of Environmental Inspections Required:
Asbestos sampling

List of Potential Abatement:
If any inspections identify lead, mold, or PCBs, abatement activities must be completed and final clearance inspections completed.

Public Outreach [24 CFR 50.23 & 58.43]**:**
On February 24, 2018, a combined Notice of Finding of No Significant Impact and Intent to Request Release of Funds was published in the Daily (Schenectady) Gazette. Any individual, group, or agency may submit written comments on the Environmental Review Record to:

Lori A. Shirley, GOSR, HCR
38-40 State Street
Albany, NY 12207
(518) 474-0755
NYSCDBG_DR_ER@nyshcr.org

Cumulative Impact Analysis [24 CFR 58.32]**:**
The Project is not expected to trigger cumulative impacts, including the degradation of important natural resources, socioeconomic resources, human health, recreation, quality of life issues, and cultural and historic resources. The Project is not of a scale large enough to contribute significantly to cumulative impacts. It will create positive impacts, as it will provide the Hamlet of West Fulton with municipal facilities better configures for operations during future storm events.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Proposed Project. As fully described in this Environmental Assessment, the West Fulton Fire Department Improvement Project involves improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, Schoharie County. The project would involve constructing an addition to the firehouse, expansion of the parking area and installation of a new generator.

Alternative Sites Alternative. A key strategy for the Town of Fulton in their New York Rising Community Reconstruction plan is to reconstruct and enlarge the existing West Fulton Firehouse so that there will be sufficient space for an Emergency Operations Center and also emergency first responders. Construction of a new Firehouse on a different property would not be financially feasible.

No Action Alternative [24 CFR 58.40(e)]:
Not undertaking the Project would not be consistent with the goals and objectives of the Towns of Fulton and Blenheim NYRCR Plan and other local and state plans because the Town would not be able to efficiently respond to community needs during extreme storm events.

Summary of Findings and Conclusions:

The expanded facility would allow for more efficient operations and response to extreme storm events. Renovation of the firehouse would provide a safe refuge for survivors and allow for staging and coordinating emergency services during the extreme storm events. The proposed Project will not result in a significant impact on the quality of the human environment or result in other direct, indirect, or cumulative impacts. The Project will comply with all relevant regulations listed in 24 CFR subparts 58.5 and 58.6.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

GOSR has summarized below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures or conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Clean Air Act	All Project activities will comply with applicable federal, state, and local laws and regulations regarding construction emissions, including but not limited to NYCRR, NYSDEC Air Quality Management Plan, and the New York SIP. All necessary measures will be used to minimize fugitive dust emissions during construction activities.
Clean Air Act	The proposed emergency generator is subject to the stationary RICE MACT regulations at 40 CFR 63 ZZZZ that govern emission limits and compliance requirements for existing and new stationary RICE. Any new compression ignition generator must comply with 40 CFR 60, Subpart IIII, and any new spark ignition generator must comply with 40 CFR 60, Subpart JJJJ. Compliance will be demonstrated by purchasing generators certified to the limits in these regulations.
Contamination and Toxic Substances	A post construction radon barrier will be included to prevent radon gas penetration into the new structure. A new radon barrier system will be included in the addition to prevent radon gas penetration.
Contamination and Toxic Substances	All Project-related solid waste generated will be managed and transported in accordance with the NYS solid and hazardous waste rules.
Contamination and Toxic Substances	PCB containing materials will be managed in accordance with the applicable federal and NYSDEC regulations.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	BMPs, such as silt fence and erosion prevention, will be used, if required by permits or agency discretion. State and local permitting requirements will incorporate BMPs to eliminate erosion impacts during construction.

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Cristy L. Boyd Date: February 22, 2018

Name/Title/Organization: Cristy L. Boyd, Senior Environmental Scientist CSA Group

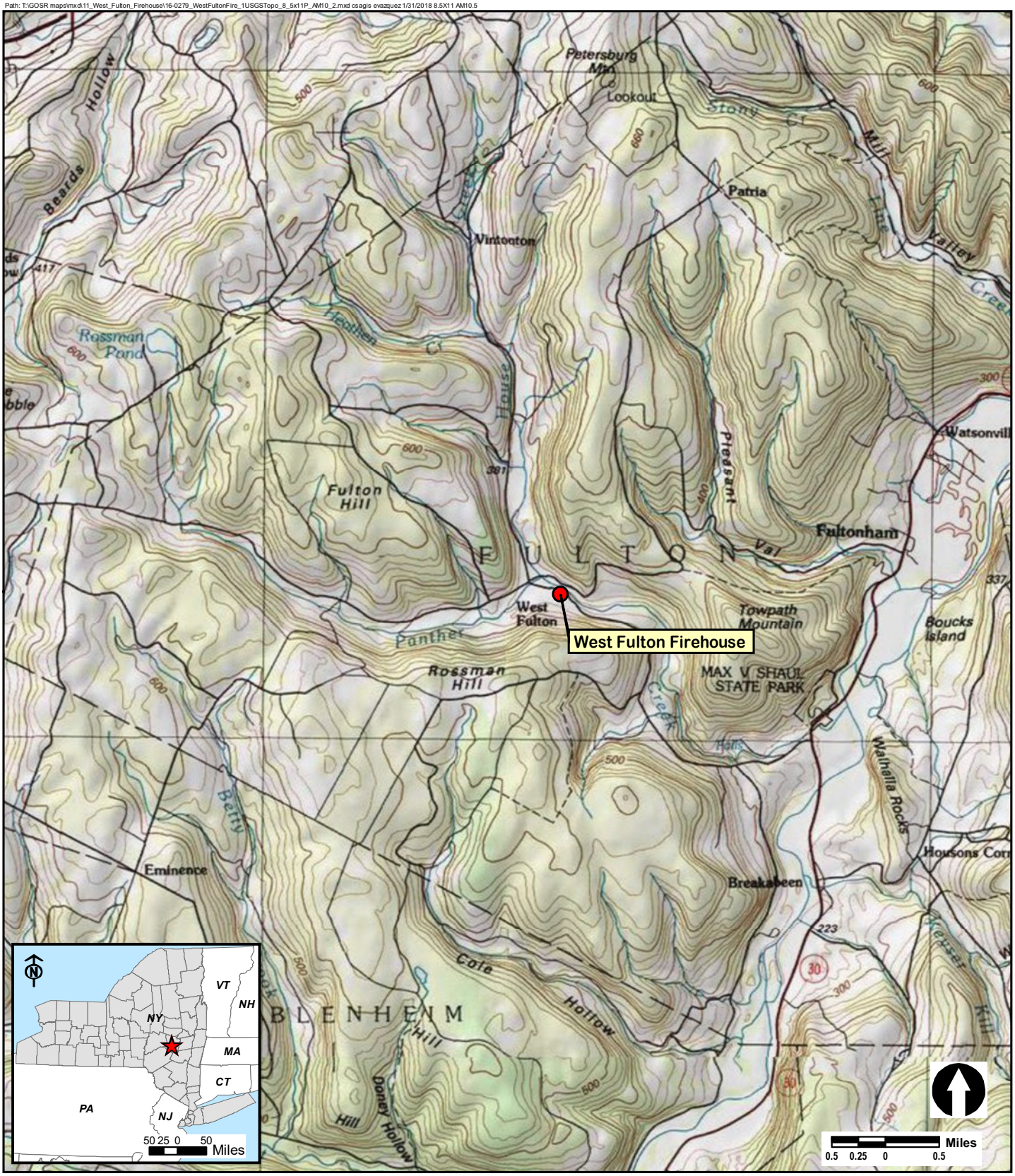
Certifying Officer Signature: Lori A Shirley Date: February 22, 2018

Name/Title: Lori A. Shirley, Director, Bureau of Environmental Review and Assessment, Governor's Office of Storm Recovery

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Appendix A: Figures

Path: T:\GOSR maps\mxd\11_West_Fulton_Firehouse\16-0279_WestFultonFire_1USGSTopo_8_5x11P_AM10_2.mxd csagis evazquez 1/31/2018 8.5X11 AM10.5



Project Site

Figure 1

USGS Regional Location

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Source: USGS Topgraphic Map, Breakabeen Quadrangle
USA Topo Maps WMS (Copyright:© 2013 National Geographic Society, i-cubed)

CSA Group

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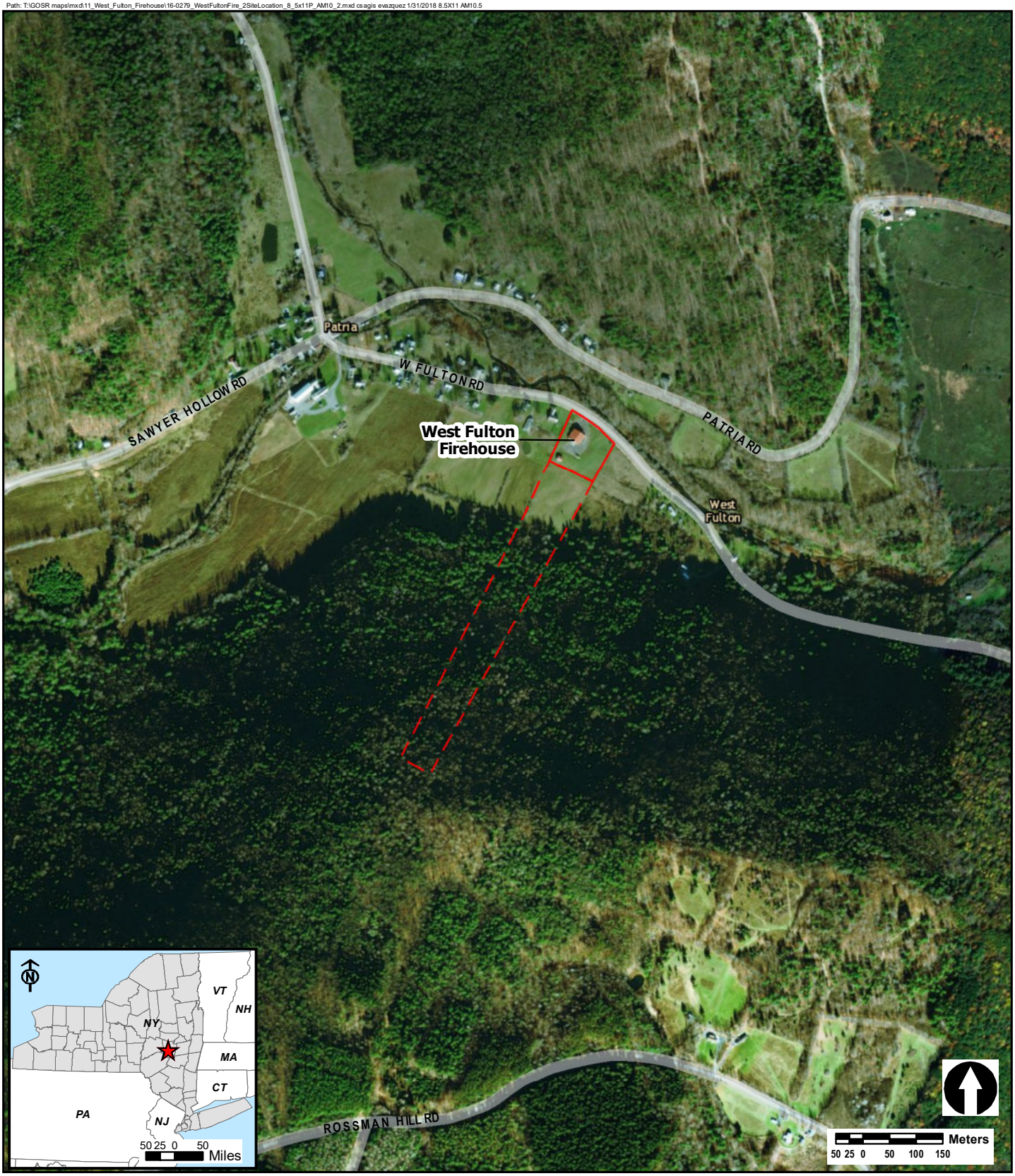

Project Site

West Fulton Fire Department 13.5 acre parcel

Figure 2

Project Area

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Source: NYS ITS GIS Program Office, Geographic Information Systems Clearinghouse; Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

CSA Group

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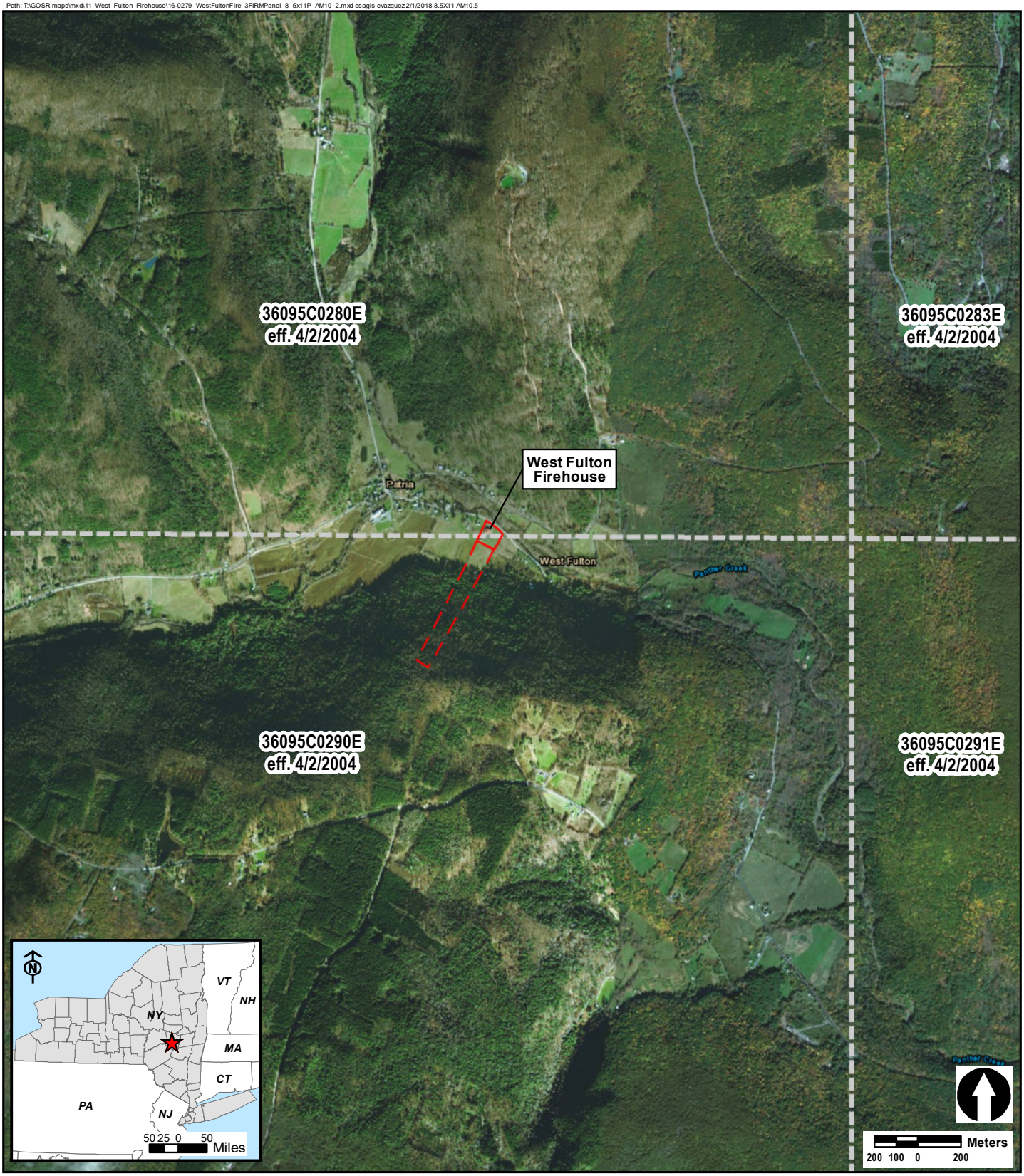

Project Site - No Special Flood Hazard Areas

West Fulton Fire Department 13.5 acre parcel

FIRM Panel

Figure 3

FEMA FIRM Panel

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: FEMA Flood Insurance Rate Map, Maps: 36095C0290E and 36095C0280E (Panels Not Printed), effective date 4/2/2004; Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

CSA Group

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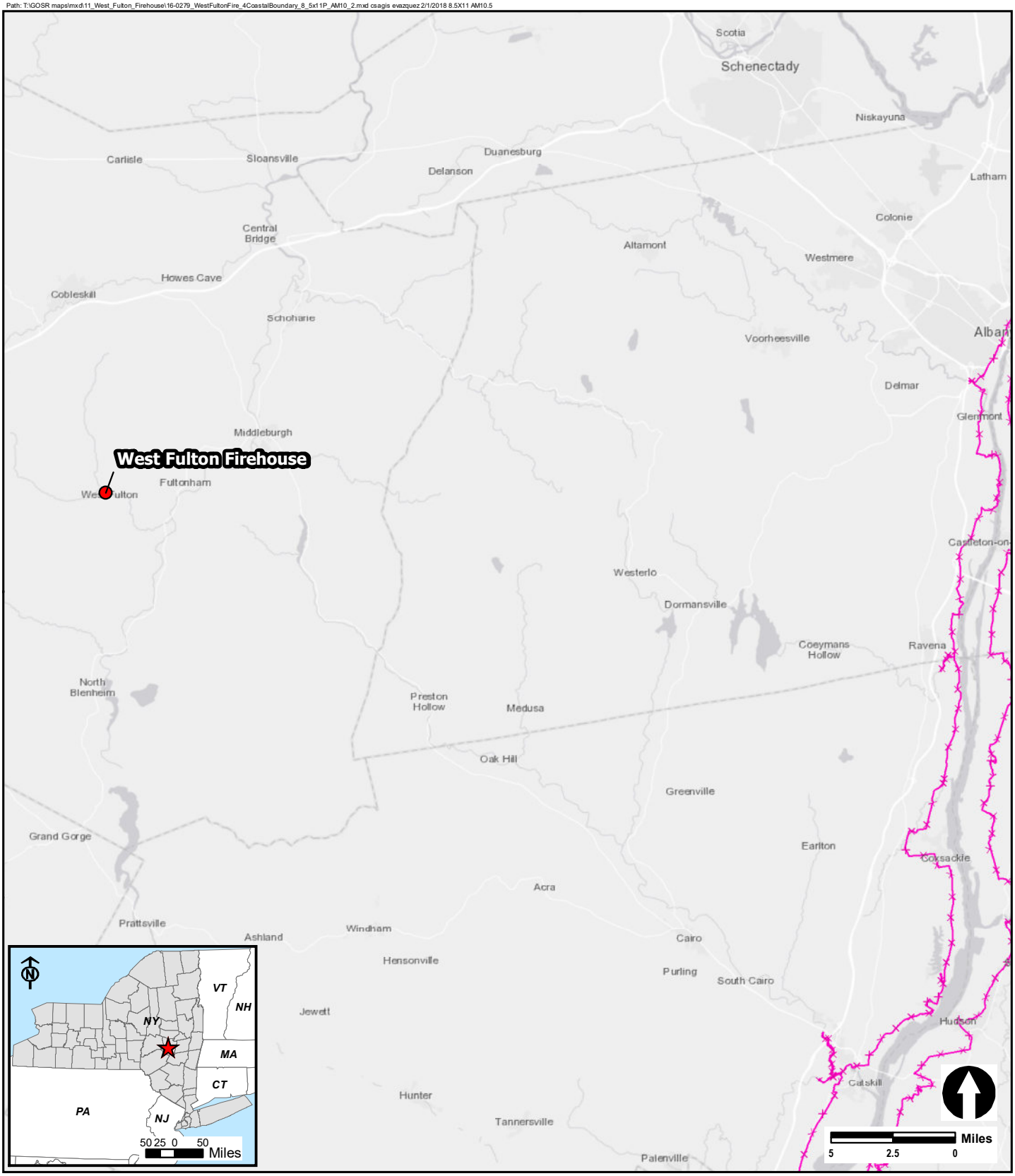

Project Site

NYS Coastal Boundary

Figure 4

Coastal Boundary

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: NYS Department of State, Office of Planning and Development (2014); ESRI (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

CSA Group

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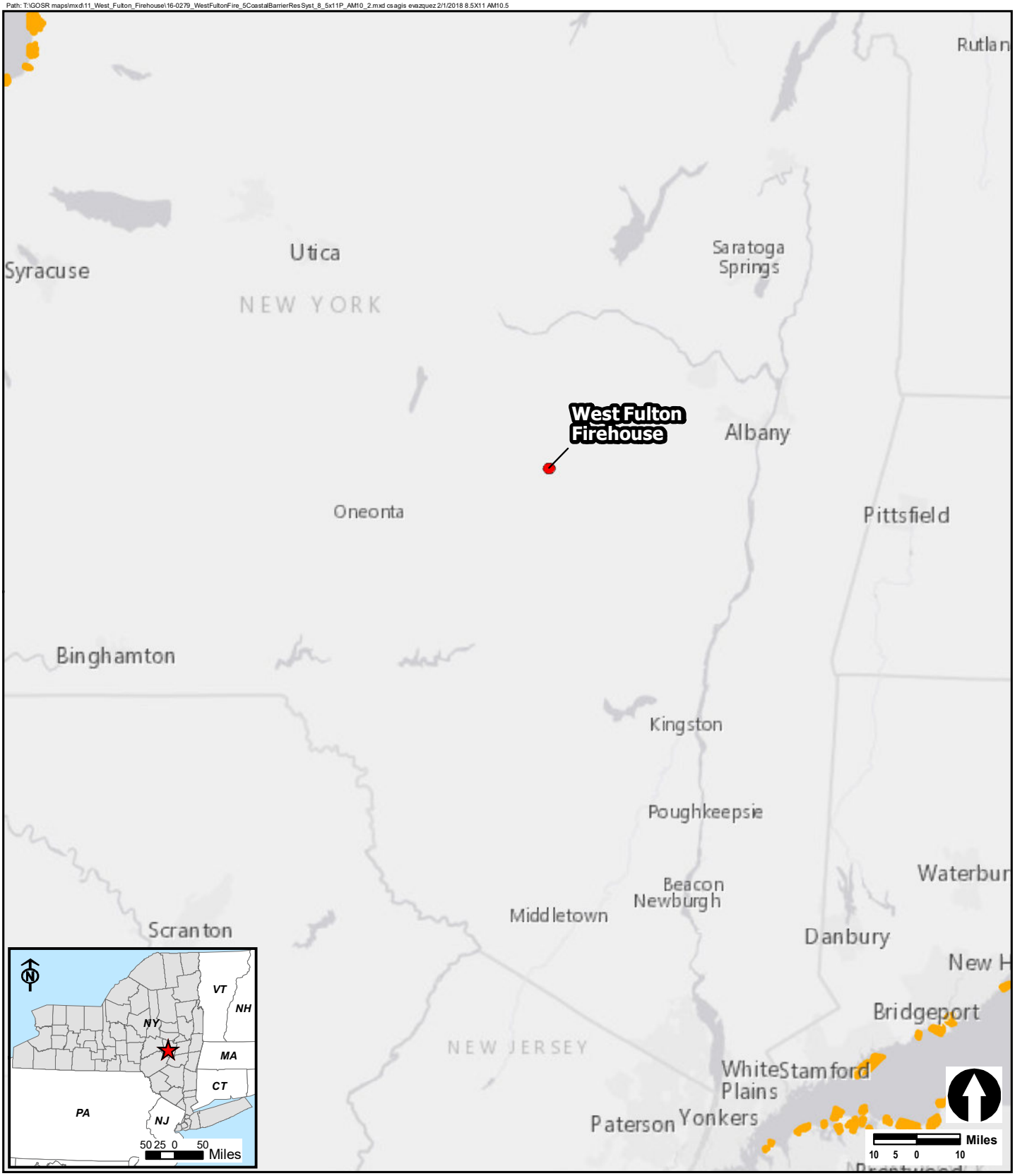

Project Site

Coastal Barrier Resource System

Figure 5

Coastal Barrier Resource System

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: U.S. Fish and Wildlife Service, John H. Chafee Coastal Barrier Resources System Approximate Polygons - Vector Digital Data Set (Polygon), March 14, 2016; ESRI (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

CSA Group

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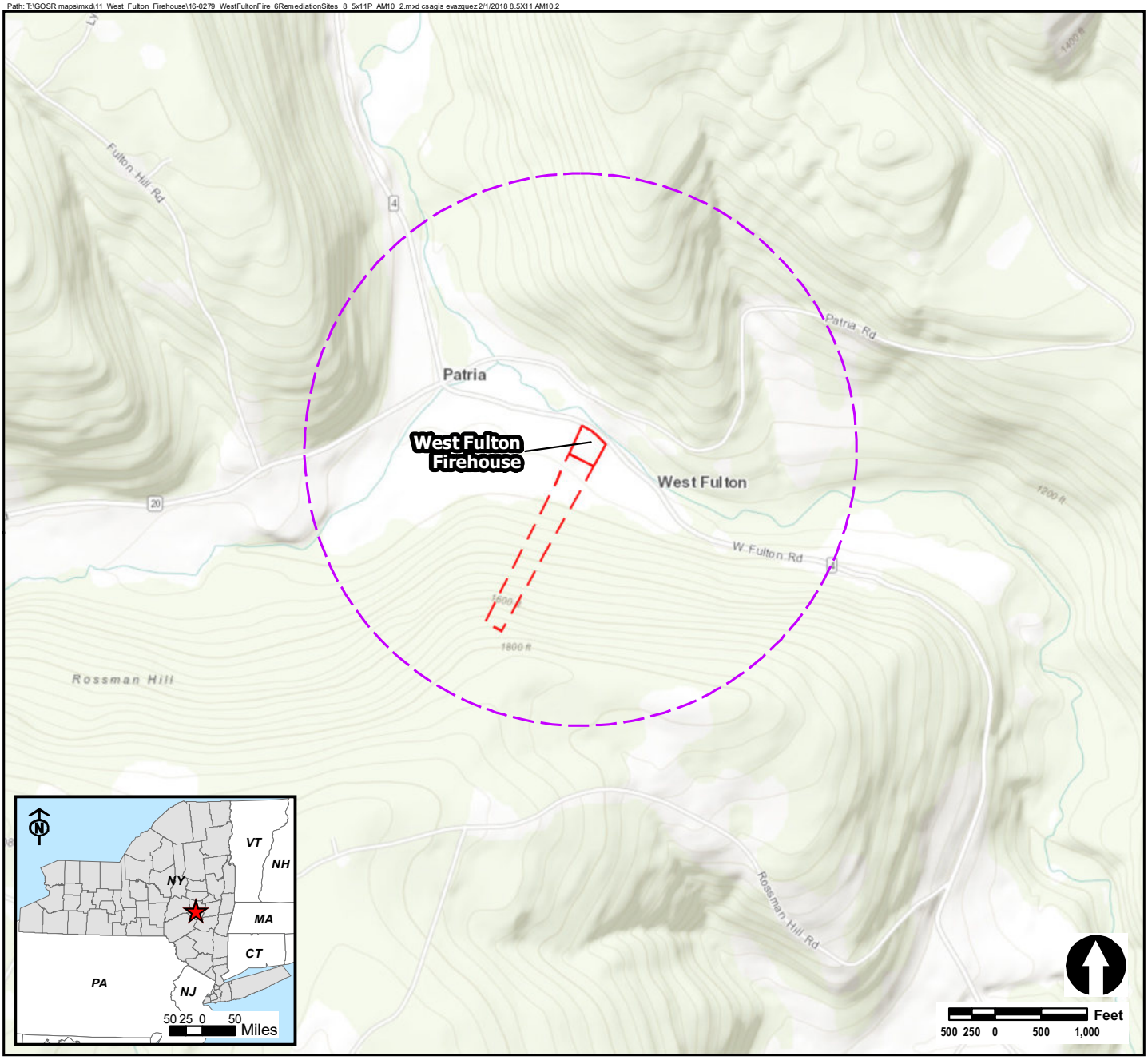

Project Site

West Fulton Fire Department 13.5 acre parcel

3,000 foot radius

Figure 6

Remediation Sites

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

EPA Listed Sites	On Site	Found within 3,000 ft Radius	NYSDEC Remedial Sites	On Site	Found within 3,000 ft Radius
NPL/Superfund/CERCLA	No	No	Superfund/ER	No	No
Toxic Release Inventory (TRI)	No	No	Brownfield Cleanup	No	No
Brownfields	No	No	Voluntary Cleanup	No	No
NPDES-Water Discharger	No	No	Former Haz Waste Disposal	No	No
Toxic Substances (TSCA)	No	No	Bulk Storage	No	No
Resource Conservation and Recovery Act Information (RCRA Inventory)	No	No	SPILLS	No	No
Toxic or Solid Waste Landfill	No	No			

***No federal or state remediation sites found within 3,000 ft radius**

Source: New York State Department of Environmental Conservation (NYSDEC); NEPAssist accessed January 2018; Esri (Service Layer Credits: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community)

CSA Group

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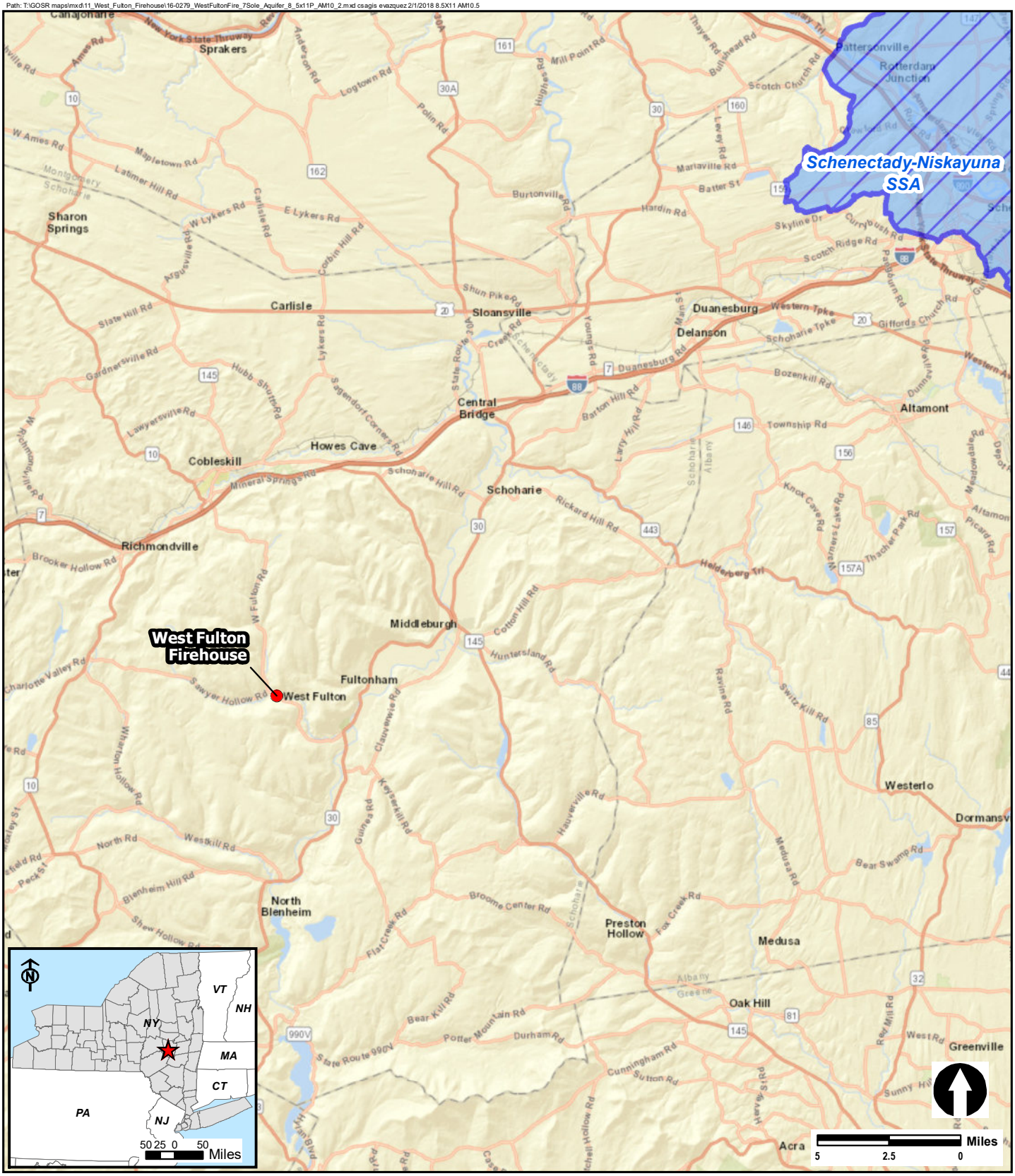

Project Site

Sole Source Aquifer

Figure 7

Sole Source Aquifers

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: U.S. EPA Office of Water National Sole Source Aquifer GIS Layer (2009); ESRI (Service Layer Credits: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community)

CSA Group

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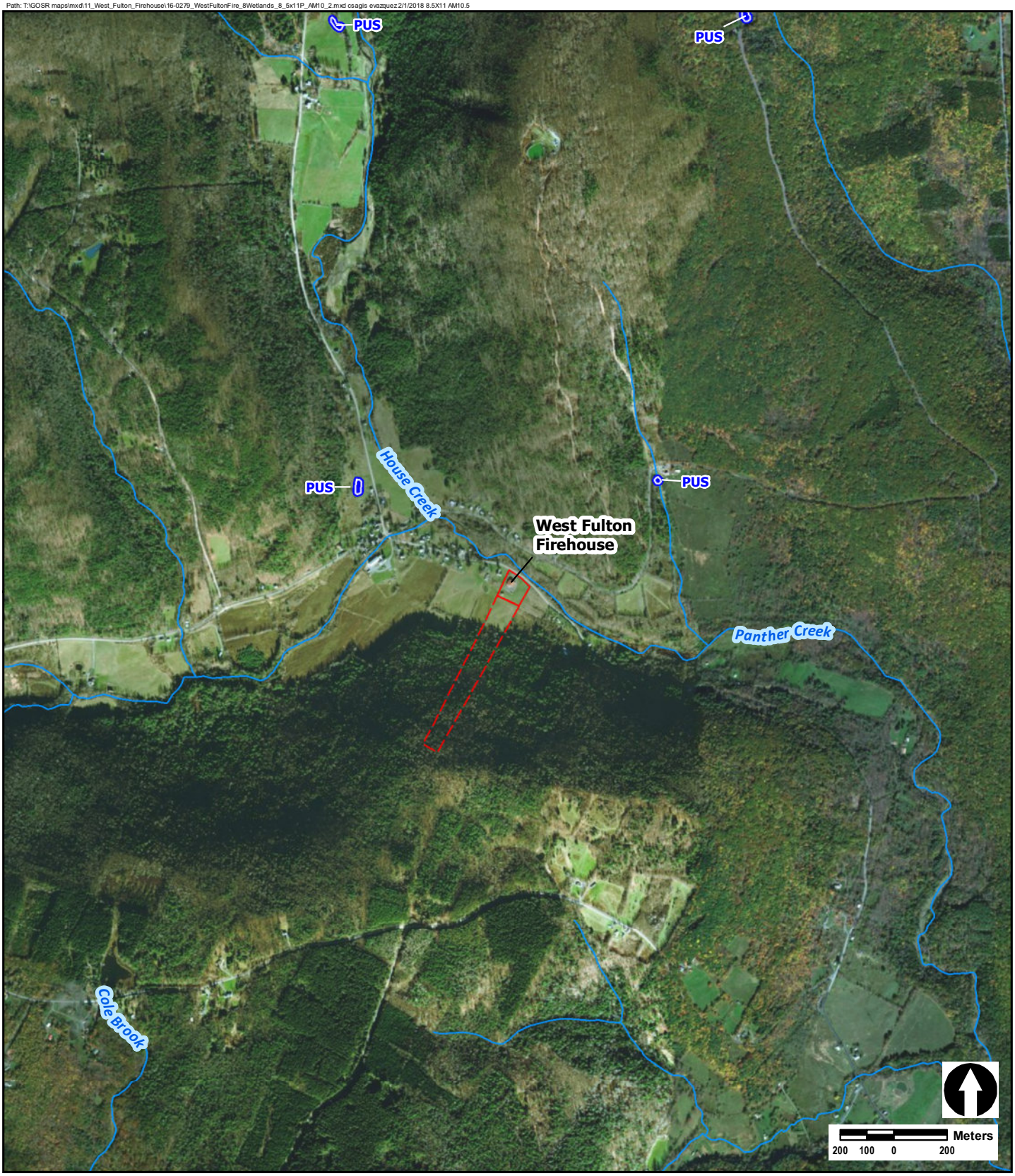

Project Site

Stream/River

Wetland Type (FWS NWI)

Freshwater Pond (PUS)

***No state jurisdictional features were found near the project area.**

Figure 8

Wetlands

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: Fish and Wildlife Service (FWS), National Wetlands Inventory (NWI); USGS National Hydrography Dataset; Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

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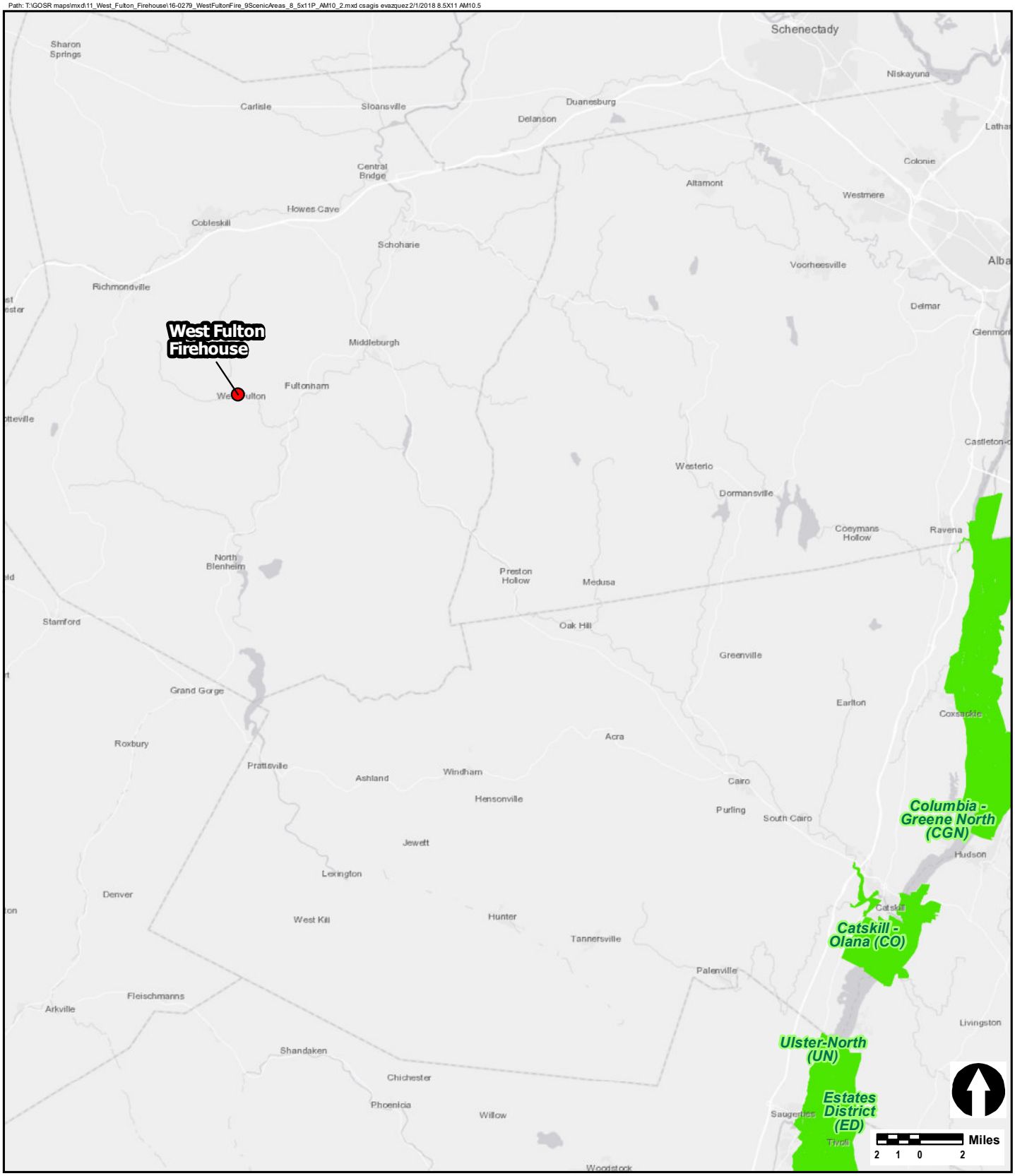

Project Site

Scenic Areas of Statewide Significance

*No Wild and Scenic Rivers are located near the project area

Sources: NYS Department of State, Office of Planning and Development (November 2014); ESRI (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community)

Figure 9

Scenic Areas

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

CSA Group

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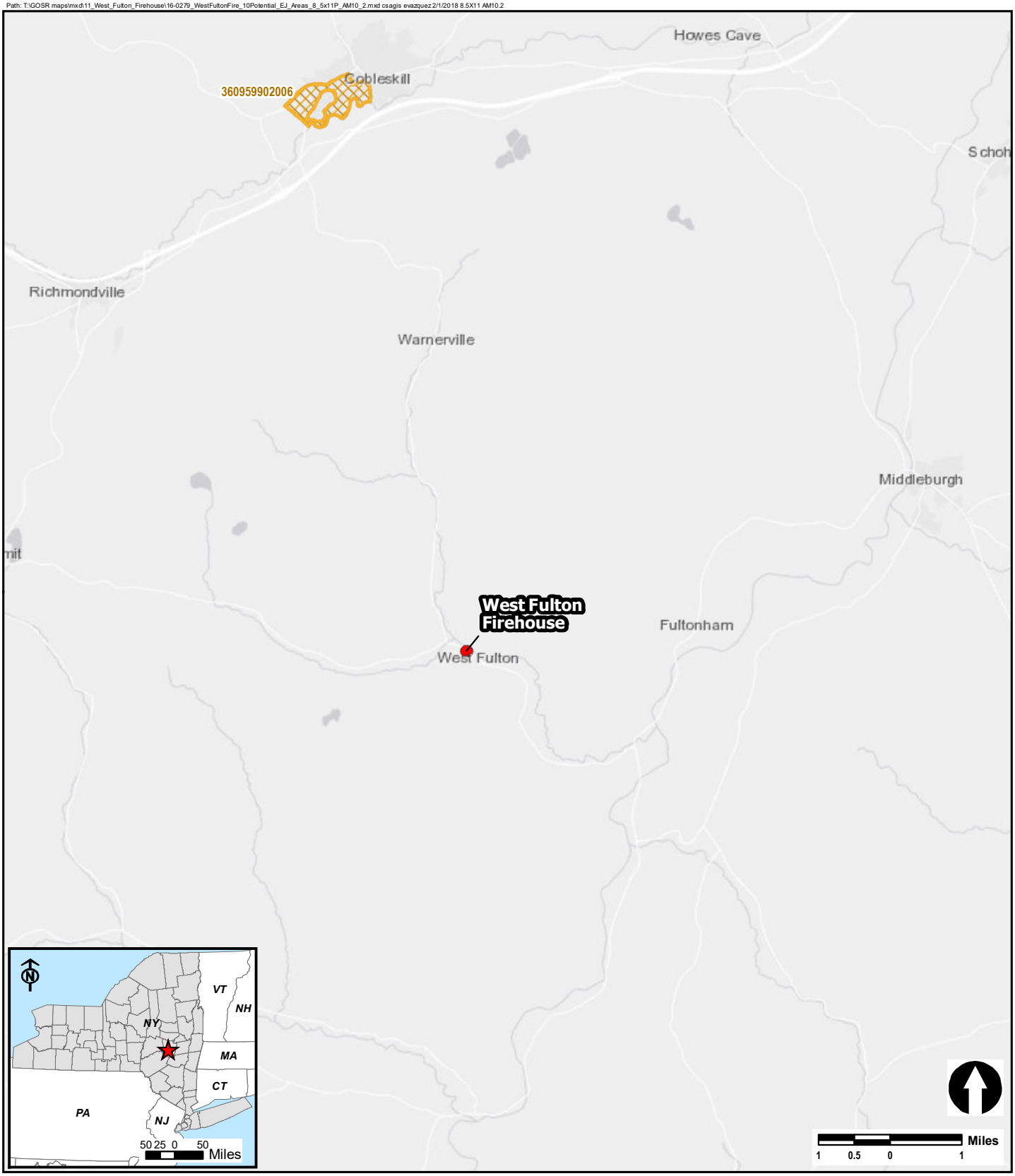

Project Site

Potential Environmental Justice (EJ) Area

Figure 10

Potential Environmental Justice Areas

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: New York State Department of Environmental Conservation (2014);
ESRI (Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia,
© OpenStreetMap contributors, and the GIS user community)

CSA Group

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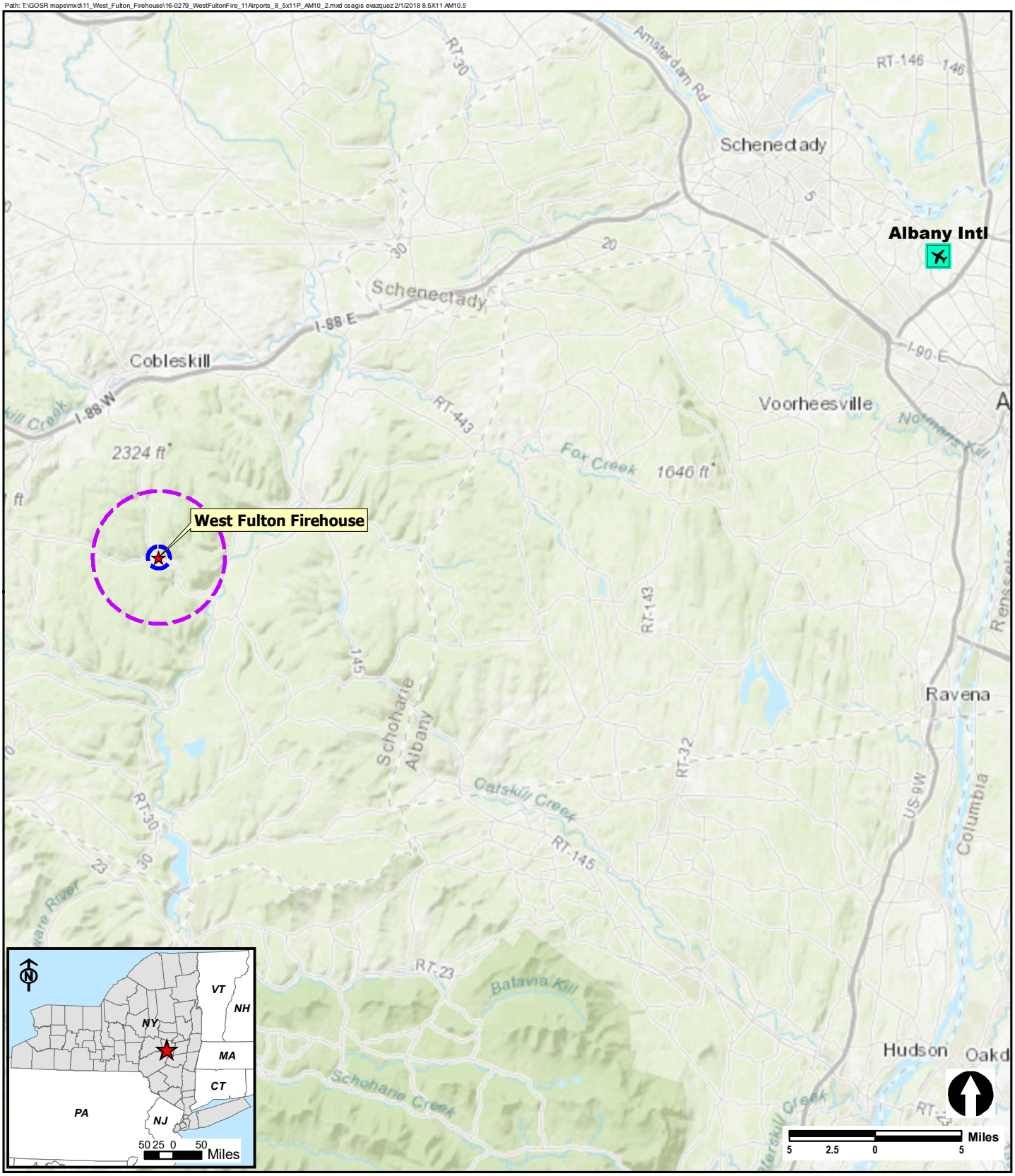


Project Site

Airport

2,500 feet Radius

15,000 feet Radius

Figure 11

Airports within the Vecinity of the Proposed Project

West Fulton Fire Department Improvements

807 West Fulton Road, West Fulton, New York

Sources: Federal Aviation Administration (FAA), National Transportation Atlas; Esri (Service Layer Credits: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community)

CSA Group

Appendix B: New York State Department of Conservation Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits
625 Broadway, 4th Floor, Albany, New York 12233-1750
P: (518) 402-9167 | F: (518) 402-9168 | deppermitting@dec.ny.gov
www.dec.ny.gov

October 25, 2017

Ms. Lori Shirley
Governor's Office of Storm Recovery
99 Washington Avenue
Suite 1224
Albany, NY 12260

RE: West Fulton Fire Department Improvements
Town of Fulton, Schoharie County

Dear Ms. Shirley:

We received your jurisdictional inquiry request for West Fulton Fire Department Improvements located at 807 West Fulton Road, West Fulton in the Town of Fulton, Schoharie County. It is our understanding that the project is to reconstruct the emergency response capabilities of the West Fulton Fire House. This will include rehabilitating, enlarging and modernizing the existing building. This will also include a new back-up power generator, septic system and leach fields, water storage unit, and a repeater tower. Based on our understanding of the project and review of the Pre- Application dated May 2016, we have the following comments on the project:

WATER

Please note that any project undertaken shall not result in the degradation or contravening of water quality standards of the stream. Activities resulting in sedimentation and/or turbid waters may constitute a violation of water quality standards and the Environmental Conservation Law (ECL). Care needs to be taken to stabilize the disturbed areas promptly after construction, and all necessary precautions be taken to prevent contamination of the stream by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

Stormwater Permit: If your project will disturb more than one acre of land, you must comply with the State Pollutant Discharge Elimination System (SPDES) Phase II regulations for Stormwater Discharges Associated with Construction Activities. Information regarding the SPDES General Permit for Stormwater Discharges can be found on the Department's website at: http://www.dec.ny.gov/chemical/8468.html.

STATE-LISTED SPECIES

We have reviewed the available information in the New York Natural Heritage Program database on known occurrences of rare or state-listed animals and plants, significant communities and other significant habitats.

All threatened or endangered species are subject to regulation under Article 11, Title 5 of the Environmental Conservation Law and a permit is required for a taking of that species pursuant to 6 NYCRR Part 182. Besides death of individuals, taking includes harassment, interference with essential behaviors, and adverse modification of habitat. Additional information on the proposal will be required for a determination on the need for a permit.

The absence of data does not necessarily mean that any other rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

CULTURAL RESOURCES

Your project/site appears to be located within an area of potential historical or archeological significance. If approvals/permits are needed from this Department, we may require consultation with the Office of Parks, Recreation and Historic Preservation (OPRHP) in order to better evaluate this project's impact to these resources.

For more information, please visit the New York State Office of Historic Preservation website at http://www.nysparks.com/shpo/.

OTHER

Air Quality:
Emergency engines are generally exempt from air permitting as described in 201-3.2(c)(6). However, in order to qualify for the exemption, the engine(s) must be operated for less than 500 hours during a calendar year, and must not be enrolled in any sort of peak shaving or demand response program with the local utility. Based on the purpose of these generators, the exemption would apply, and no air permit would be necessary.

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify

the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

May O'Malley

May O’Malley
Division of Environmental Permits
may.omalley@dec.ny.gov
518-402-9154

Cc: Andy Marcuccio, NYSDEC Region 4 Environmental Permits

Appendix C: Hazardous Waste Supplemental Report

HUD Environmental Standards Review - Hazardous Waste Supplemental Report

WEST FULTON FIRE DEPARTMENT IMPROVEMENT PROJECT

Introduction: The purpose of this review is to ensure that the project complies with U.S. Department of Housing and Urban Development (HUD) environmental standards in relation to 24 CFR Part 58.5. Properties that are proposed for use in HUD programs "must be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property."

A desktop review was performed to identify whether the Subject Property referenced in the title of this document complies with the following criteria:

(i) is not Listed on an U.S. Environmental Protection Agency (EPA) Superfund National Priorities or Comprehensive Environmental Response Superfund National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list;

(ii) is not located within 3,000 feet of a toxic or solid waste landfill site;

(iii) does not have an underground storage tank;

(iv) is not known or suspected to be contaminated by toxic chemicals or radioactive materials.

Data Sources: CSA Group has reviewed the following sources to make the determinations found in the Table below: Hazardous Waste records contained in the RCRA, the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) for sites listed under the CERCLA (otherwise known as Superfund), EPA's Toxic Release Inventory Database (TRI), and the EPA Radiation Information Database (RADInfo).

CSA reviewed the NYSDEC Remedial Site Database to assess whether the site is registered as a NYS Superfund or Environmental Restoration site. The NYSDEC Environmental Remediation Database includes records of sites that are part of the NYS Superfund, Brownfield Cleanup, Environmental Restoration, and Voluntary Cleanup Programs. The Database also includes a Registry of Inactive Hazardous Waste Disposal Sites.

The NYSDEC Bulk Storage Database was reviewed for records of facilities that are or have been regulated according to one of the Bulk Storage Programs - Chemical Bulk Storage or Major Oil Facility. The NYSDEC Spill Incident Database was used to determine the potential effects of spills on or near the Subject Property. A desktop review of Google Earth was used in conjunction with a map of active municipal landfills (provided by the NYSDEC) in determining whether there was a landfill within 3,000 feet of the Subject Property.

Based on the EPA's Map of Radon Zones, the Subject Property is located within Zone 1, which is a zone that has predicted average indoor radon screening levels greater than 4 pCi/L (High Potential). A post-construction vapor barrier will be applied to the existing structure as part of the renovation and a new vapor barrier will be installed within the addition. http://www.epa.gov/radon/states/newyork.html

Summary Table of Potential Hazardous Waste Sites

EPA Listed Sites	On Site	Found within 3,000 ft Radius	NYSDEC Remedial Sites	On Site	Found within 3,000 ft Radius
NPL/Superfund/CERCLA	No	No	**Superfund/ER**	No	No
Toxic Release Inventory (TRI)	No	No	**Brownfield Cleanup**	No	No
Brownfields	No	No	**Voluntary Cleanup**	No	No
NPDES-Water Discharger	No	No	**Former Haz Waste Disposal**	No	No
Toxic Substances (TSCA)	No	No	**Bulk Storage**	No	No
Resource Conservation and Recovery Act Information (RCRA Inventory)	No	No	**SPILLS**	No	No
Toxic or Solid Waste Landfill	No	No			

Records Review for the Subject Property

EPA Records: The Subject Property is not listed on an EPA Superfund National Priorities/CERCLA list nor is it listed on the TRI, Brownfield, TSCA or RCRA databases.

New York State Department of Environmental Conservation (NYSDEC) Records: According to the NYSDEC Environmental Remediation database, the Subject Property is not listed in the Bulk Storage, SPILLS or any Environmental Site Remediation database.

Records Review for the Surrounding Properties

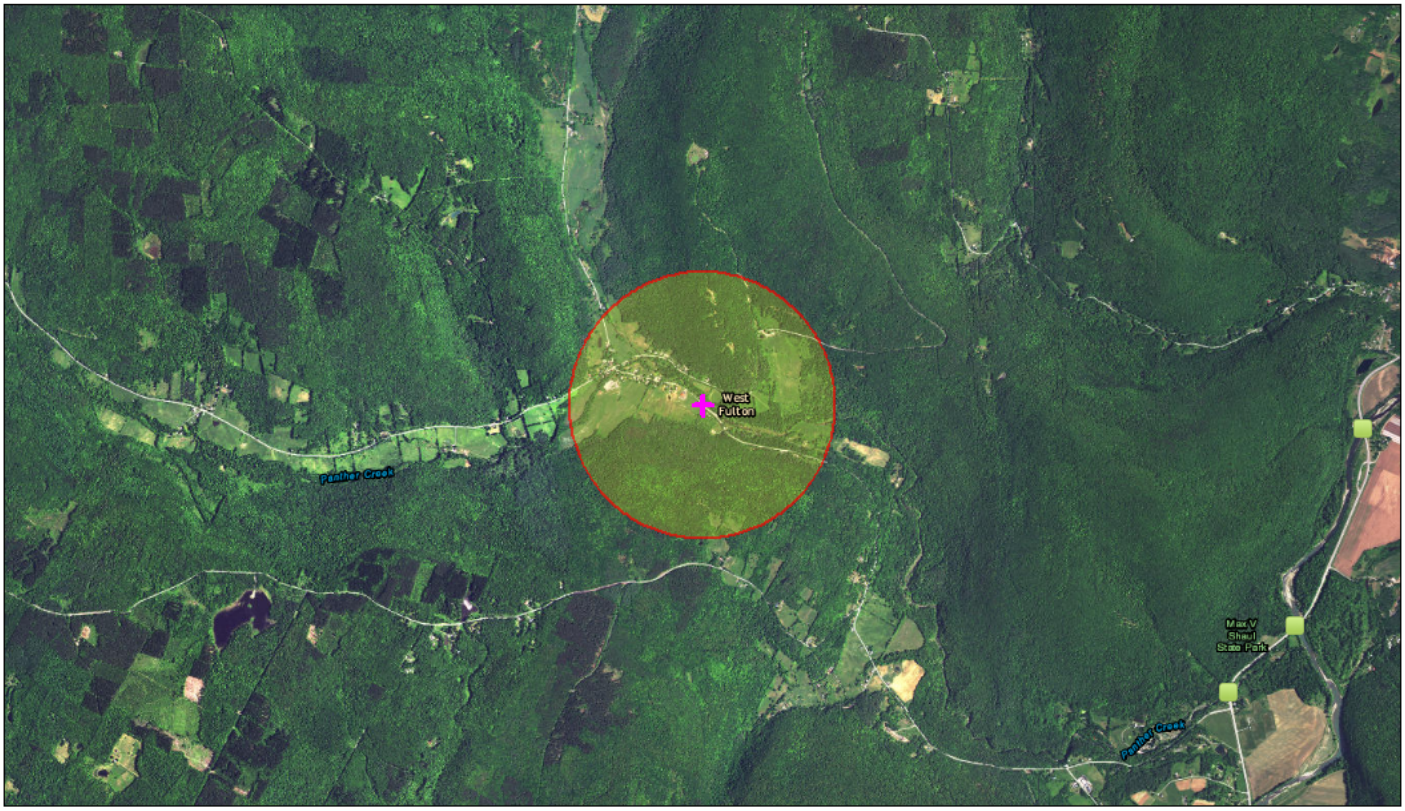
EPA Records: There are no EPA-permitted facilities located within 3,000 feet of the Subject Property.

NYSDEC Records: Review of the NYSDEC Remediation Database, including Bulk Storage and SPILLS databases, indicate that there are no Bulk Storage facilities nor any SPILLS sites situated within 3,000 feet of the Subject Property.

In Summary: Based on a review of available environmental records for the Subject Property and surrounding area, the Subject Property is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

NEPAssist Report

West Fulton Fire Dept



November 15, 2017

RCRAINFO (single)

Search Result (point)

Buffer Area

1:46,919

0 0.4 0.8 1.6 mi

0 0.5 1 2 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Project Location	42.562143,-74.456361
Within 3000 feet of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	yes
Within 3000 feet of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 3000 feet of a Federal Land?	no
Within 3000 feet of an impaired stream?	no
Within 3000 feet of an impaired waterbody?	no
Within 3000 feet of a waterbody?	no
Within 3000 feet of a stream?	yes
Within 3000 feet of an NWI wetland?	Available Online
Within 3000 feet of a Brownfields site?	no
Within 3000 feet of a Superfund site?	no
Within 3000 feet of a Toxic Release Inventory (TRI) site?	no
Within 3000 feet of a water discharger (NPDES)?	no
Within 3000 feet of a hazardous waste (RCRA) facility?	no
Within 3000 feet of an air emission facility?	no

Within 3000 feet of a school?	no
Within 3000 feet of an airport?	no
Within 3000 feet of a hospital?	no
Within 3000 feet of a designated sole source aquifer?	no
Within 3000 feet of a historic property on the National Register of Historic Places?	yes
Within 3000 feet of a Toxic Substances Control Act (TSCA) site?	no
Within 3000 feet of a RADInfo site?	no

Created on: 11/15/2017 7:05:25 PM

Appendix D: U.S. Fish and Wildlife, Natural Heritage, NYSDEC Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Field Office
3817 Luker Road
Cortland, NY 13045
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo

To: Alicia Shultz Date: Nov 13, 2017

USFWS File No: 18I0357

Regarding your: ___Letter ___Fax _x_ Email Dated: Nov 9, 2017

For project: West Fulton Fire Department

Located: 807 West Fulton Road

In Town/County: Town of West Fulton, Schoharie County

Pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Fish and Wildlife Service:

_x_ Acknowledges receipt of your "no effect" and/or no impact determination. No further ESA coordination or consultation is required.

___ Acknowledges receipt of your determination. Please provide a copy of your determination and supporting materials to any involved Federal agency for their final ESA determination.

___ Is taking no action pursuant to ESA or any legislation at this time, but would like to be kept informed of project developments.

As a reminder, until the proposed project is complete, we recommend that you check our website (http://www.fws.gov/northeast/nyfo/es/section7.htm) every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current. Should project plans change or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.

USFWS Contact(s): Robyn

Supervisor: Acting Branch Chief Date: 11·13·17

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

By Electronic Mail

November 9, 2017

Robyn A. Niver
Endangered Species Biologist
U.S. Fish & Wildlife Service
New York Field Office (Region 5)
3817 Luker Rd.
Cortland, NY 13045

Re: Section 7 Project Review - ESA/MBTA/BGEPA Consultation for West Fulton Fire Department Improvements, 807 West Fulton Road, West Fulton, New York 12194

Dear Ms. Niver:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for West Fulton Fire Department Improvements Project at 807 West Fulton Road, West Fulton, New York 12194 (see attached figures) which includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road. GOSR is acting as HUD's non-federal representative for the purposes of conducting consultation pursuant to Section 7 of the Endangered Species Act.

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), as well as the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712), and the Bald and Golden Eagle Protection Act of 1940 (BGEPA) (54 Stat. 240, as amended; 16 U.S.C. 668-668c).

Program Overview

During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential

for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

Area of Potential Effect and Project Description: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion. **No trees will be removed.**

The existing fire station is a wood frame structure. The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

ESA, Migratory Bird Treaty Act, And Bald and Golden Eagle Protection Act Species: The USFWS, New York Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The IPaC Resource List identified one threatened species the Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*) potentially associated with the project site (see attached **Resource Species List**). The Resource List indicated that no critical habitats are within the Project area. The IPaC review also indicated that there are several migratory birds of concern that could potentially be affected by the proposed project.

New York State Department of Environmental Conservation (NYSDEC) provided GOSR with a jurisdictional review which stated that the available information in the New York Natural Heritage Program (NYNHP) database was for reviewed for the known occurrences of rare or state-listed bat species (attached). This project area does not occur in the immediate vicinity of known occurrences of rare or state-listed bat species (see NYS Resources map, attached). The major concern for bat species in relation to this project would be the destruction of potential roosts and roosting habitat that may occur if tree clearing is required. Because this project does not take place within known occupied habitat, there are no restrictions on cutting.

ESA -Analysis and Determination of Effects:

Fulton County is within the White-Nose Syndrome Zone. According to information provided by NYSDEC, the project site is not within 0.25 miles of known or assumed hibernacula for the NLEB, nor are there documented or assumed maternity roosts within 150 feet of the project site. The project site is not within 5 miles of NLEB hibernacula. As the proposed project would not result in the removal of trees, GOSR has determined that the proposed action will have **No Effect** on the NLEB. Additionally, the proposed project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat.

MBA: The IPaC report stated that no migration bird information was available at this time. Migratory birds are known to occur throughout NY state. GOSR has determined that the project would have no significant adverse impact on migratory birds or their habitat. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance. Extensive areas of high quality woodland habitat are available.

If USFWS has documentation of the presence of migratory birds or the Bald Eagle in this area, GOSR requests that this documentation be provided to GOSR for review.

Compliance

No critical habitat has been identified within the project area. No trees will be removed. GOSR has reviewed the list of USFWS threatened and endangered species associated with the project location and has made a no effect determination based on the project scope and species habitat.

If you have questions or require additional information regarding this request, please contact Alicia Shultz at (518) 474-0647 or alicia.shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes and Community Renewal
38-40 State Street, Hampton Plaza
Albany NY 12207

Attachments:

Project Location Maps
Resource List
NYSDEC Correspondence - NYS Resource Map for Bat Occurrences

Project Location Maps

West Fulton Fire House

October 5, 2017

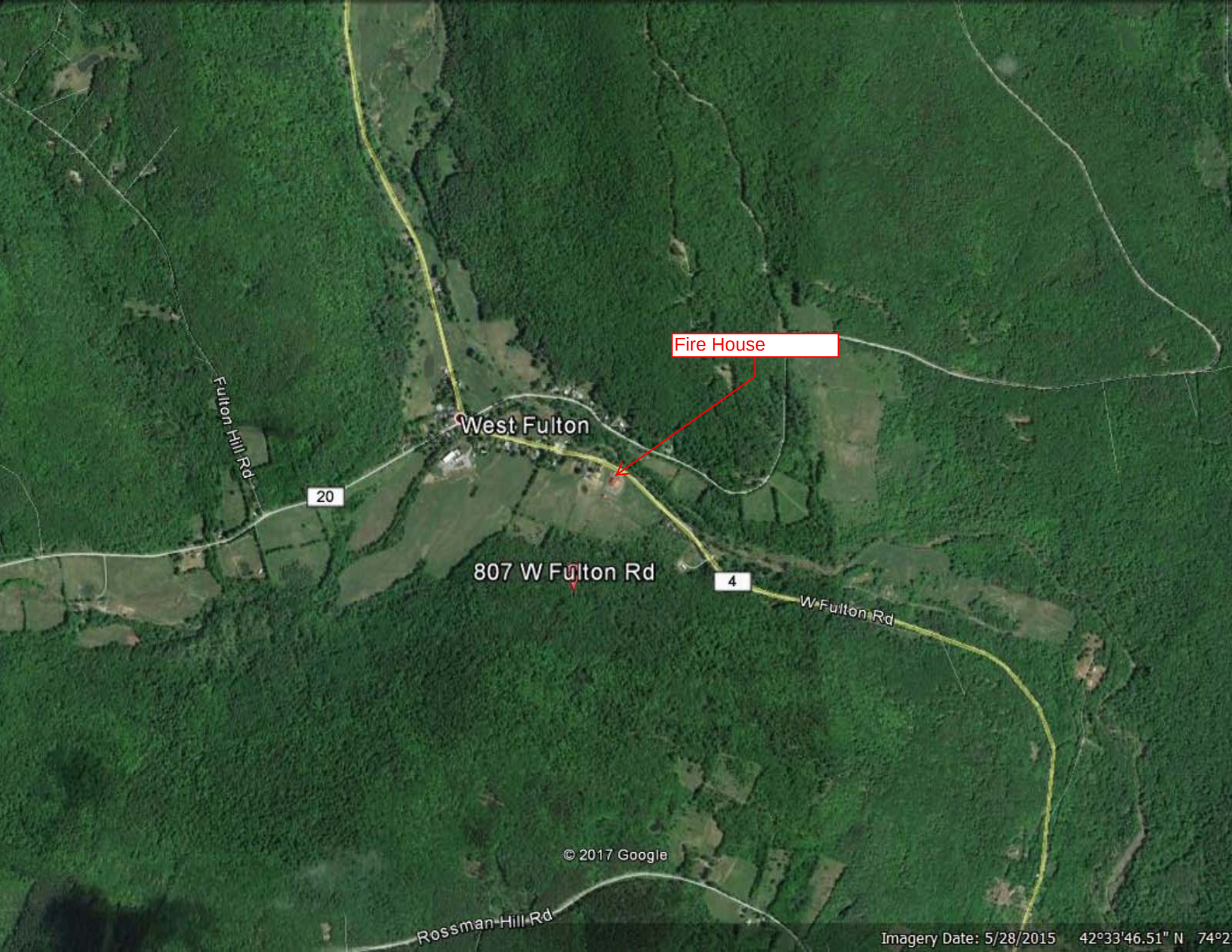
1:2,257

0 0.0275 0.055 0.11 mi

0 0.0425 0.085 0.17 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

Resource Species List

IPaC **U.S. Fish & Wildlife Service**

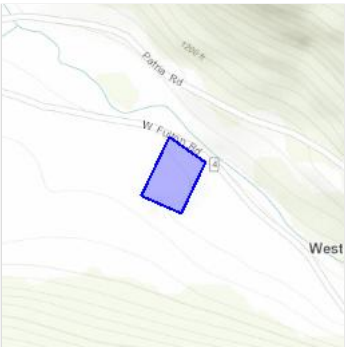
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Schoharie County, New York



Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9349

http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

NOT FOR CONSULTATION

- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are USFWS Birds of Conservation Concern that might be affected by activities in this location. The list does not contain every bird you may find in this location, nor is it guaranteed that all of the birds on the list will be found on or near this location. To get a better idea of the specific locations where certain species have been reported and their level of occurrence, please refer to resources such as the E-bird data mapping tool (year-round bird sightings by birders and the general public) and Breeding Bird Survey (relative abundance maps for breeding birds). Although it is important to try to avoid and minimize impacts to all birds, special attention should be given to the birds on the list below. To get a list of all birds potentially present in your project area, visit the E-bird Explore Data Tool.

NAME	BREEDING SEASON
Black-billed Cuckoo Coccyzus erythropthalmus https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Black-capped Chickadee Poecile atricapillus practicus	Breeds Apr 10 to Jul 31
Bobolink Dolichonyx oryzivorus	Breeds May 20 to Jul 31
Canada Warbler Wilsonia canadensis	Breeds May 20 to Aug 10
Cerulean Warbler Dendroica cerulea https://ecos.fws.gov/ecp/species/2974	Breeds Aug 20 to Jul 20
Henslow's Sparrow Ammodramus henslowii https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Prairie Warbler Dendroica discolor	Breeds May 1 to Jul 31
Red Crossbill Loxia curvirostra https://ecos.fws.gov/ecp/species/8743	Breeds Dec 20 to Oct 15
Red-headed Woodpecker Melanerpes erythrocephalus	Breeds May 10 to Sep 10
Wood Thrush Hylocichla mustelina	Breeds May 10 to Aug 31
Yellow-bellied Sapsucker sphyrapicus varius https://ecos.fws.gov/ecp/species/8792	Breeds May 10 to Jul 15

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in your project's counties during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote when the bird breeds in the Bird Conservation Region(s) in which your project lies. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information.

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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Such measures are particularly important when birds are most likely to occur in the project area. To see when birds are most likely to occur in your project area, view the Probability of Presence Summary. Special attention should be made to look for nests and avoid nest destruction during the breeding season. The best information about when birds are breeding can be found in Birds of North America (BNA) Online under the "Breeding Phenology" section of each species profile. Note that accessing this information may require a subscription. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) that might be affected by activities in your project location. These birds are of priority concern because it has been determined that without additional conservation actions, they are likely to become candidates for listing under the Endangered Species Act (ESA).

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets. The AKN list represents all birds reported to be occurring at some level throughout the year in the counties in which your project lies. That list is then narrowed to only the Birds of Conservation Concern for your project area.

Again, the Migratory Bird Resource list only includes species of particular priority concern, and is not representative of all birds that may occur in your project area. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird entry on your migratory bird species list indicates a breeding season, it is probable the bird breeds in your project's counties at some point within the time-frame specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

NYSDEC Correspondence - NYS Resource Map for Bat Occurrences

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife
625 Broadway, 5th Floor, Albany, NY 12233-4750
P: (518) 402-8924 | F: (518) 402-8925
www.dec.ny.gov

October 25, 2017

Ms. Alicia Shultz
Governor's Office of Storm Recovery
99 Washington Avenue
Suite 1224
Albany NY 12260

RE: West Fulton Fire Department Improvements
Hamlet of West Fulton, Schoharie County, NY

Dear Ms. Shultz,

We received your jurisdictional inquiry request for the West Fulton fire department improvement project, located at 807 West Fulton Road, West Fulton, Schoharie County, NY. It is our understanding that an addition to the existing fire department, located on 13.5 acres of land, will be constructed. In addition, the septic system/leach field will be expanded, a generator pad will be constructed, and a cell tower will be installed. Based on our understanding of the project and the NYS Resources map created by Amanda Bailey on 10/25/2017 (attached), we have the following comments on the project:

STATE-LISTED SPECIES

All threatened or endangered species are subject to regulation under Article 11, Title 5 of the Environmental Conservation Law and a permit is required for a taking of that species pursuant to 6 NYCRR Part 182. Besides death of individuals, taking includes harassment, interference with essential behaviors, and adverse modification of habitat. **If the site is in close proximity to known occurrences of state-protected species, additional information on the proposal will be required by the appropriate regional office for a determination on the need for an incidental take permit.**

We have reviewed the available information in the New York Natural Heritage Program database on known occurrences of rare or state-listed bat species. This project area does not occur in the immediate vicinity of known occurrences of rare or state-listed bat species (see NYS Resources map, attached). The major concern for bat species in relation to this project would be the destruction of potential roosts and roosting habitat that may occur if tree clearing is required. Because this project does not take place within known occupied habitat, there are no restrictions on cutting.

The absence of data does not necessarily mean that any rare or state-listed bat species do not exist on or adjacent to the proposed site. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence of all rare or state-listed bat species. To avoid potential take, DEC *recommends* that any tree clearing be conducted between November 1 and March 31, when bats are inactive in hibernation sites. DEC also recommends that all snag and cavity trees remain uncut, unless their removal is necessary for protection of human life and property. For more information, please refer to the

DEC Northern long-eared bat protective measures guidance, available at: http://www.dec.ny.gov/animals/106090.html.

This document is only intended to address state-listed bat species. Other rare or state-listed species, natural communities or other significant habitats may exist within the project area and would require additional review. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

OTHER

USFWS Cortland Field Office

If a federal agency is involved in the project, or if federal funding is used, there are additional considerations for federally listed species. Section 7(a)(1) of the Endangered Species Act requires federal agencies to use their authorities to conserve listed species. Section 7(a)(2) requires federal agencies to consult on any action that may affect a listed species.

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

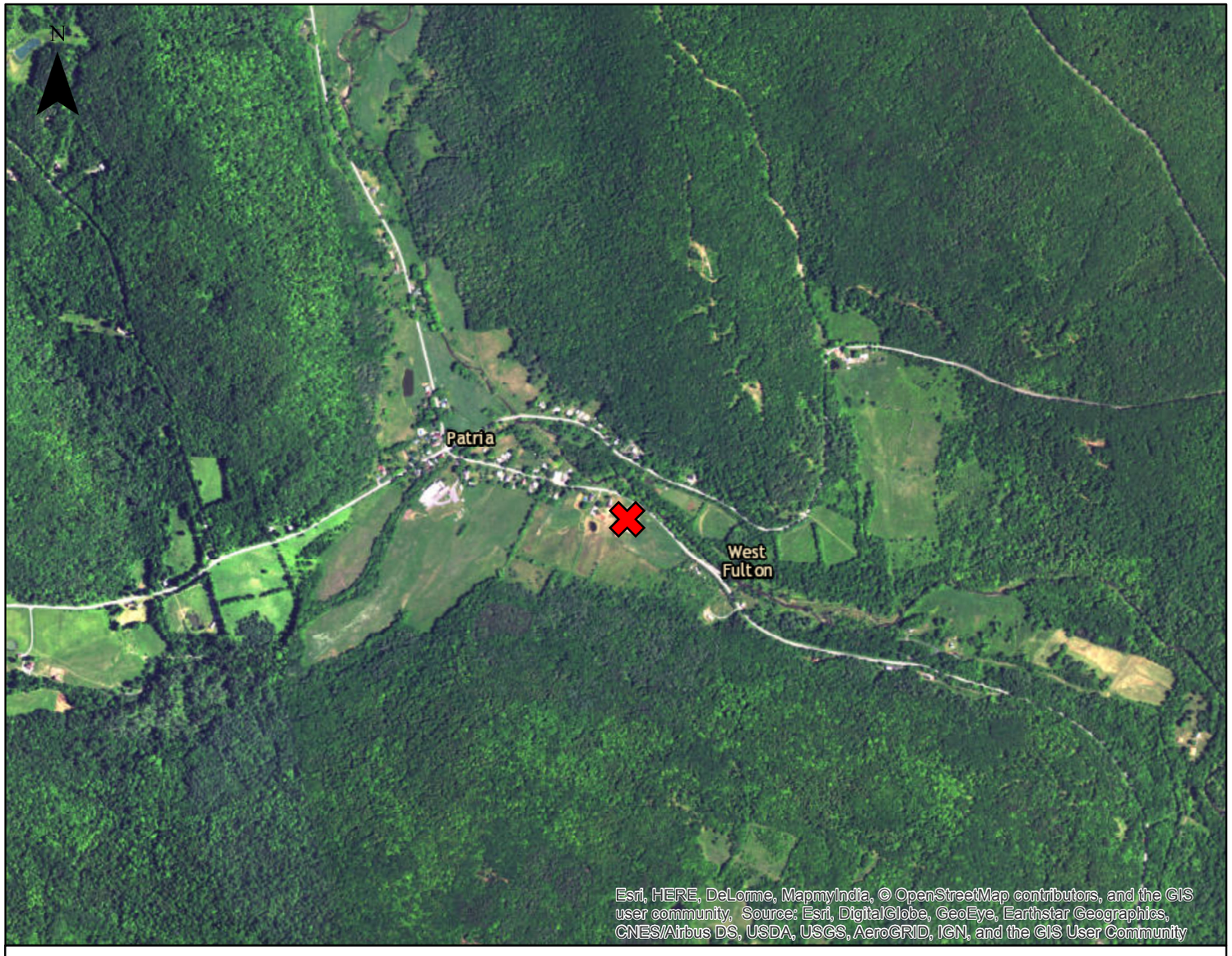
Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

Amanda Bailey

Amanda Bailey
Division of Fish and Wildlife
Amanda.bailey@dec.ny.gov
518-402-8859

Cc: Paul Novak, NYSDEC Regional Wildlife Biologist, Region 4
Martha Bellinger, NYSDEC Deputy Regional Permit Administrator, Region 4
May O’Malley, NYSDEC Division of Environmental Permits



NEW YORK
STATE OF OPPORTUNITY

Department of Environmental Conservation

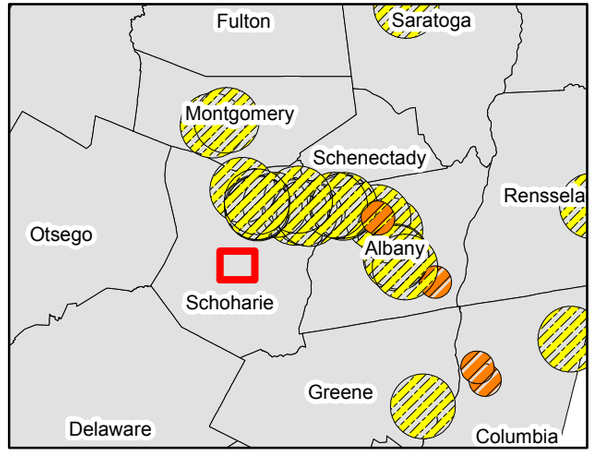
0 0.075 0.15 0.3 0.45 0.6 Miles

1 inch = 1,250 feet

NYS Resources Map

West Fulton Fire Dept. Improvements
West Fulton, Schoharie County

Prepared by AMB on 10/25/2017



Project Area

Bat Occurrences

Indiana Bat

Northern Long-eared Bat

Disclaimer: this map was prepared by the NYSDEC using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

November 1, 2017

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: West Fulton Fire Department Improvements, 807 West Fulton Road
County: Schoharie Town/City: Fulton

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 4 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Nick Conrad

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1345

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife
625 Broadway, 5th Floor, Albany, NY 12233-4750
P: (518) 402-8924 | F: (518) 402-8925
www.dec.ny.gov

October 25, 2017

Ms. Alicia Shultz
Governor's Office of Storm Recovery
99 Washington Avenue
Suite 1224
Albany NY 12260

RE: West Fulton Fire Department Improvements
Hamlet of West Fulton, Schoharie County, NY

Dear Ms. Shultz,

We received your jurisdictional inquiry request for the West Fulton fire department improvement project, located at 807 West Fulton Road, West Fulton, Schoharie County, NY. It is our understanding that an addition to the existing fire department, located on 13.5 acres of land, will be constructed. In addition, the septic system/leach field will be expanded, a generator pad will be constructed, and a cell tower will be installed. Based on our understanding of the project and the NYS Resources map created by Amanda Bailey on 10/25/2017 (attached), we have the following comments on the project:

STATE-LISTED SPECIES

All threatened or endangered species are subject to regulation under Article 11, Title 5 of the Environmental Conservation Law and a permit is required for a taking of that species pursuant to 6 NYCRR Part 182. Besides death of individuals, taking includes harassment, interference with essential behaviors, and adverse modification of habitat. **If the site is in close proximity to known occurrences of state-protected species, additional information on the proposal will be required by the appropriate regional office for a determination on the need for an incidental take permit.**

We have reviewed the available information in the New York Natural Heritage Program database on known occurrences of rare or state-listed bat species. This project area does not occur in the immediate vicinity of known occurrences of rare or state-listed bat species (see NYS Resources map, attached). The major concern for bat species in relation to this project would be the destruction of potential roosts and roosting habitat that may occur if tree clearing is required. Because this project does not take place within known occupied habitat, there are no restrictions on cutting.

The absence of data does not necessarily mean that any rare or state-listed bat species do not exist on or adjacent to the proposed site. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence of all rare or state-listed bat species. To avoid potential take, DEC *recommends* that any tree clearing be conducted between November 1 and March 31, when bats are inactive in hibernation sites. DEC also recommends that all snag and cavity trees remain uncut, unless their removal is necessary for protection of human life and property. For more information, please refer to the

DEC Northern long-eared bat protective measures guidance, available at: http://www.dec.ny.gov/animals/106090.html.

This document is only intended to address state-listed bat species. Other rare or state-listed species, natural communities or other significant habitats may exist within the project area and would require additional review. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

OTHER

USFWS Cortland Field Office

If a federal agency is involved in the project, or if federal funding is used, there are additional considerations for federally listed species. Section 7(a)(1) of the Endangered Species Act requires federal agencies to use their authorities to conserve listed species. Section 7(a)(2) requires federal agencies to consult on any action that may affect a listed species.

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

Amanda Bailey

Amanda Bailey
Division of Fish and Wildlife
Amanda.bailey@dec.ny.gov
518-402-8859

Cc: Paul Novak, NYSDEC Regional Wildlife Biologist, Region 4
Martha Bellinger, NYSDEC Deputy Regional Permit Administrator, Region 4
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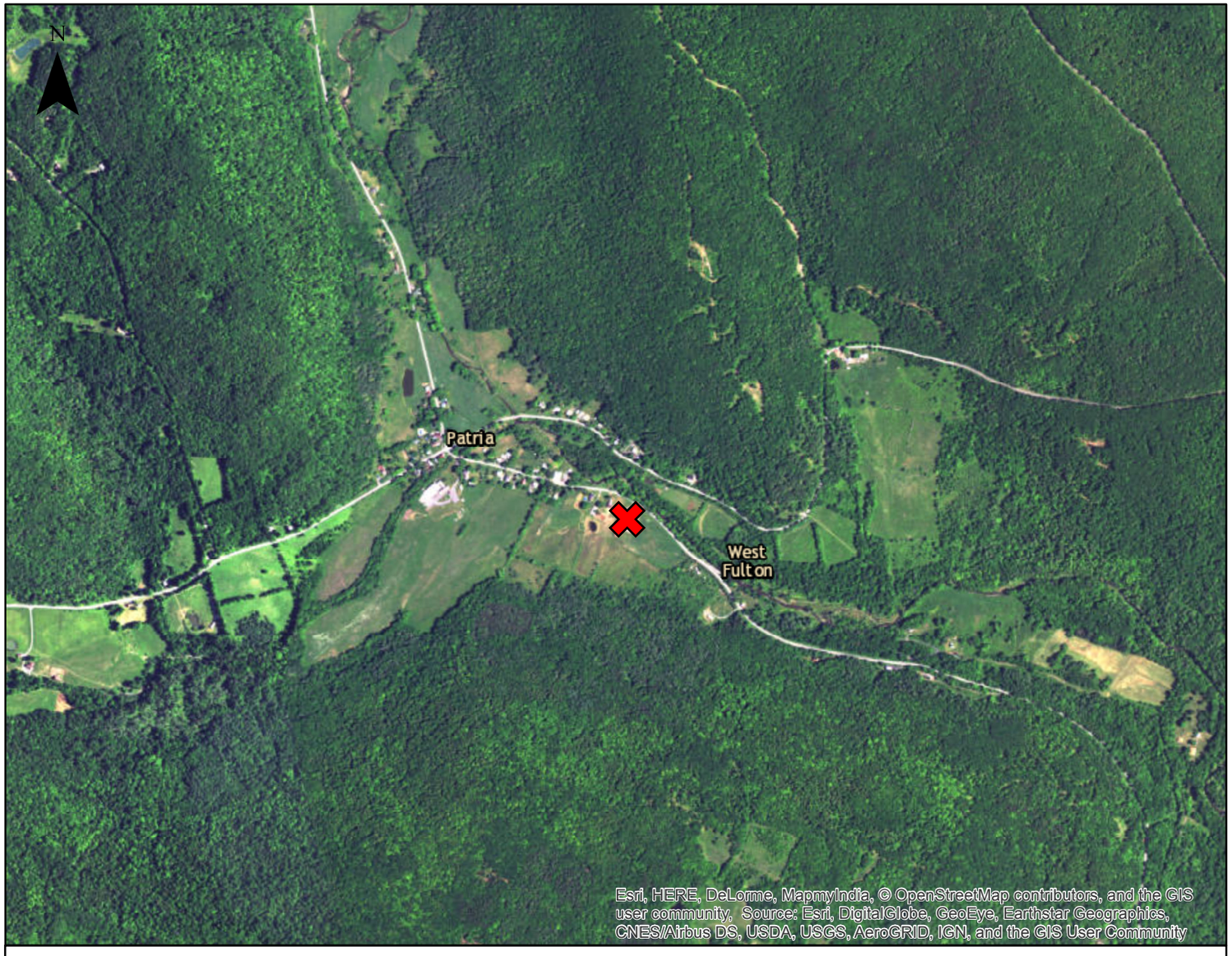

NEW YORK
STATE OF OPPORTUNITY

Department of Environmental Conservation

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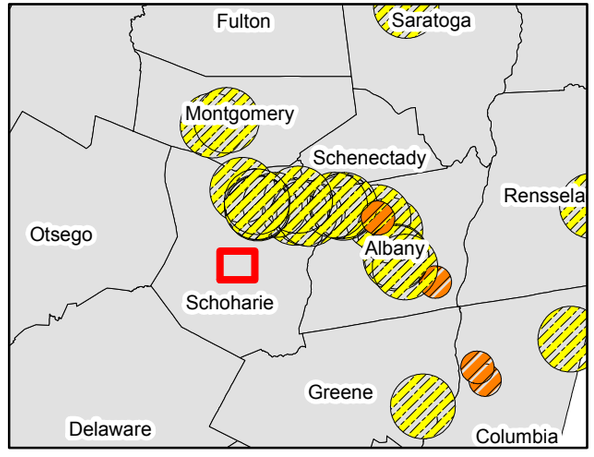
1 inch = 1,250 feet

NYS Resources Map

West Fulton Fire Dept. Improvements
West Fulton, Schoharie County

Prepared by AMB on 10/25/2017



Project Area

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Indiana Bat

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Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

Via Electronic Mail

October 24, 2017

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program – Information Services
625 Broadway, 5th Floor
Albany, New York 12233-4757

Re: Natural Heritage Compliance Process for the West Fulton Fire Department Improvements, 807 West Fulton Road, West Fulton, New York 12194

To Natural Heritage Program:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for the West Fulton Fire Department Improvements located at the existing West Fulton Volunteer Fire Department at 807 West Fulton Road, West Fulton, New York 12194 (see attached figures).

The purpose of this letter is to request a search of the files of the New York Natural Heritage Program for records of the occurrence of any rare animals, plants, and natural communities and/or significant wildlife habitats near this project. The information we receive will be used in NEPA and SEQRA documentation and/or any permit applications. We will retain the confidentiality, as needed, of any information received.

Program Overview: During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

Area of Potential Effect: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion.

The existing fire station is a wood frame structure. The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

GOSR respectfully requests that the New York Natural Heritage Program review its records of concern for any rare or state-listed animals or plants, or significant natural communities, at this site or in its immediate vicinity. In addition, information regarding the presence of any other species or habitats of special concern in the vicinity of the proposed projects is also requested.

If you have questions or require additional information regarding this request, please contact me at (518) 474-0647 or Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
Governor's Office of Storm Recovery
NYS Homes and Community Renewal

Enclosures:
Environmental Resource Mapper
Site Location

West Fulton Fire House

October 5, 2017

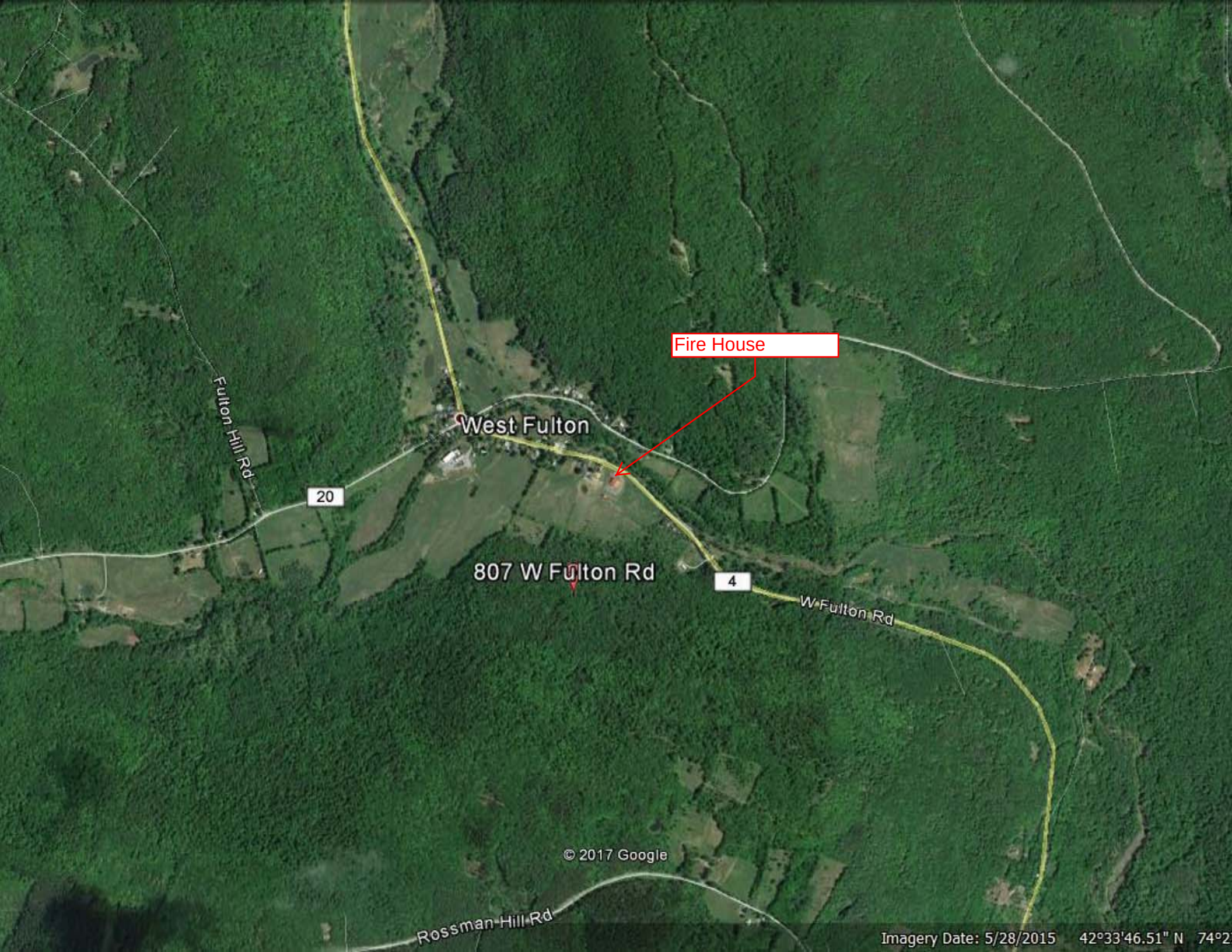
1:2,257

0 0.0275 0.055 0.11 mi

0 0.0425 0.085 0.17 km

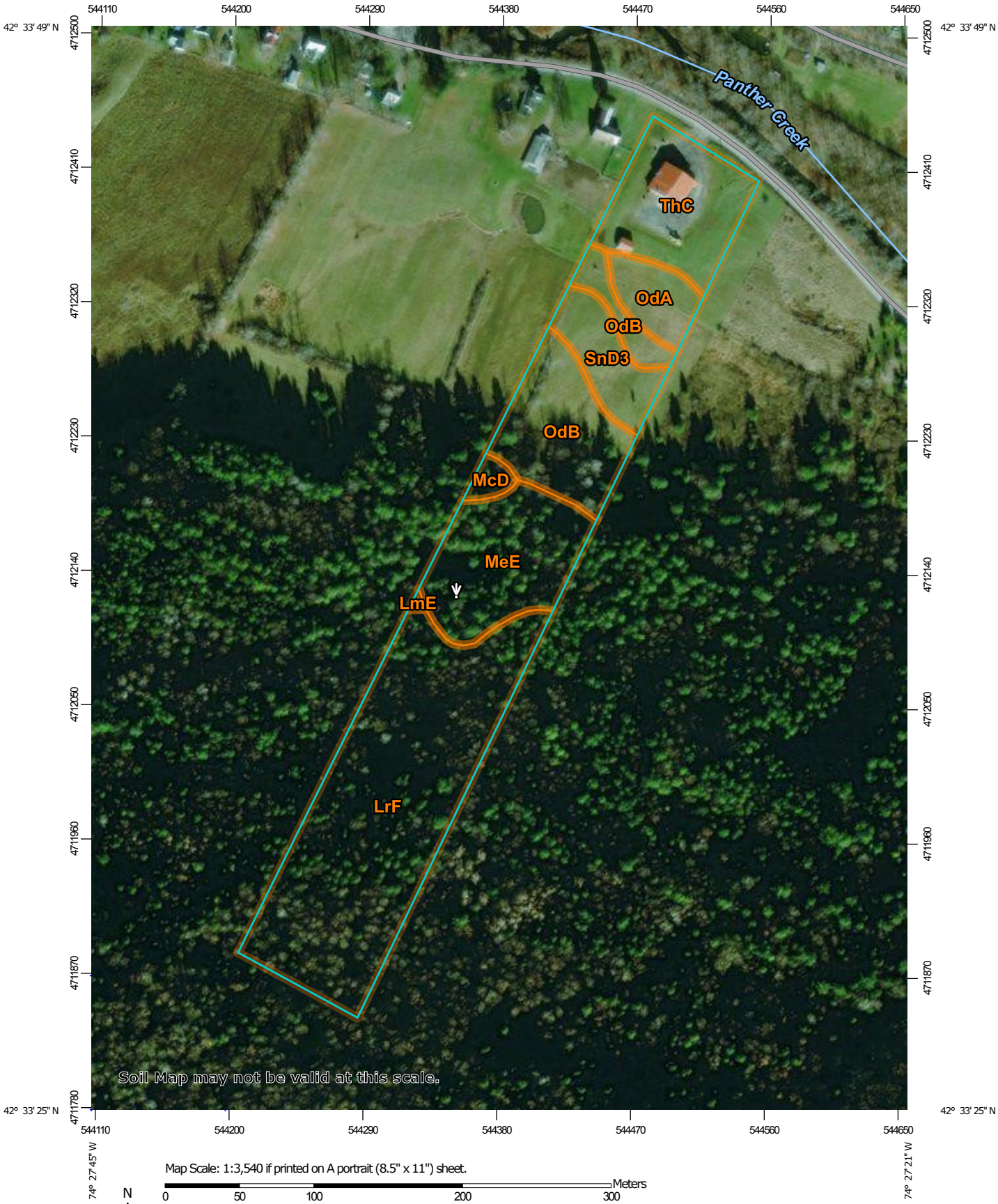
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

Appendix E: Soil Suitability and Prime Farmland

Soil Map—Schoharie County, New York
(West Fulton Firehouse Site Soils)



Map Scale: 1:3,540 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Schoharie County, New York
Survey Area Data: Version 13, Oct 8, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Nov 9, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LmE	Lordstown channery silt loam, 25 to 35 percent slopes	0.0	0.1%
LrF	Lordstown, Oquaga, and Nassau soils, 35 to 70 percent slopes	6.0	44.3%
McD	Mardin channery silt loam, 15 to 25 percent slopes	0.2	1.2%
MeE	Mardin and Wellsboro soils, 0 to 35 percent slopes, very stony	2.0	15.0%
OdA	Odessa and Rhinebeck soils, 0 to 2 percent slopes	0.6	4.6%
OdB	Odessa and Rhinebeck soils, 2 to 6 percent slopes	2.0	15.1%
SnD3	Schoharie and Hudson soils, 12 to 20 percent slopes	0.9	6.3%
ThC	Tunkhannock and Chenango gravelly silt loams, 5 to 15 percent simple slopes	1.8	13.3%
Totals for Area of Interest		**13.5**	**100.0%**

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands–Schoharie County, New York		
Map Symbol	**Map Unit Name**	**Farmland Classification**
LmE	Lordstown channery silt loam, 25 to 35 percent slopes	Not prime farmland
LrF	Lordstown, Oquaga, and Nassau soils, 35 to 70 percent slopes	Not prime farmland
McD	Mardin channery silt loam, 15 to 25 percent slopes	Not prime farmland
MeE	Mardin and Wellsboro soils, 0 to 35 percent slopes, very stony	Not prime farmland
OdA	Odessa and Rhinebeck soils, 0 to 2 percent slopes	Prime farmland if drained
OdB	Odessa and Rhinebeck soils, 2 to 6 percent slopes	Prime farmland if drained
SnD3	Schoharie and Hudson soils, 12 to 20 percent slopes	Not prime farmland
ThC	Tunkhannock and Chenango gravelly silt loams, 5 to 15 percent simple slopes	Farmland of statewide importance

Data Source Information

Soil Survey Area: Schoharie County, New York
Survey Area Data: Version 13, Oct 8, 2017

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Dwellings and Small Commercial Buildings

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Dwellings and Small Commercial Buildings–Schoharie County, New York							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LmE—Lordstown channery silt loam, 25 to 35 percent slopes							
Lordstown	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.57	Depth to hard bedrock	1.00	Depth to hard bedrock	0.57

Dwellings and Small Commercial Buildings–Schoharie County, New York							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LrF—Lordstown, Oquaga, and Nassau soils, 35 to 70 percent slopes							
Lordstown	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Nassau	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Oquaga	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
McD—Mardin channery silt loam, 15 to 25 percent slopes							
Mardin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to thin cemented pan	0.50			Depth to thin cemented pan	1.00
		Depth to thick cemented pan	0.01			Depth to thick cemented pan	0.01

Dwellings and Small Commercial Buildings–Schoharie County, New York							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MeE—Mardin and Wellsboro soils, 0 to 35 percent slopes, very stony							
Mardin, very stony	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Depth to thin cemented pan	1.00
		Depth to thin cemented pan	0.50			Slope	1.00
		Depth to thick cemented pan	0.01			Depth to thick cemented pan	0.01
Wellsboro, very stony	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Depth to thin cemented pan	1.00
		Depth to saturated zone	0.98	Slope	1.00	Slope	1.00
		Depth to thin cemented pan	0.50			Depth to saturated zone	0.98
		Depth to thick cemented pan	0.02			Depth to thick cemented pan	0.02
OdA—Odessa and Rhinebeck soils, 0 to 2 percent slopes							
Odessa	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Rhinebeck	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Dwellings and Small Commercial Buildings–Schoharie County, New York							
Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
OdB—Odessa and Rhinebeck soils, 2 to 6 percent slopes							
Odessa	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.01
Rhinebeck	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
SnD3—Schoharie and Hudson soils, 12 to 20 percent slopes							
Schoharie	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.99	Shrink-swell	1.00	Shrink-swell	0.99
				Slope	1.00		
Hudson	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.67	Slope	1.00	Depth to saturated zone	0.67
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
ThC—Tunkhannock and Chenango gravelly silt loams, 5 to 15 percent simple slopes							
Tunkhannock	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Chenango	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00

Data Source Information

Soil Survey Area: Schoharie County, New York
Survey Area Data: Version 13, Oct 8, 2017

Appendix F: State Historic Preservation Office Correspondence

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

November 14, 2017

Mary Barthelme
Governor's Office of Storm Recovery (GOSR)
99 Washington Ave, Suite 1224
Albany, NY 12231

Re: HTF/ GOSR/ CDBG Disaster Recovery Program
West Fulton Fire Department Improvements
807 West Fulton Road, West Fulton/ Schoharie County.
17PR07689

Dear Ms. Barthelme:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 (Title 54, Section 306108) of the National Historic Preservation Act of 1966. These comments relate only to Historic/ Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based on this review, it is the opinion of SHPO that there will be No Historic Properties Affected by the proposed undertaking.

If I can be of further assistance, please contact me at (518) 268-2187 Larry.moss@parks.ny.gov

Sincerely,

LMoss

Larry K Moss, Historic Preservation Technical Specialist

CC: Alicia Shultz, NYSHCR

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

November 9, 2017

Mr. Larry Moss
Historic Preservation Technical Specialist
New York State Office of Parks, Recreation and Historic Preservation
Division of Historic Preservation
Peebles Island
P.O. Box 189
Waterford, New York 12188-0189

Re: Section 106 Compliance for West Fulton Fire Department Improvements, 807 West Fulton Road, West Fulton, Schoharie County, New York 12194

Dear Mr. Moss:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and request for consultation.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. A consultation request for the project described herein will also be sent to the Saint Regis Mohawk Tribe, the Mohawk Nation, and the Stockbridge-Munsee Community Band of Mohicans. In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. §306108), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action.

Area of Potential Effect: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion. The existing fire station is a wood frame structure.

Proposed Project Description: The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will

be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower. Project plans are attached to this consultation request.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

Request for Comment: The purpose of this letter is to initiate consultation pursuant to Section 106 of the NHPA per the implementing regulations at 36 Code of Federal Regulations (CFR) Part 800. GOSR respectfully requests your review of the proposed project described herein. If you have any questions, please feel free to contact me via telephone number (518)-474-0647 or email: Alicia.Shultz@nyshcr.org. Thank you for your consideration and cooperation.

Sincerely,

Alicia Shultz
Community Developer – Environmental Services
New York State Homes and Community Renewal
Governor's Office of Storm Recovery

Enclosures:
Attachment 1: Project Location Map
Attachment 2: Site Plans

West Fulton Fire House

October 5, 2017

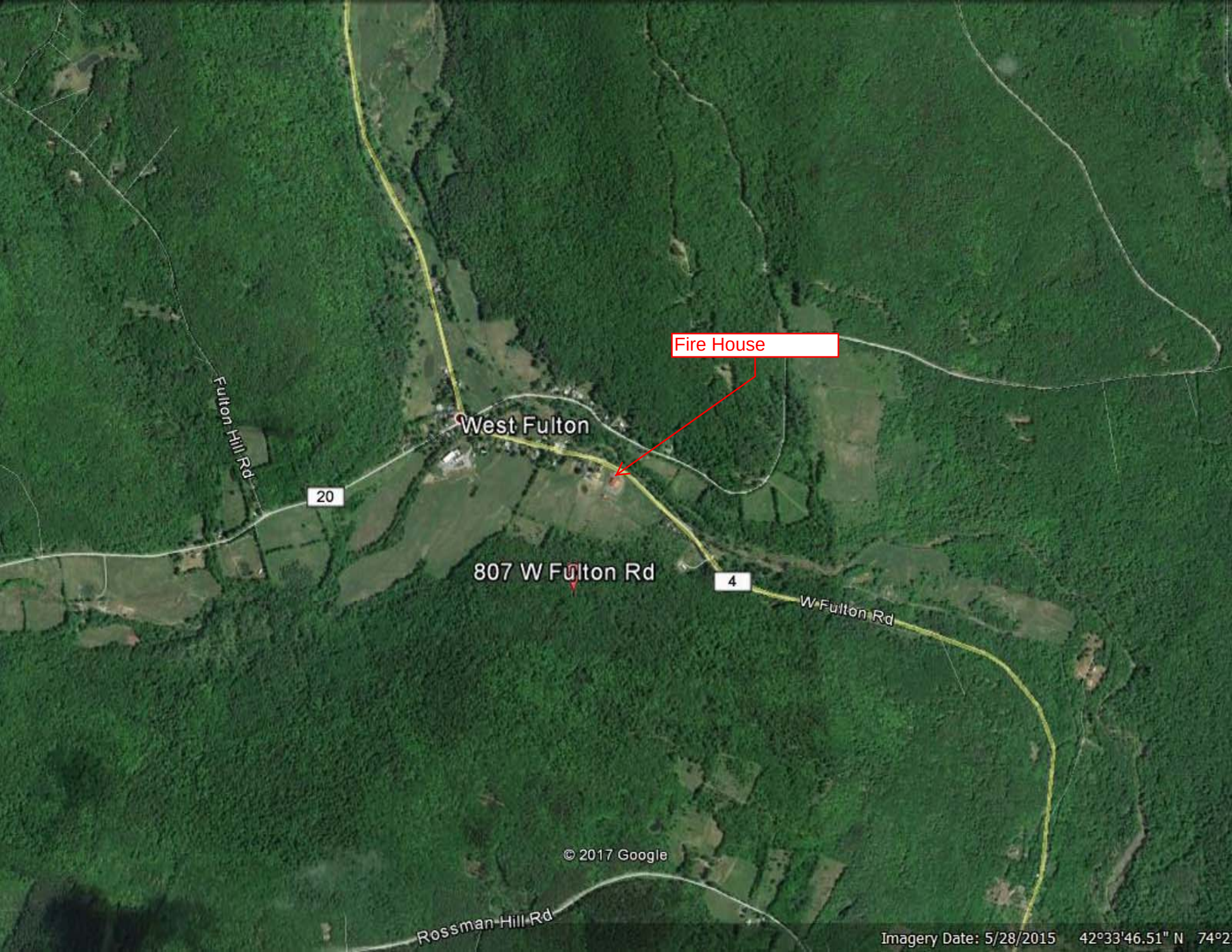
1:2,257

0 0.0275 0.055 0.11 mi

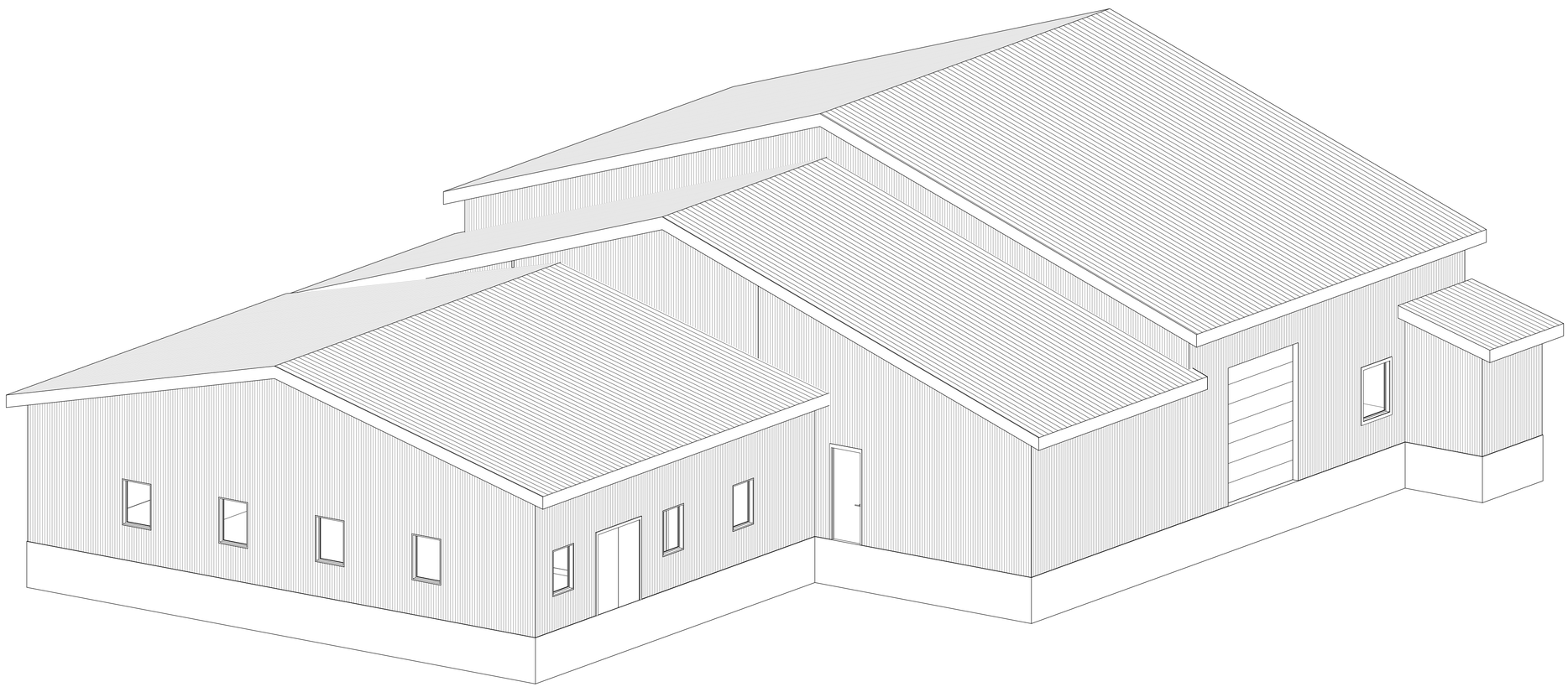
0 0.0425 0.085 0.17 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

WEST FULTON FIRE DEPARTMENT
SCHOHARIE COUNTY, NY
SCHEMATIC DESIGN
SEPTEMBER 8, 2017



DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE:
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

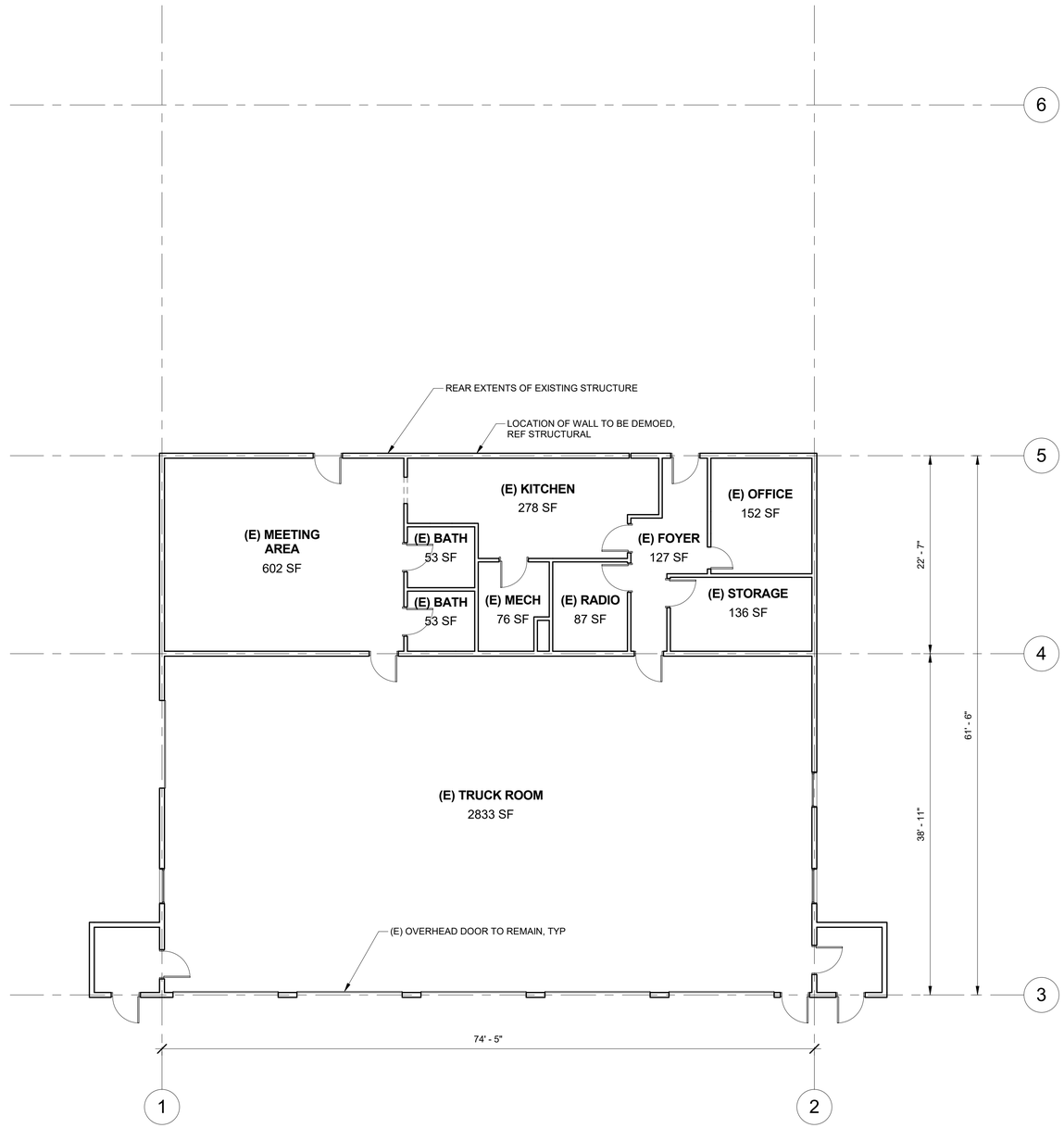
REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

COVER

SHEET:
COVER



1 / A1 Existing Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Existing Floor Plan

SHEET:
A1

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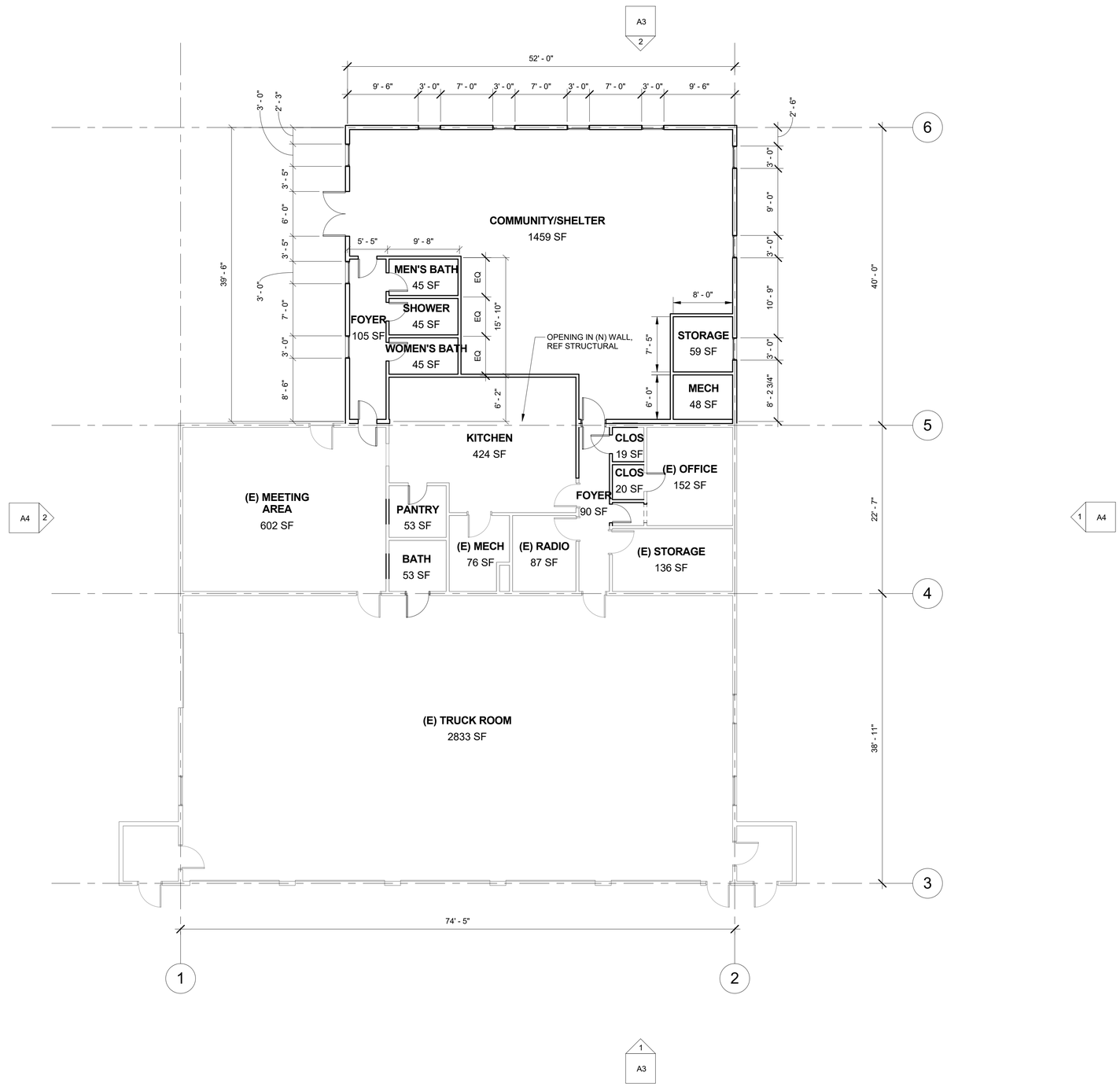

1 / A2 Proposed Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Proposed Floor Plan

SHEET: A2

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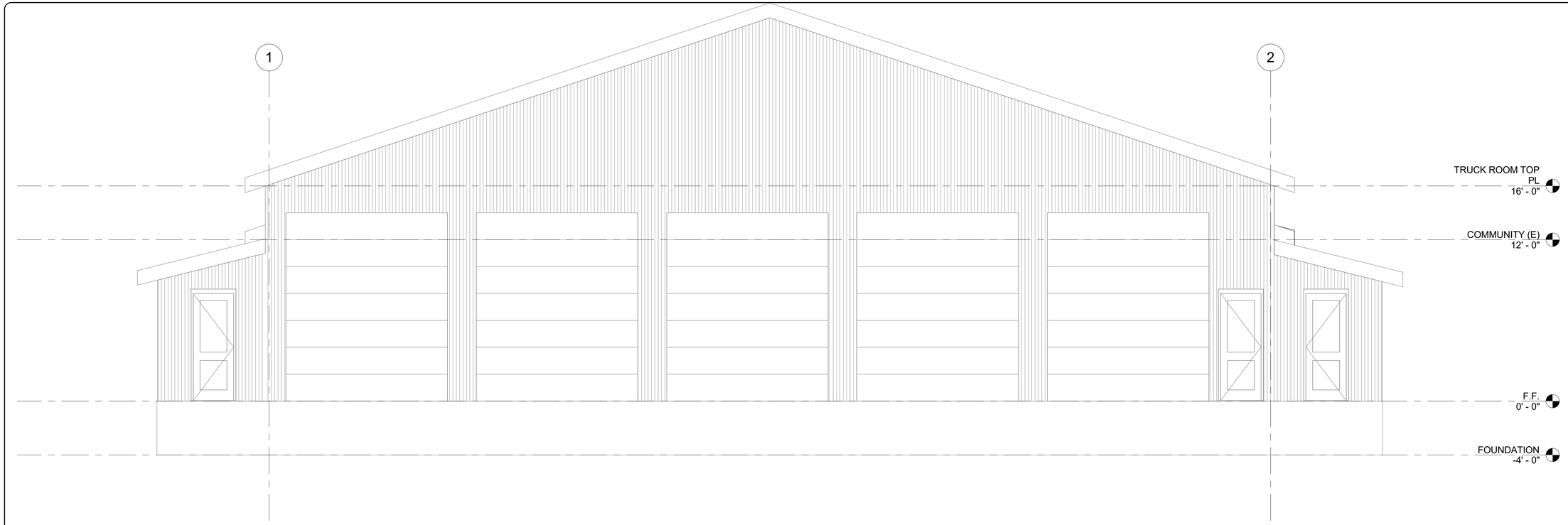
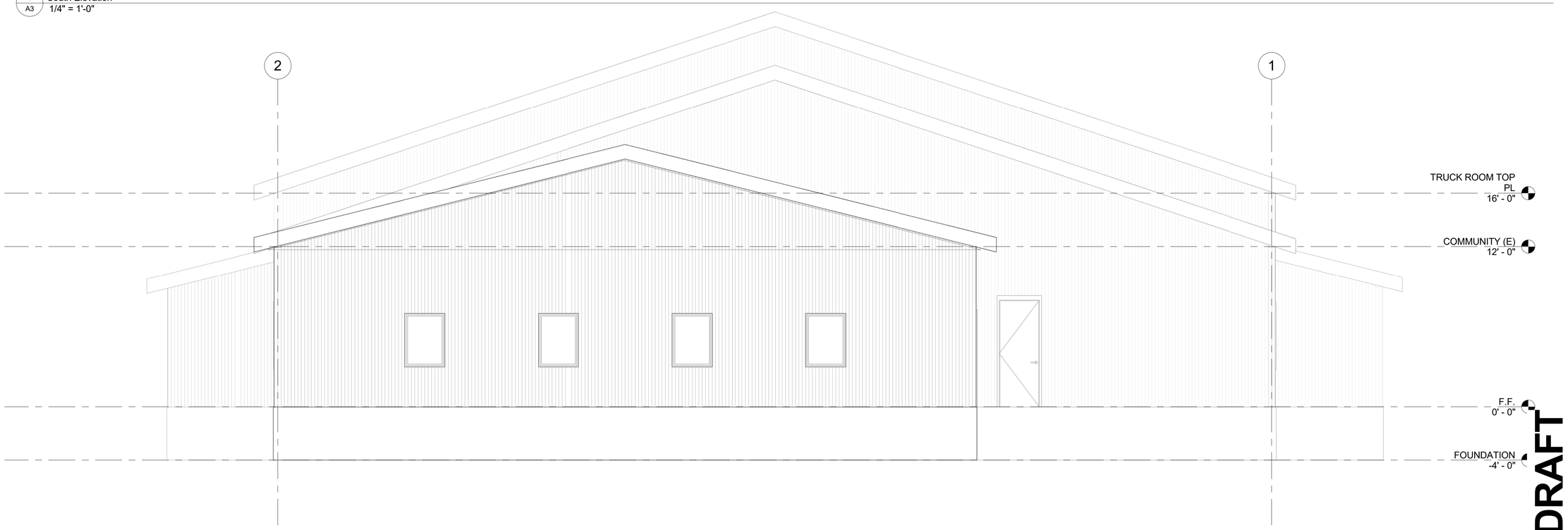


1 / A3 South Elevation
1/4" = 1'-0"



2 / A3 North Elevation
1/4" = 1'-0"

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW SECTION 7209.2.

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/4" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

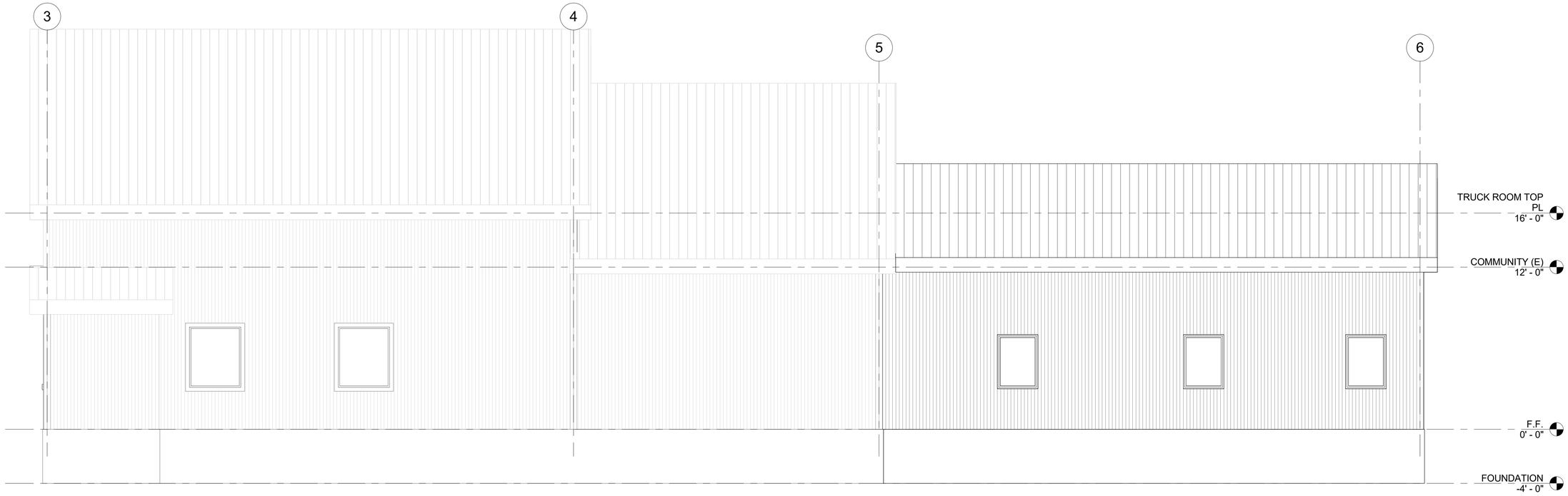
REVISIONS

NO.	DATE	DESCRIPTION

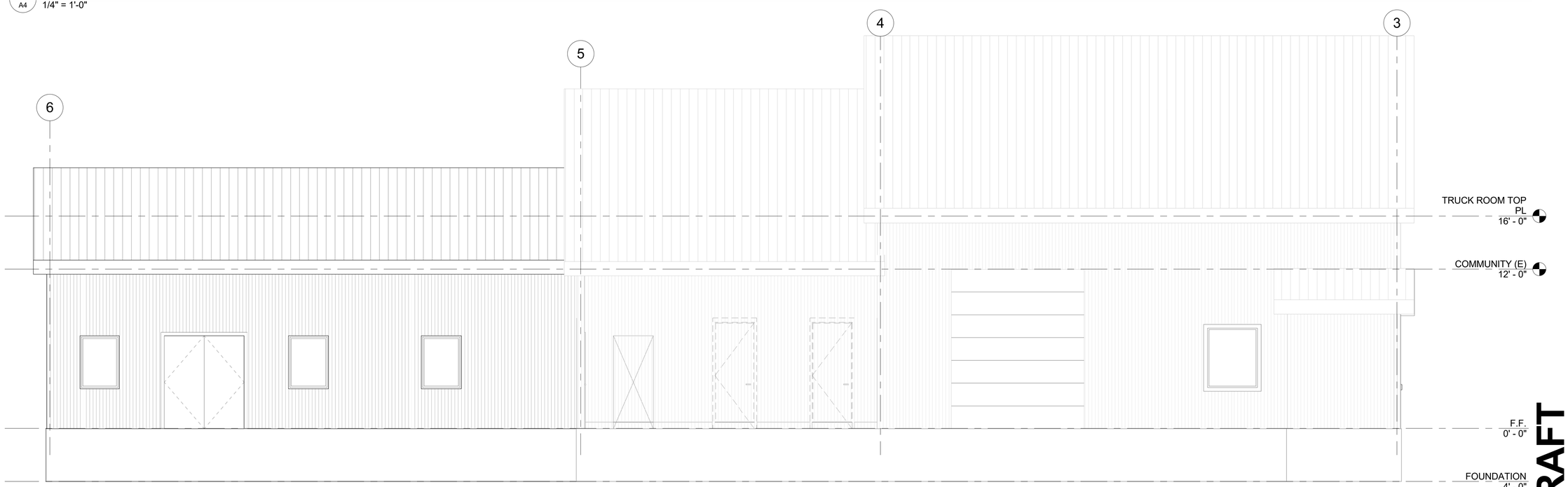
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A3



1 / A4 East Elevation
1/4" = 1'-0"



2 / A4 West Elevation
1/4" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/4" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A4

PROJECT DESCRIPTION:
1. ADDITION TO EXISTING SINGLE-STORY FIRE HOUSE
2. EXISTING BUILDING CONSISTS OF WOOD FRAMED CONSTRUCTION
3. ADDITION CONSISTS OF CONVENTIONAL WOOD FRAMED CONSTRUCTION
4. CONVENTIONAL SHALLOW FOUNDATIONS
5. CONCRETE SLAB-ON-GRADE
6. WOOD 2X STUD WALLS SHEATHED WITH PLYWOOD FOR LATERAL SYSTEM
7. PRE-ENGINEERED ROOF TRUSSES

GENERAL:
1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
4. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:
1. CONFORM TO 2015 INTERNATIONAL BUILDING CODE (IBC)
2. ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:
1. THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
2. CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:
1. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:
1. DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

DESIGN CRITERIA		
GEOTECHNICAL DESIGN CRITERIA		
DESIGN BASED ON GEOTECHNICAL REPORT BY:	XXXXXX, INC PROJECT NO.: XXXXXXX	
ALLOWABLE SOIL BEARING PRESSURE	2,500 PSF + 50% INCREASE FOR WIND OR SEISMIC LOADS	
SNOW DESIGN CRITERIA		
DESIGN ROOF SNOW LOAD	45 PSF MINIMUM	
SNOW DRIFT	AS SHOWN ON PLANS	
GROUND SNOW LOAD	P_g = 53 PSF	
FLAT ROOF SNOW LOAD	P_f = 45 PSF	
EXPOSURE FACTOR	C_e = 1.0 (PARTIAL EXPOSED)	
IMPORTANCE FACTOR	I_S = 1.20	
THERMAL FACTOR	C_t = 1.0	
WIND DESIGN CRITERIA		
MAIN WIND FORCE RESISTING SYSTEM	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDING	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	C	
GUST/INTERNAL PRESSURE	GC_{pi} = +/- 0.18	
SEISMIC DESIGN CRITERIA		
RISK CATEGORY	IV	
SITE CLASS	D (DEFAULT W/OUT GEOTECH REPORT)	
IMPORTANCE FACTOR	I_e = 1.25	
SEISMIC DESIGN CATEGORY	C	
MCE SPECTRAL ACCELERATIONS	S_S = 0.107	S_1 = 0.067
SITE COEFFICIENTS	F_a = 1.2	F_V = 1.7
DESIGN SPECTRAL ACCELERATIONS	S_{DS} = 0.181	S_{D1} = 0.107
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-10 SECTION 12.8	
	NORTH-SOUTH DIRECTION	EAST-WEST DIRECTION
SEISMIC LOAD RESISTING SYSTEM	LIGHT FRAMED WOOD SHEAR WALLS	LIGHT FRAMED WOOD SHEAR WALLS
RESPONSE MODIFICATION FACTOR	R = 6.5	R = 6.5
SEISMIC RESPONSE COEFFICIENT	C_S = 0.042	C_S = 0.042
REDUNDANCY FACTOR	ρ = 1.0	ρ = 1.0
DESIGN INELASTIC STORY DRIFT	Δ = XX INCHES	Δ = XX INCHES

STRUCTURAL OBSERVATION:
1. THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS		
CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
AT COMPLETION OF WOOD SHEAR WALLS	X	REF FOOTNOTE A, B
AT COMPLETION OF HORIZONTAL ROOF DIAPHRAGM	X	REF FOOTNOTE A, B
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

A. STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.
B. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.
C. STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

FOUNDATIONS:
1. FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL, AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
2. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW FINAL GRADES.
3. ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE PROJECT GEOTECHNICAL REPORT.
4. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITEWORK.
5. STRUCTURAL FILL MATERIALS, PLACEMENT, AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
6. BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS.
7. PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN UNDER THE GUIDANCE OF THE GEOTECHNICAL ENGINEER. MINIMUM TESTING FREQUENCY SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
9. ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
10. ALL FILL, BACKFILL AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL ENGINEER.

SPECIAL INSPECTION AND TESTING:
1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S0.03. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
HOLDOWN ANCHOR BOLT LAYOUT	X		
EMBEDDED STEEL ITEMS	X		
SLAB-ON-GRADE CONTROL JOINT LAYOUT	X		
STRUCTURAL STEEL MILL CERTS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL DECKING	X		
STEEL FASTENERS	X		
GLUED LAMINATED MEMBERS	X		
PREMANUFACTURED WOOD JOISTS	X	X	
PREMANUFACTURED WOOD TRUSSES	X	X	
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"

A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER "DESIGN CRITERIA."
C. THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
D. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:
1. ALL CONCRETE WORK SHALL CONFORM TO "ACI 318--BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
2. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS FOLLOWS:

CONCRETE STRENGTHS				
DESCRIPTION	f'c (PSI)	WATER - CEMENT RATIO BY WEIGHT	ENTRAINED AIR	OTHER
FOOTINGS, STEMWALLS	3,000	0.53	2% +/- 1.5%	
RETAINING WALLS	3,000	0.50	6% +/- 1.5%	
EXTERIOR SLAB-ON-GRADE	3,000	0.48	6% +/- 1.5%	
COLUMNS, BEAMS	4,000	0.45		
INTERIOR SLAB-ON-GRADE	4,000	0.48		

NOTES:
A. VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
B. CONCRETE MIXES SHALL BE NORMAL WEIGHT AND CONTAIN PORTLAND CEMENT CONFORMING TO ASTM C150 FOR TYPE I, OR TYPE II.
C. AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260.
D. COLUMNS THAT ARE AN INTEGRAL PART OF A WALL SHALL HAVE CONCRETE STRENGTH AS REQUIRED FOR COLUMNS.

3. MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:

MINIMUM CEMENT CONTENT	
f'c (PSI)	MINIMUM CEMENT CONTENT PER CUBIC YARD
3,000	470 LBS.
4,000	550 LBS.
5,000	630 LBS.

NOTES:
A. FLYASH CONFORMING TO ASTM C618 "TYPE F," OR "TYPE C" MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

4. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
5. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
6. A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 "TYPE F, OR TYPE "G" MAY BE USED IN CONCRETE MIXES PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
7. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
8. SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
9. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 10'-0" ON-CENTER EACH WAY FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
10. ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
11. ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET, OR WET SET.
12. ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
13. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
14. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
15. PREPARATION, CONSTRUCTION AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 5.12, 5.13 AND ACI 306R AND 305R.

SHORING AND RE-SHORING:
1. SHORING AND RE-SHORING IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.
2. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FARENHEIT SURROUNDING TEMPERATURE.	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

EPOXY REPAIR ADHESIVE:
1. EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.
2. ADHESIVE SHALL HAVE A MINIMUM SLANT SHEAR STRENGTH OF 5,000 PSI AND A MINIMUM TENSILE STRENGTH OF 4,000 PSI.
3. HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.
4. REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

REINFORCING STEEL:
1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO "ACI 318—BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND "ACI 315—MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
2. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
   A. SMOOTH WELDED WIRE FABRIC—ASTM A185
   B. CONCRETE COLUMN VERTICAL REINFORCEMENT—ASTM A706, GRADE 60
   C. ALL OTHER REINFORCEMENT—ASTM A615, GRADE 60
3. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.
4. REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE "CRSI MANUAL OF STANDARD PRACTICE," MSP-1.
5. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.
6. REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. "WET SETTING" OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.
8. ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.
9. THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

TYPICAL LAP SPLICE SCHEDULE (IN)						
BAR SIZE	3,000 PSI		4,000 PSI		5,000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17
#4	37	29	32	25	29	22
#5	47	36	40	31	36	28
#6	56	43	48	37	43	33
#7	81	63	70	54	63	49
#8	93	72	80	62	72	55
#9	105	81	91	70	81	63
#10	118	91	102	79	91	70
#11	131	101	113	87	101	78

NOTES:
A. FOR CENTER-TO-CENTER SPACING LESS THAN FOUR TIMES THE BAR DIAMETER, MULTIPLY THE ABOVE VALUES BY A FACTOR OF 1.4.
B. TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.
C. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
D. VALUES ARE FOR UNCOATED BARS.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)	
USE	COVER
COLUMN BARS	1-1/2" COVER TO TIES
SLAB-ON-GRADE BARS	1-1/2" COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

MINIMUM CONCRETE COVER (PRE-CAST)	
USE	COVER
COLUMN BARS	1" TO TIES

11. CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.
12. PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING WITH A MINIMUM 6" EMBEDMENT BELOW THE TOP OF FOOTING.
13. AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2'-0") PAST THE OPENING ON ALL SIDES.
14. PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4'-0" LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.
15. REFERENCE TYPICAL DETAILS FOR THE DISPOSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.
16. PROVIDE #5 CARRIER BAR AT 3'-0" MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.
17. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCMENT ON EACH LEG.

CONCRETE ACCESSORIES:
1. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON TYPE D2L (ICC ESR-2907) OR APPROVED EQUAL.
2. HEADED SHEAR STUDS SHALL BE NELSON HEADED ANCHORS WITH FLUXED ENDS (ICC ESR-2856) OR APPROVED EQUAL.
3. HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AUTOMATICALLY END-WELDED WITH THE MANUFACTURER'S STANDARD EQUIPMENT AND IN ACCORDANCE WITH THE ASSOCIATED ICC REPORTS.
4. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. EMBEDDED ITEMS SHALL NOT BE LOADED, NOR SHALL WELDS BE APPLIED, FOR A MINIMUM OF 7-DAYS AFTER CASTING OF CONCRETE.
5. APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

APPROVED POST-INSTALLED CONCRETE ANCHORS		
TYPE	ANCHOR	ICC REPORT
CONCRETE SCREW	SIMPSON TITEN HD	ICC ESR-2713
	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY ADHESIVE	SIMPSON AT-XP	ICC ESR-2508
	HILTI HIT-RE 500SD	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3037
	HILTI KWIK BOLT TZ	ICC ESR-1917

NOTES:
A. ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.
B. REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.
C. ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL, OR HOT-DIPPED GALVANIZED.

DRAFT

WARNING -- IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

DATE: 7/11/2017
DRAWN BY: AH
SCALE: 12" = 1'-0"
REVIEWED BY: AH
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S1

SAWN FRAMING LUMBER:

1. SAWN LUMBER SHALL CONFORM TO THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR THE WESTERN WOODS PRODUCTS ASSOCIATION (WWPA) GRADING RULES.
2. ALL LUMBER SHALL BE THE SPECIES AND GRADES AS FOLLOWS:

SAWN LUMBER		
USE	SPECIES/GRADE	Fb (PSI)--BASE VALUE
LUMBER 2" TO 4" THICK	DOUGLAS FIR-LARCH NO.2	900
BEAMS 5"x5" AND GREATER	DOUGLAS FIR-LARCH NO.1	1350
POSTS	DOUGLAS FIR-LARCH NO.1	1200

3. ALL DIMENSIONAL LUMBER AND TIMBERS SHALL BE KILN DRIED AND CERTIFIED IN WRITING BY THE SUPPLIER TO BE LESS THAN 19% MOISTURE CONTENT.
4. ALL LUMBER IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED (PT) PER THE AMERICAN WOOD PRESERVERS BUREAU (AWPB) UNLESS AN APPROVED MOISTURE BARRIER IS PROVIDED. ALL PT LUMBER SHALL BEAR THE AWPB QUALITY MARK.
5. CUTTING AND NOTCHING OF JOISTS AND STUDS SHALL CONFORM TO IBC SECTIONS 2308.8.2, 2308.9.10, 2308.10.4.2 AND THE LIMITATIONS AS NOTED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE SOLID LINES OF BLOCKING, SAME DEPTH OF FRAMING MEMBER, AT ALL BEARING POINTS.
7. JOIST BRIDGING SHALL BE REQUIRED WHERE JOISTS HAVE A DEPTH-TO THICKNESS RATIO GREATER THAN 5-TO-1 AND WHERE ONE EDGE IS UNSUPPORTED. JOIST BRIDGING SHALL BE SPACED AT 8'-0" ON CENTER MAXIMUM.

WOOD STRUCTURAL PANEL SHEATHING:

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE "U.S. PRODUCT STANDARD PS 1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD," THE "U.S. PRODUCT STANDARD PS 2 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL USE PANELS," OR THE "APA PRP-108 PERFORMANCE STANDARDS."
2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING AS FOLLOWS:

WOOD STRUCTURAL PANEL SHEATHING	
USE	THICKNESS/RATING
ROOF SHEATHING	5/8"-INDEX 40/20
WALL SHEATHING	15/32"-INDEX 32/16

3. ALL ROOF SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS SHALL BE STAGGERED.
4. ROOF SHEATHING SHALL BE BLOCKED, OR HAVE EDGES SUPPORTED BY PLYCLIPS.
5. SHEAR WALL SHEATHING SHALL BE PLYWOOD OR ORIENTED STRAND BOARD (OSB) PANELS CONFORMING TO THE REQUIREMENTS FOR ITS TYPE SPECIFIED IN DOC PS1 OR PS2.
6. SHEAR WALL SHEATHING SHALL BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY AND BE BLOCKED AT ALL PANEL EDGES. SHEET SIZES SHALL BE 4'X8' UNLESS AT BOUNDARIES OR FRAMING CHANGES. REFERENCE PLANS FOR ADDITIONAL REQUIREMENTS.

NAILING AND FASTENERS:

1. ALL FRAMING NAILS SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS AND CONFORM TO THE "STANDARD SPECIFICATION OF DRIVEN FASTENERS: NAILS, SPIKES, AND STAPLES" (ASTM F1667) AND "POWER-DRIVEN STAPLES AND NAILS FOR USE
2. NAILING NOT SHOWN SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.9.1, OR NER-272.
3. NAILS SHALL BE IDENTIFIED BY LABELS ATTACHED TO THEIR CONTAINERS, THAT SHOW THE MANUFACTURER'S NAME, NAIL SHANK DIAMETER, AND LENGTH.
4. NAIL SIZES SHALL BE AS FOLLOWS:

FRAMING NAILS		
NAIL TYPE	SHANK DIAMETER (IN)	MINIMUM PENETRATION INTO FRAMING MEMBER (IN)
6d	0.113	1.25
8d	0.131	1.50
10d	0.148	1.625
12d	0.148	1.625
16d	0.148	1.625

5. UNLESS OTHERWISE NOTED ON PLANS, PLYWOOD SHEATHING SHALL BE ATTACHED TO THE FRAMING SUPPORTS AS FOLLOWS:

SHEATHING NAILING		
USE	PANEL EDGES	INTERMEDIATE FRAMING MEMBERS
ROOF SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC
WALL SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC

NOTES:

A. ALL NAILS SHALL BE COMMON NAILS EXCEPT RING SHANKS SHALL BE USED FOR FASTENING ROOF SHEATHING.

6. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS. ALL A307 BOLTS SHALL HAVE CUT THREADS.
7. PRE-DRILL HOLES FOR LAG BOLTS. SOAP THREADS OF LAGS IMMEDIATELY PRIOR TO INSTALLATION.
8. JOIST HANGERS, HOLDOWNS, AND OTHER FRAMING ACESSORIES SHALL BE MANUFACTURED BY SIMPSON STRONG TIE (OR AN APPROVED EQUAL) AND BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HARDWARE FASTENERS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURER'S REQUIREMENTS. ANY PRODUCT SUBSTITUTIONS TO SIMPSON SHALL MEET OR EXCEED SIMPSON'S PUBLISHED DESIGN CAPACITIES AND MUST HAVE A CURRENT ICC EVALUATION REPORT FOR THE APPLICABLE CODES.
9. HANGERS NOT SHOWN SHALL BE SIMPSON U-TYPE, OR B-TYPE OF THE SIZE RECOMMENDED FOR THE SPECIFIC FRAMING MEMBER SHOWN ON PLAN.
10. FASTENERS IN CONTACT WITH PRESERVATIVE TREATED, OR FIRE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.
11. SILLS AT WALLS SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS DETAILED OTHERWISE. WASHERS TO BE MINIMUM 1/4"x3"x3" AS PER IBC 2305.3.11.
12. ALL SILL PLATES AND LEDGERS SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE.

GLUED LAMINATED MEMBERS:

1. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH THE "AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER" (ANSI A190.1), OR OTHER CODE-APPROVED DESIGN, MANUFACTURING AND QUALITY ASSURANCE PROCEEDURES.
2. ADHESIVE SHALL BE WET-USE EXTERIOR WATERPROOF GLUE.
3. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS INDENTIFICATION MARK OR BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE.
4. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER THE SHOP OR FIELD.
5. NOTCHING AND/OR BORING OF GLUED LAMINATED MEMBERS (EITHER IN THE SHOP, OR FIELD) IS STRICTLY PROHIBITED UNLESS AS SPECIFICALLY DETAILED IN THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
6. GLUED LAMINATED TIMBER BEAMS SHALL BE WESTERN SPECIES WITH THE FOLLOWING STRENGTH PROPERTIES:

GLUED LAMINATED TIMBER BEAMS				
COMBINATION SYMBOL (SPECIES)	USE	MODULUS OF ELASTICITY (PSI)	FLEXURAL STRESS (PSI)	HORIZONTAL SHEAR STRESS (PSI)
24F-V4 (DF/DF)	SIMPLE SPAN	1,800,000	2,400	265
24F-V8 (DF/DF)	CANTILEVERED OR CONTINUOUS	1,800,000	2,400	265

7. UNEXPOSED GLULAM MEMBERS SHALL BE FRAMING APPEARANCE GRADE. EXPOSED GLULAM MEMBERS SHALL BE ARCHITECTURAL APPEARANCE GRADE.
8. GLULAM MEMBERS NOTED AS "FRR" (FIRE RESISTANCE RATED) SHALL BE LAYED UP WITH ADDITIONAL TENSION LAMINATION(S) AS REQUIRED TO MEET 1 HOUR FIRE RESISTANCE RATING PER IBC 722.6.3.4. THE QUALITY STAMP ON "FRR" BEAMS SHALL INDICATE THAT THE MANUFACTURER HAS MADE THE REQUIRED LAYUP MODIFICATIONS.

ENGINEERED COMPOSITE LUMBER:

1. ENGINEERED COMPOSITE WOOD PRODUCTS SUCH AS LAMINATED VENEER LUMBER (LVL), PARALLEL STRAND LUMBER (PSL), AND LAMINATED STRAND LUMBER (LSL) SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS, MANUFACTURED BY TRUS-JOIST OR AN APPROVED EQUAL.
2. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM DESIGN PROPERTIES:

ENGINEERED COMPOSITE LUMBER		
COMPOSITE LUMBER TYPE	MODULUS OF ELASTICITY (PSI)	ALLOWABLE FLEXURAL STRESS (PSI)
LSL	1,500,000	2,350
LVL	1,900,000	2,600

NOTE:
FLEXURAL STRESSES NOTED ABOVE ARE FOR 12" DEEP MEMBERS. DEEPER MEMBERS SHALL BE DESIGNED FOR REDUCED STRESSES PER THE MANUFACTURER'S REQUIREMENTS.

ANCHOR BOLTS:

1. ANCHOR BOLTS FROM SILL PLATES TO FOUNDATION SHALL BE GALVANIZED.
2. ALL ANCHOR BOLTS SHALL HAVE A GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND NUT.
3. ANCHOR BOLTS SHALL BE PLACED SO THAT PLATE WASHER IS NO MORE THAN 1/2" FROM THE SHEATHED FACE OF THE SHEARWALL. FOR THE CONDITION WHERE SHEATHING IS APPLIED TO BOTH SIDES OF SHEARWALL, ALTERNATE ANCHOR BOLTS.
4. ANCHOR BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION (SIMILAR IF ALTERNATE ANCHORAGE IS SELECTED):
   A. ANCHOR BOLT MATERIAL TYPE
   B. ANCHOR BOLT SIZE
   C. OVERALL ANCHOR BOLT LENGTH
   D. ANCHOR BOLT EMBEDMENT
   E. ANCHOR BOLT PROJECTION (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR FIELD TOLERANCES)
   F. ANCHOR BOLT SPACING
   G. DIMENSIONS ANCHOR BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL ANCHOR BOLTS
   H. PLATE WASHER TYPE AND LOCATIONS
   I. SILL PLATE LENGTHS AND SPLICE LOCATIONS
6. SILLS AT WALL SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
7. ALL SILL PLATES SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
8. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL.

HOLDOWN ANCHOR BOLTS:

1. ALL HOLDOWN BOLTS AT SHEAR WALLS TO FOUNDATION SHALL NOT BE IN CONTACT W/ PRESERVATIVE TREATED (PT) WOOD. PT WOOD PLATES SHALL HAVE OVERSIZED HOLES 1/4" MIN & 3/8" MAX LARGER THAN BOLT SIZE. AS AN ALTERNATIVE, THE ANCHOR MAY BE SLEEVED WITH AN INSULATOR BUSHING OR GALVANIZED IN ACCORDANCE W/ ASTM A653.
2. HOLDOWN BOLTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
3. HOLDOWN BOLTS SHALL BE PLACED A MINIMUM OF 5" FROM THE END OF CONCRETE STEMWALLS. ADD ADDITIONAL 2x STUD AS REQUIRED.
4. SEE HOLDOWN SCHEDULE AND DETAILS ON SHEET S8.00 FOR TYPICAL HOLDOWN INSTALLATION REQUIREMENTS.
5. HOLDOWN BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
6. HOLDOWN BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL, THREADED ON BOTH ENDS UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION:
   A. HOLDOWN BOLT MATERIAL TYPE
   B. HOLDOWN BOLT SIZE
   C. OVERALL HOLDOWN BOLT LENGTH
   D. HOLDOWN BOLT EMBEDMENT INTO FOOTING
   E. HOLDOWN BOLT PROJECTION FOR HOLDOWN TYPE (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR A MINIMUM OF 2" FIELD TOLERANCE)
   F. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL HOLDOWN BOLTS
   G. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION, SIZE, TYPE, AND QUANTITY OF HOLDOWN POST OR BUILT-UP MEMBER
   H. HOLDOWN TYPE
   I. ALL ACCESSORIES (INCLUDING PLATE WASHERS, DOUBLE NUTS, ETC.) AND LOCATIONS

PREMANUFACTURED WOOD TRUSSES:

1. DESIGN OF THE PREMANUFACTURED WOOD ROOF TRUSS SYSTEM SHALL BE THE CONTRACTORS RESPONSIBILITY.
2. DESIGN SHALL CONFORM TO THE PROFILES SHOWN ON THE DRAWINGS AND THE REQUIREMENTS OF IBC SECTION 2303.4 AND THE "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES", TPI-24 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE.
3. THE DESIGNER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS TO THE STRUCTURE REQUIRED TO TRANSFER DESIGN LOADS INTO THE STRUCTURAL SYSTEM OF THE BUILDING.
4. MANUFACTURER SHALL DESIGN AND FURNISH ALL WOOD FRAMING CONNECTIONS NECESSARY TO TRANSMIT DESIGN LOADS, INCLUDING SEISMIC AND WIND LOADS, TO THE BEARING AND SHEAR WALL SUPPORTS.
5. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS SHOWING LAYOUT AND ANY DETAILING NECESSARY FOR DETERMINING FIT AND PLACEMENT IN THE STRUCTURE.
6. METAL PLATE CONNECTED TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS AND ANY SNOW DRIFTING/SLIDING SNOW INDICATED ON DRAWINGS:

PREMANUFACTURED WOOD TRUSS LOADING	
LOADING TYPE	UNIFORMLY DISTRIBUTED LOAD (PSF)
ROOF LIVE LOAD	20
ROOF SNOW LOAD	25
ROOF DEAD LOAD	TOP CHORD: 14
	BOTTOM CHORD: 9.5

WIND UPLIFT (PSF)	
FIELD	57
PERIMETER	89
CORNER	121

NOTES:

1. WIND UPLIFT PRESSURES SHOWN ABOVE DO NOT INCLUDE ROOF DEAD LOAD.
2. WIND UPLIFT PRESSURES SHOWN ABOVE ARE UNFACTORED.

7. CONTRACTOR TO VERIFY ALL WEIGHTS AND LOCATIONS OF CONCENTRATED LOADS DUE TO ROOF TOP MECHANICAL UNITS, MECHANICAL PIPING, ELECTRICAL UNITS, FOLDING PARTITIONS AND OTHER CONCENTRATED LOADS PRIOR TO TRUSS FABRICATION.
8. TRUSS MANUFACTURER SHALL DESIGN ALL DRAG TRUSSES AND DRAG STRUTS FOR THE FOLLOWING:
   A. SHEAR LOADS AS INDICATED ON THE PLANS AND NOTES.
   B. DRAG TRUSSES TO COLLECT LOAD ALONG THE TOP CHORD AND TRANSFER TO THE BOTTOM CHORD THROUGH WEB MEMBERS.
   C. ALL TOP AND BOTTOM CHORDS TO HAVE CAPACITY OF TRANSFERING SHEAR LOADS THROUGH SPLICES.
9. THE TRUSS MANUFACTURER SHALL SUBMIT DESIGNS, SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED FOR REVIEW AND APPROVAL.
10. DEFLECTION OF MEMBERS DUE TO DESIGN LOADS SHALL NOT EXCEED THE FOLLOWING (UNLESS NOTED OTHERWISE):
    ROOFS: LIVE LOAD - 1/360 OF SPAN, TOTAL LOAD - 1/240 OF SPAN
11. DESIGN, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE THE FOLLOWING INFORMATION:
    A. DEFLECTION DESIGN CRITERIA
    B. LIVE, SNOW, DEAD, WIND, SEISMIC AND MECHANICAL DESIGN LOADS
    C. ERECTION AND PLACEMENT CRITERIA
    D. DETAILS OF ALL BRIDGING, BRACING, STIFFENERS, BLOCKING AND CONNECTIONS
    E. LOCATION AND FRAMING FOR ALL EQUIPMENT LOADS OVER 500 LBS
    F. LOCATION AND FRAMING FOR ALL SUSPENDED WALLS AND EQUIPMENT
12. LOWER CHORDS SHALL BE CAMBERED TO PROVIDE FOR LONG-TERM DEAD LOAD DEFLECTION AT GYPSUM BOARD CEILINGS.
13. DO NOT NOTCH OR DRILL TRUSS MEMBERS WITH OUT APPROVAL OF THE TRUSS MANUFACTURER AND THEIR ENGINEER.

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DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S2

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER

TABLE 5

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X (a)	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

TABLE 6

REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SEISMIC CATEGORIES C, D, E, F)

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
STRUCTURAL WOOD					
CONNECTIONS FOR DIAPHRAGM CHORDS, COLLECTORS, BRACING, AND SHEAR WALL ANCHORAGE AND HOLDOWNS				X	ALL CONNECTIONS VISUALLY INSPECTED
FASTENING OF DIAPHRAGM AND SHEAR WALL SHEATHING WITH EDGE NAILING ≤4"				X	SPECIAL INSPECTION IS NOT REQUIRED WHEN FASTENER SPACING IS GREATER THAN 4" ON CENTER FOR WOOD SHEAR WALLS, DIAPHRAGMS, NAILING, BUILDING AND OTHER COMPONENTS IN THE SEISMIC FORCE-RESISTING SYSTEM.
ARCHITECTURAL COMPONENTS					
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.11	ASCE 7-10 Section 13.5.6		X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.11.5			X (a)	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.11.6			X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	
PROCESS MECHANICAL COMPONENTS					
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1909.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
WOOD					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
PREFABRICATED WOOD SHEAR PANELS	1705.5 1704.2.5	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO HOLDOWN ANCHOR SIZE AND PLACEMENT, INCLUDING EMBEDMENT LENGTH, SPACING, AND EDGE DISTANCE

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8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

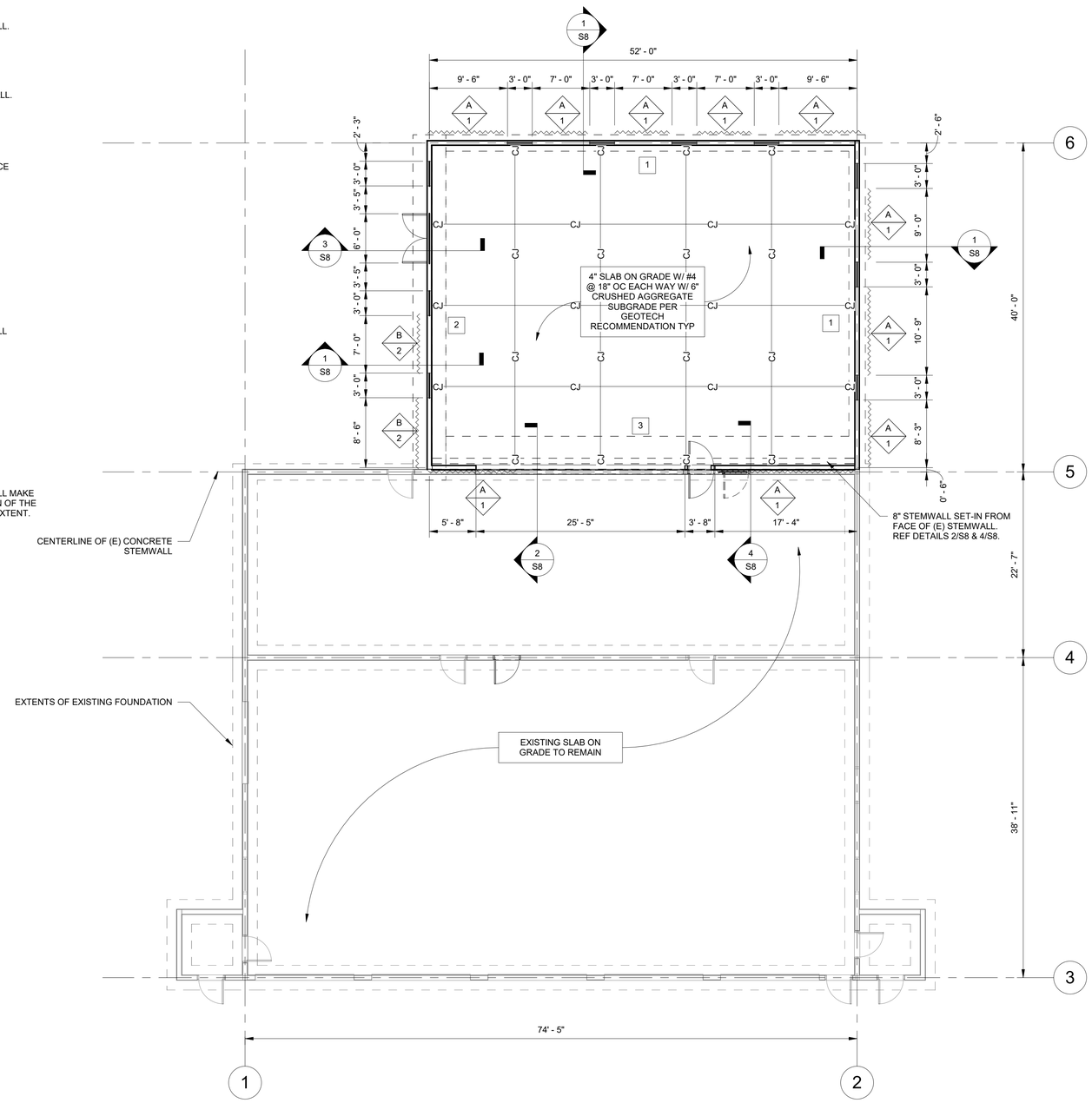
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Special Inspection

SHEET: S3

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S4 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

B. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOILS UNLESS SPECIFIED OTHERWISE IN THE STRUCTURAL DETAIL OR SPECIFIED IN THE GEOTECHNICAL REPORT.

C. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION FOR NEW FOUNDATION SYSTEM.

D. UNDER-SLAB VAPOR BARRIER AND FOUNDATION DRAINAGE SHALL BE PROVIDED AS SPECIFIED IN THE GEOTECHNICAL REPORT AS WELL AS THE GOVERNING BUILDING CODE (IBC).

E. CONTROL JOINTS SHALL BE PROVIDED AS INDICATED ON THE FOUNDATION PLAN. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT MAXIMUM SPACING AS SPECIFIED ON SHEET S1 IF THE PROVIDED LAYOUT INDICATES LARGER SPACING.

F. ALL ELEVATIONS TO FINISHED FLOORS (TOP OF SLAB) SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

G. ALL BOTTOM OF (N) FOOTING ELEVATIONS SHALL BE 4'-0" BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED.

Structural Foundation Schedule				
Type Mark	Width	Foundation Thickness	Longitudinal Reinforcement	Transverse Reinforcement
1	2' - 0"	1' - 0"	(3) #4, BOTTOM	#4@18" OC, BOTTOM
2	4' - 0"	2' - 0"	(5) #4, TOP & BOTTOM	#4@18" OC, TOP & BOTTOM
3	4' - 0"	1' - 0"	(5) #4, BOTTOM	#4@18" OC, TOP & BOTTOM

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS					
MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
2	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 2 / S7 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTICAL ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

WOOD SHEAR WALL SCHEDULE					
WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

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REVISIONS

NO.	DATE	DESCRIPTION

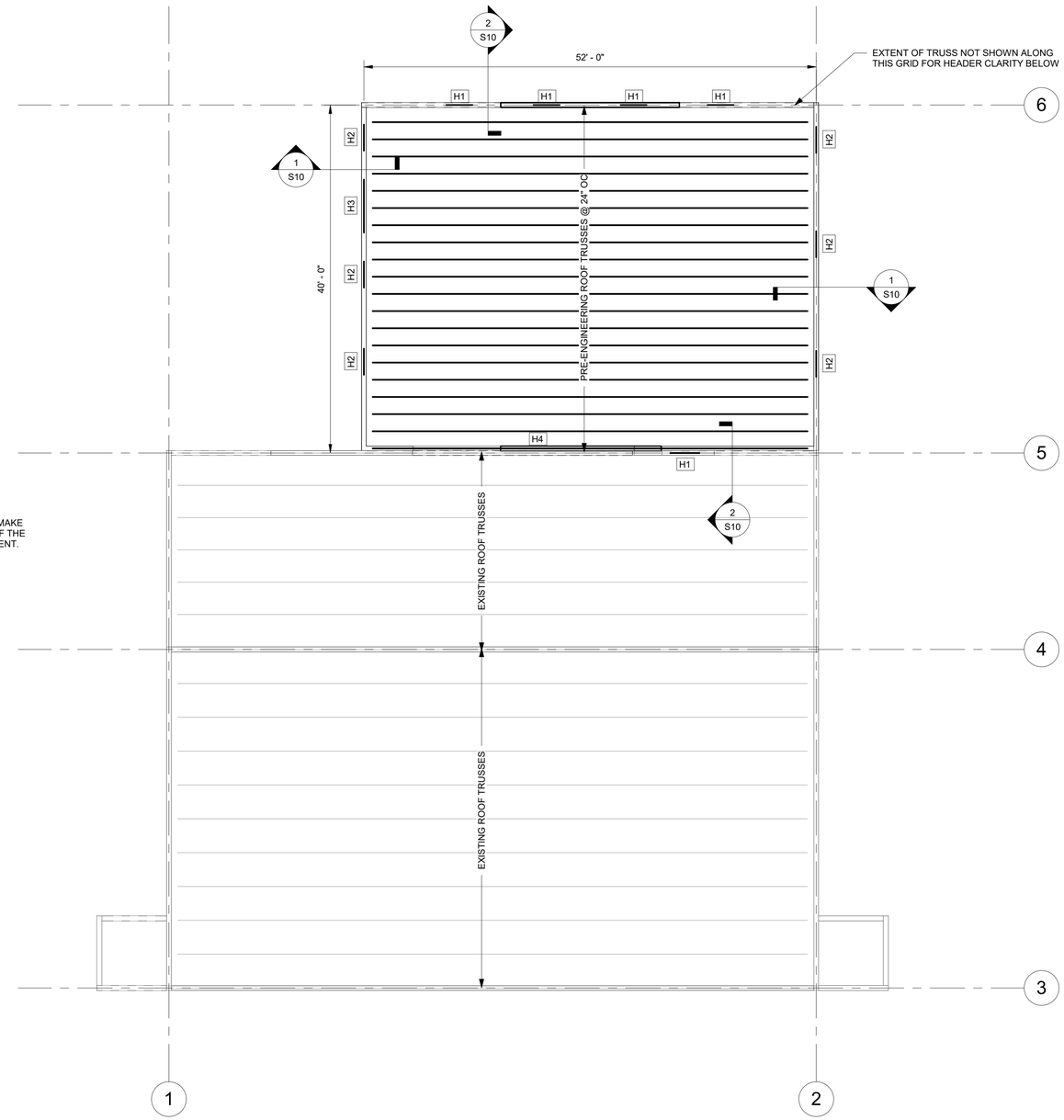
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Foundation Plan

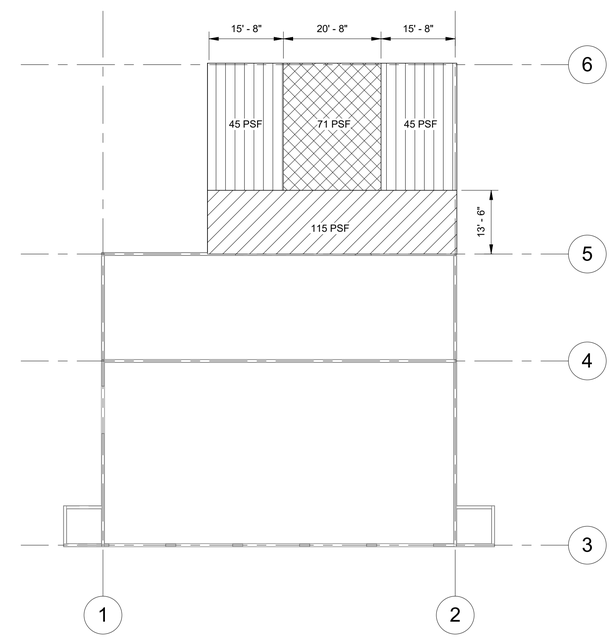
SHEET: S4

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- H- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- DX INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- XX PSF / XX'-XX" INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S6 ROOF FRAMING PLAN
1/8" = 1'-0"



2 / S6 SNOW DRIFT PLAN
1/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

B. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION OF ROOF STRUCTURE.

C. ROOF SHEATHING SHALL BE PROVIDED AS SPECIFIED ON SHEET S1, TYPICAL UNLESS NOTED OTHERWISE.

D. ROOF SHEATHING SHALL BE NAILED TO ROOF FRAMING AND BLOCKING WITH 0.148" DIA x 3" NAILS AT 6" OC AT PANEL EDGES, 6" OC AT DIAPHRAGM BOUNDARIES, 12" OC FIELD, TYPICAL UNLESS NOTED OTHERWISE.

E. TRUSS MANUFACTURER SHALL REVIEW ALL PLANS AND DETAILS TO ACCOUNT FOR ALL LOADINGS AND TYPICAL CONNECTION CONDITIONS.

F. NON-BEARING WALLS ARE NOT SHOWN ON STRUCTURAL PLANS. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.

Structural Header Schedule	
Mark	Section
H1	4x6 SPF #2
H2	(2)1 3/4 x 11 7/8 LVL
H3	(3) 1 3/4 x 11 7/8 LVL
H4	(3)1 3/4 x 22 LVL

DRAFT

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FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

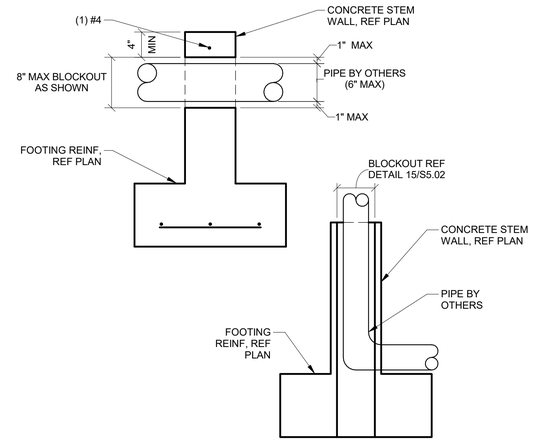
REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

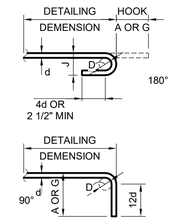
Roof Framing Plan

SHEET:
S6



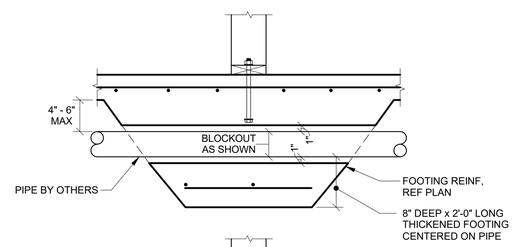
5 / S7 PIPE PENETRATION AT STEMWALL
1" = 1'-0"

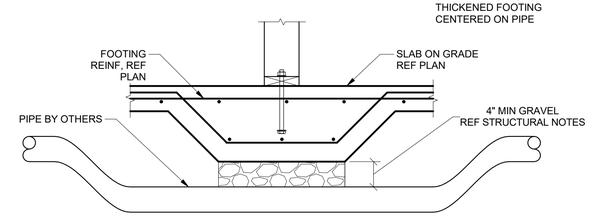
RECOMMENDED END HOOKS
ALL GRADES OF STEEL
D = FINISHED BEND DIAMETER



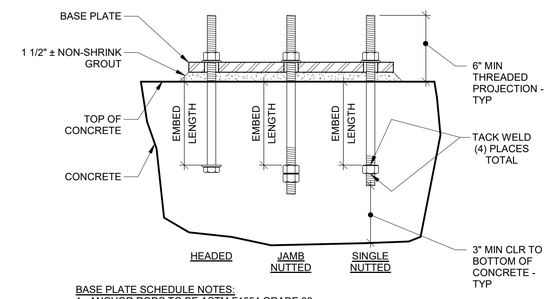
BAR SIZE	D, IN.	180° HOOKS, FT - IN.		90° HOOKS FT - IN.
		A OR G	J	A OR G
#3	2 1/4	0-5	0-3	0-6
#4	3	0-6	0-4	0-8
#5	3 3/4	0-7	0-5	0-10
#6	4 1/2	0-8	0-6	1-0
#7	5 1/4	0-10	0-7	1-2
#8	6	0-11	0-8	1-4
#9	9 1/2	1-3	0-11 3/4	1-7
#10	10 3/4	1-5	1-1 1/4	1-10
#11	12	1-7	1-2 3/4	2-0
#12	18 1/4	2-3	1-9 3/4	2-7

1 / S7 REBAR END HOOK DETAIL
1/2" = 1'-0"



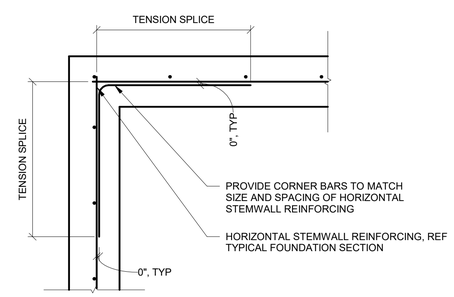


4 / S7 PIPE PENETRATION AT FOOTING
1" = 1'-0"

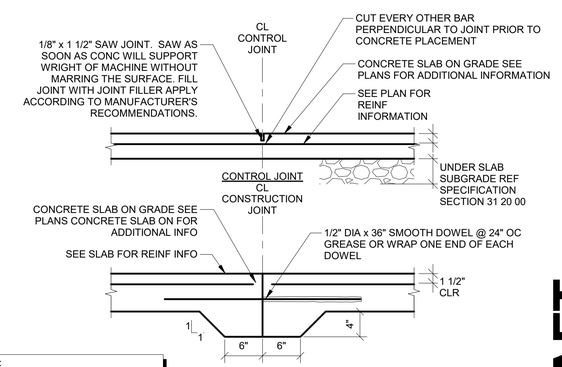


BASE PLATE SCHEDULE NOTES:
1. ANCHOR RODS TO BE ASTM F1554 GRADE 36.
2. NUTS FOR ANCHOR RODS SHALL BE STANDARD HEX NUTS TYPE ASTM A563-A.
3. WASHER FOR ANCHOR RODS SHALL BE ASTM F436. PROVIDE WASHER BETWEEN ALL NUTS AND BASE PL's
4. ALL ANCHOR ROD EMBEDED ENDS SHALL BE ONE OF THE FOLLOWING (SEE ANCHOR ROD EMBEDMENT DETAIL):
   a. HEADED
   b. JAMB NUTTED (DOUBLE NUTTED)
   c. SINGLE NUTTED (TACK WELD IN (4) LOCATIONS TO SECURE NUT IN PLACE)
5. ALL HOLES IN BASE PLATES SHALL BE ANCHOR ROD DIAMETER + 3/16" MAXIMUM.
6. ANCHOR RODS, NUTS AND WASHERS PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

2 / S7 ANCHOR ROD EMBEDMENT DETAIL
1" = 1'-0"



6 / S7 Typical Wall Corner Reinforcement
1" = 1'-0"



NOTES:
CONTRACTOR MAY USE EITHER CONTROL JOINTS OR CONSTRUCTION JOINTS AT LOCATIONS INDICATED ON PLANS.

3 / S7 SLAB JOINTS
1" = 1'-0"

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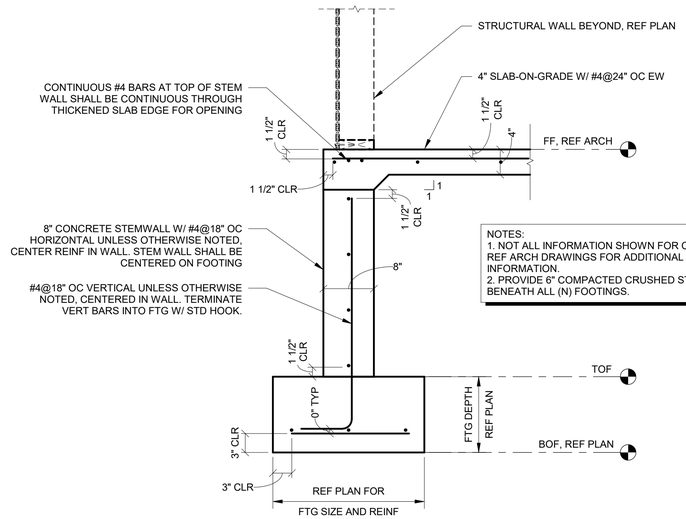
West Fulton, NY 12194

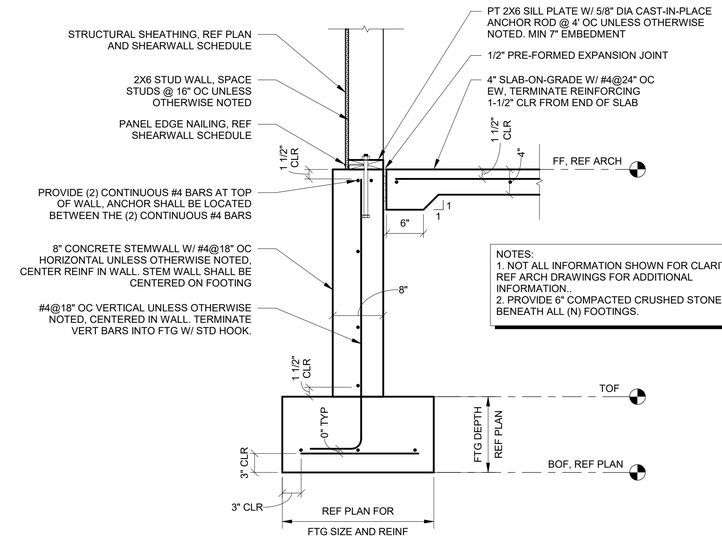
Typical Foundation Details

SHEET: S7



NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

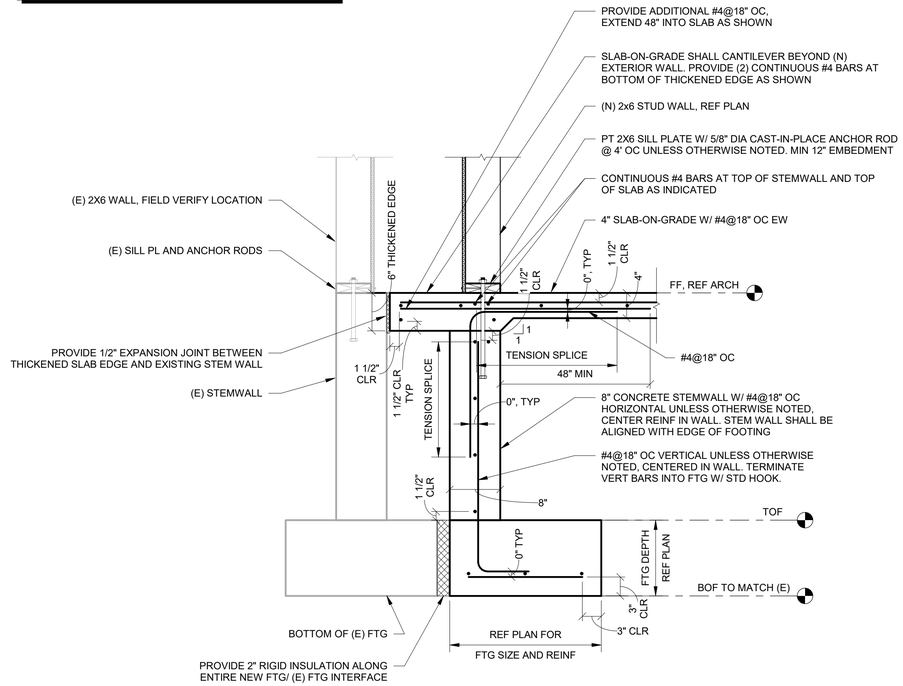
3 / S8 Typical Foundation at Opening (N)
1" = 1'-0"



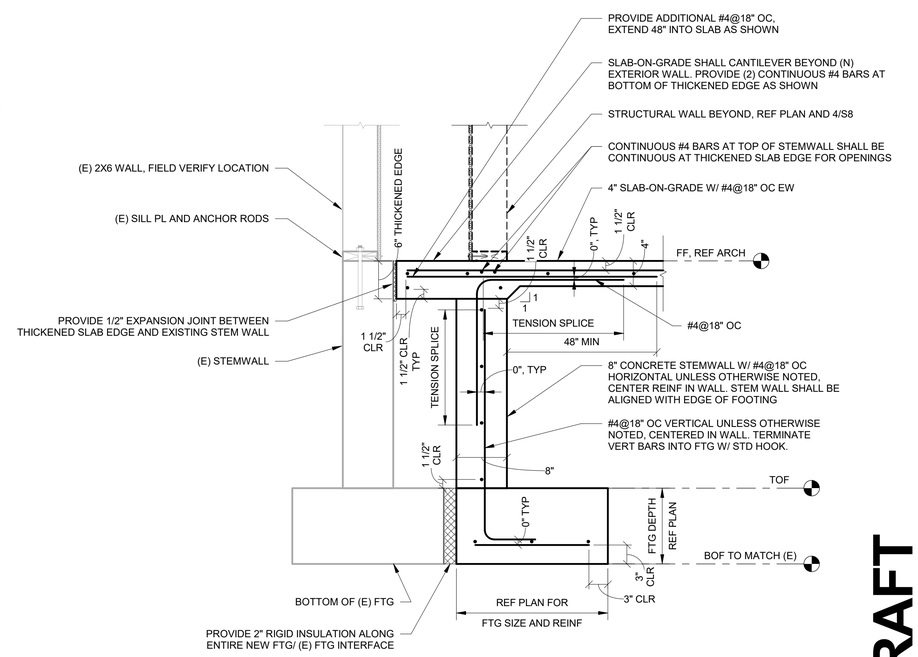
NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

1 / S8 Typical Foundation Section
1" = 1'-0"

NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. BOTTOM OF (N) FTG TO MATCH BOTTOM OF (E) FTG.
3. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.



4 / S8 Typical Foundation at Existing Structure
1" = 1'-0"



2 / S8 Foundation at Doorway
1" = 1'-0"

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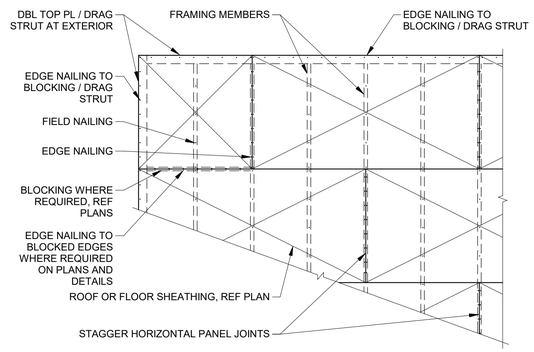
Foundation Details

SHEET:
S8

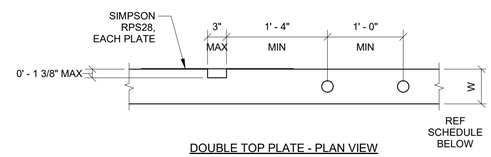
NOTE: USE EDGE NAILING AT ALL INTERIOR SHEAR WALLS AND DRAG STRUTS, UNO



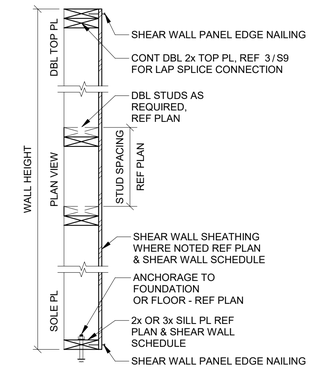
6 / S9 PLYWOOD FLOOR OR ROOF DIAPHRAGM
3/8" = 1'-0"

NOTES:
1. 'W' INDICATES WIDTH OR DEPTH OF MEMBER
2. ALL HOLES SHALL BE DRILLED, NOT SAWN
3. ALL NOTCHES TO HAVVE CORNERS PRE-DRILLED. OVERCUTS WILL NOT BE ALLOWED

SILL OR SOLE PLATE - PLAN VIEW



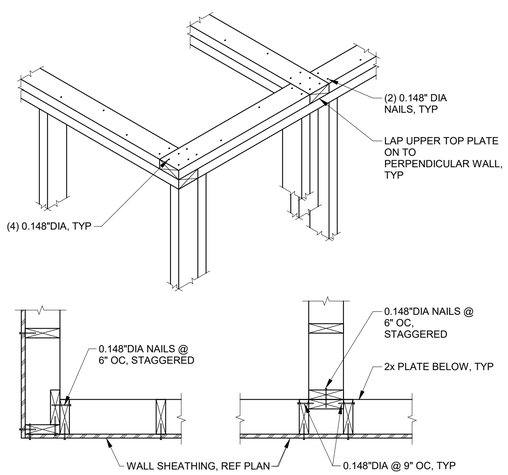
DOUBLE TOP PLATE - PLAN VIEW



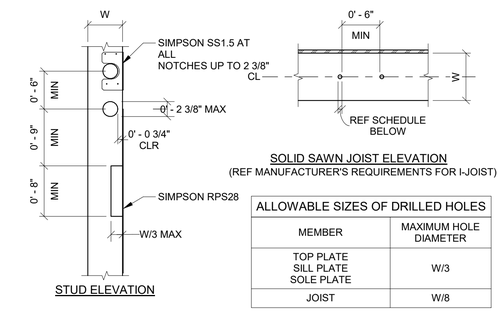
NOTE:
1. REF ARCH FOR WALL FINISHES, FURRING, ETC.
2. REF ARCH FOR ADDITIONAL REQ'D TO MAINTAIN FIRE RATING.

TYPICAL WALL CONSTRUCTION

1 / S9 BEARING WALL DETAIL
12" = 1'-0"



7 / S9 WALL FRAMING AT CORNERS AND INTERSECTIONS
1" = 1'-0"

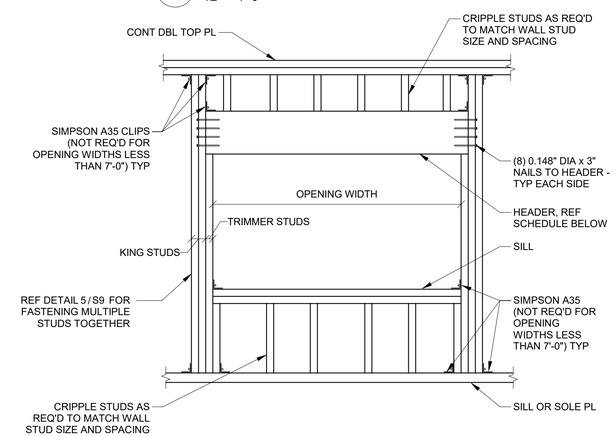


STUD ELEVATION

SOLID SAWN JOIST ELEVATION
(REF MANUFACTURER'S REQUIREMENTS FOR I-JOIST)

ALLOWABLE SIZES OF DRILLED HOLES	
MEMBER	MAXIMUM HOLE DIAMETER
TOP PLATE SILL PLATE SOLE PLATE	W/3
JOIST	W/8

4 / S9 ALLOWABLE HOLES AND NOTCHES IN WOOD FRAMING
1" = 1'-0"

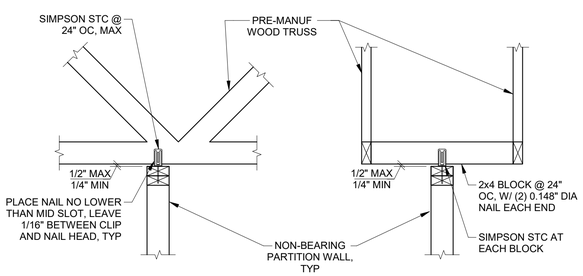


LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	REF PLAN	(2) 2x	(1) 2x	(3) 2x
6'-1" TO 12'-0"	REF PLAN	(3) 2x	(2) 2x	(4) 2x
12'-1" TO 30'-0"	REF PLAN	(3) 2x	(3) 2x	(4) 2x

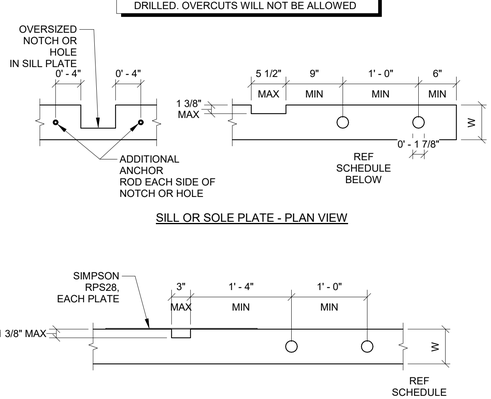
NON-LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	4x6	(1) 2x	(1) 2x	(1) 2x
6'-1" TO 10'-6"	4x8	(2) 2x	(1) 2x	(2) 2x
10'-7" TO 14'-0"	4x10	(3) 2x	(1) 2x	(3) 2x

NOTES:
1. HEADER SIZES ARE INDICATED ON THE PLANS FOR LOAD BEARING WALLS
2. THE DEPTH OF 2x SILLS, TRIMMERS AND KING STUDS SHALL MATCH THE WALL THICKNESS
3. DETAIL APPLICABLE FOR BOTH SEMI AND FULL HEIGHT OPENINGS IN WALLS.

2 / S9 WINDOW / DOOR HEADER DETAIL AND SCHEDULE
1" = 1'-0"



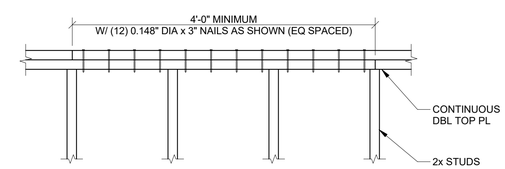
8 / S9 NON-BEARING PARTITION WALLS AT ROOF
1" = 1'-0"



BUILT-UP MEMBER	FASTENER SIZE	FASTENER SPACING	FASTENER END DIST	FASTENER EDGE DIST	ROWS OF FASTENERS
(2) 2x4	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(3) 2x4	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(4) OR MORE 2x4	1/2" DIA BOLT	9"	4"	1.5"	1 - STAGGER
(2) 2x6	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	2
(3) 2x6	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	2
(4) OR MORE 2x6	1/2" DIA BOLT	9"	4"	1.25"	2

NOTES:
1. PLYWOOD SHEATHING OR GYP BOARD FASTENERS SHALL BE STAGGERED TO EA STUD IN BUILT-UP MEMBER.
2. NAILS & SCREWS SHALL STAGGERED EACH SIDE OF BUITL-UP MEMBER.
3. BOLTS SHALL HAVE STANDARD PLATE WASHERS BETWEEN WOOD AND BOLT HEAD AND NUT HEAD.
4. NUTS TO BE TIGHTENED TO INSURE ALL WOOD LAMS ARE IN CONTACT.
5. 1/4" DIA SDS SCREWS OF SAME LENGTH MAY BE SUBSTITUTED FOR NAILS W/ 9" SPACING & 4" END DIST.

5 / S9 BUILT-UP WOOD POSTS
1" = 1'-0"



3 / S9 DOUBLE TOP PLATE SPLICE CONNECTION
1" = 1'-0"

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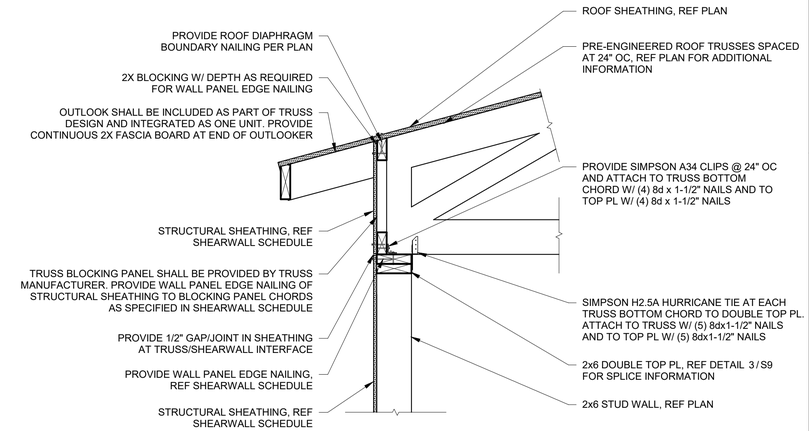
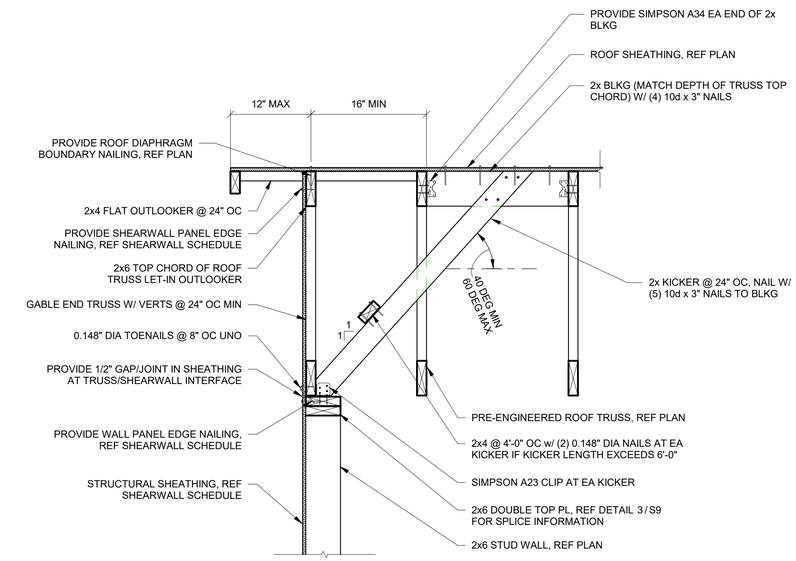
Framing Details

SHEET: S9

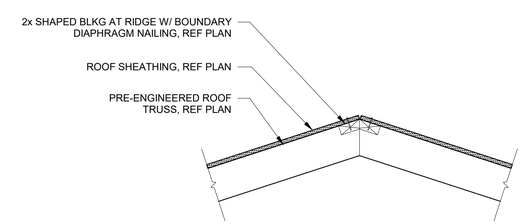


1 / S10 Typical Wall Detail - Truss Perpendicular
1" = 1'-0"



NOTES:
1. SIMPSON A34 CLIPS AND H2.5A HURRICANE TIES FOR TRUSS ARE NOT SHOWN FOR CLARITY. REF 1 / S10 FOR ADDITIONAL INFORMATION ON TYPICAL CONNECTION.

2 / S10 Typical Wall Detail - Truss Parallel
1" = 1'-0"



3 Ridge Blocking
1" = 1'-0"

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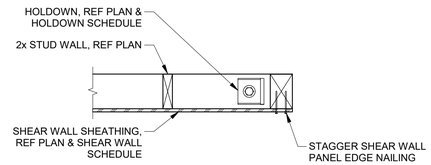
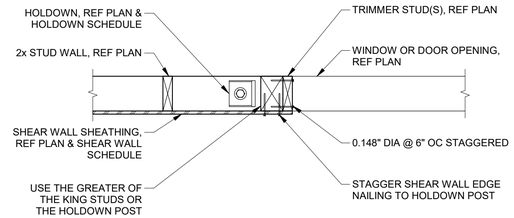
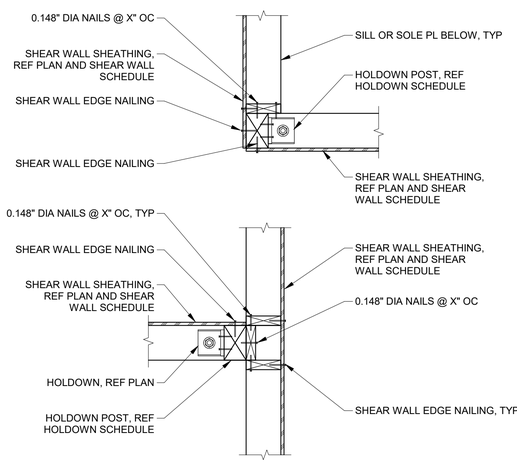
SHEET:
S10

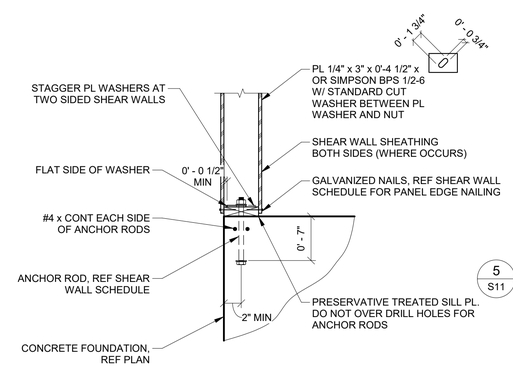




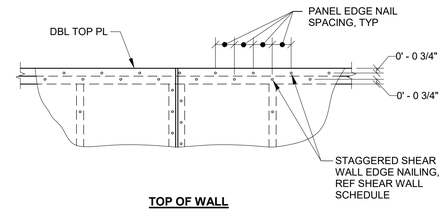
6 S11 HOLDOWN AT END OF WALL OR OPENING
1" = 1'-0"



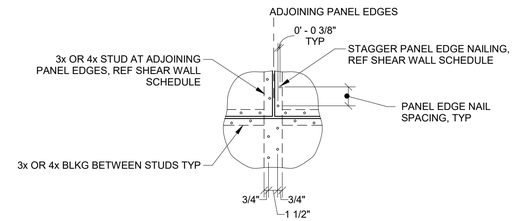
7 S11 HOLDOWN AT WALL CORNERS AND INTERSECTIONS
1" = 1'-0"



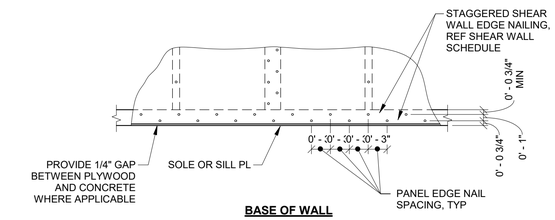
8 S11 SHEAR WALL SILL PLATE CONNECTION TO FOUNDATION
1" = 1'-0"



TOP OF WALL

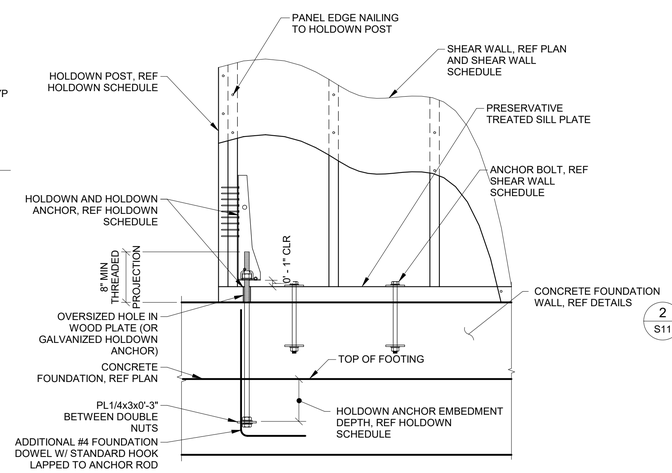


VERTICAL AND HORIZONTAL PANEL JOINTS OF WALL

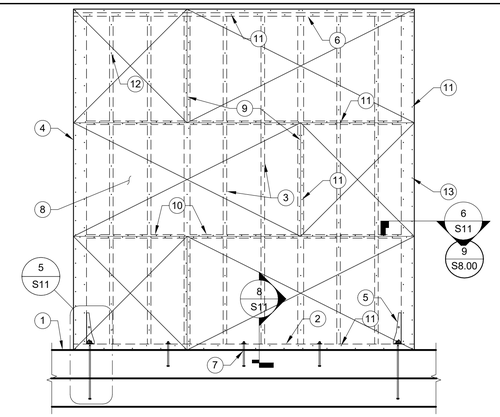


BASE OF WALL

4 S11 SHEAR WALL PANEL EDGE NAILING
1" = 1'-0"



5 S11 TYPICAL SHEAR WALL HOLDOWN AT FOUNDATION
1" = 1'-0"



SHEAR WALL ELEVATION NOTES:
1. FOUNDATION REF PLAN.
2. PRESERVATIVE TREATED SILL PLATE REF SHEAR WALL SCHEDULE.
3. WALL STUDS.
4. HOLDOWN POST REF HOLDOWN SCHEDULE.
5. HOLDOWN ANCHOR. REFERENCE PLANS & HOLDOWN SCHEDULE FOR HOLDOWN ATTACHMENT & ANCHORAGE TO FOUNDATION.
6. DOUBLE TOP PLATE. REFERENCE 3/S9 FOR DOUBLE TOP PLATE SPLICE DETAIL.
7. ANCHOR BOLTS W/ STEEL PLATE WASHERS. THERE SHALL BE A MINIMUM OF TWO ANCHORS FOR EACH SILL PIECE (ANY MODIFICATION TO SILL REMOVING MORE THAN 25% CROSS-SECTION SHALL BE CONSIDERED BREAKING PLATE) W/ ONE ANCHOR LOCATED NOT LESS THAN 4-1/2" NOR MORE THAN 12" FROM THE END OF EACH PIECE.
8. WOOD STRUCTURAL PANEL SHEATHING. ORIENTATION MAY BE EITHER HORIZONTAL OR VERTICAL AT CONTRACTORS OPTION. MINIMUM DIMENSION OF AN INDIVIDUAL PANEL SHALL BE 24" IN EITHER DIRECTION.
9. STAGGER ALL VERTICAL PANEL JOINTS WHERE POSSIBLE.
10. ALL PANEL EDGES ARE TO BE BLOCKED. REFERENCE SHEAR WALL SCHEDULE FOR FRAMING THICKNESS AT ADJOINING PANEL EDGES.
11. PANEL EDGE NAILING, REFERENCE SHEAR WALL SCHEDULE.
12. PANEL FIELD NAILING TO INTERMEDIATE SUPPORT MEMBERS AT 12" OC.
13. PROVIDE EDGE NAILING TO EACH HOLDOWN POST. WHERE HOLDOWN POST CONSISTS OF BUILT-UP MEMBERS, PROVIDE STAGGERED NAILING TO EACH PIECE AND LAMINATE IN ACCORDANCE W/ SHEAR WALL SCHEDULE.
14. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS & FOR INFORMATION NOT SHOWN.

1 S11 TYPICAL SHEAR WALL ELEVATION
3/8" = 1'-0"

WOOD SHEAR WALL SCHEDULE

WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)
C	15/32"	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
D	15/32" (2) SIDES	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
E	15/32" (2) SIDES	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

2 S11 WOOD SHEAR WALL SCHEDULE
12" = 1'-0"

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS

MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU2-SDS2.5	(2) 2x STUDS	(6) SDS 1/4" x 2-1/2"	5/8"	0'-8"
2	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
3	HDU5-SDS2.5	(2) 2x STUDS	(14) SDS 1/4" x 2-1/2"	5/8"	0'-9"
4	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"
5	HD19	6X6 DF#1 POST	(5) 1" DIA BOLTS	1-1/4"	1'-0"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 4/S500 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTIC ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

3 S11 HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS
12" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Shearwall Details

SHEET: S11

Appendix G: Tribal Correspondence

From: Bonney Hartley
To: Barthelme, Mary (STORMRECOVERY)
Cc: HistoricPres Intern
Subject: RE: West Fulton FD addition project-SMC comment
Date: Monday, December 04, 2017 3:02:47 PM

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

STOCKBRIDGE-MUNSEE COMMUNITY

CULTURAL RESOURCES REVIEW RESPONSE FORM

Project Details:	Received: 11/16/2017 __Mail _x_ Email
Project Name:	West Fulton FD addition project
Agency/Consultant/ Firm:	GOSR
Proposed Project Description:	The proposed project includes construction of a 2,080 square-foot frame addition to include: a community room/shelter, office space, mechanical space, storage space, laundry facilities, and bathrooms. The addition would be constructed on a 4 inch concrete slab. The addition would also include an expansion of the current kitchen area. Energy efficient heating and ventilation systems would be incorporated, as well as emergency lighting for the entire station. The septic system would also need to be expanded to accommodate the addition. A new backup generator would also be installed by a diesel tank, and emergency communications increased with the installation of a repeater tower. Parking areas would also be increased, and made ADA compliant. While no acquisition is anticipated, the project would include significant earthwork, including but not limited to the building of the addition itself, along with septic/leech field expansion, generator pad, and cell tower.
City, County, State:	807 West Fulton Rd, West Fulton, Schoharie County NY
Point of Contact:	Mary Barthelme Mary.Barthelme@stormrecovery.ny.gov (518)473-0154

Response:	
X	We have no significant concerns related to the proposed project. We anticipate no adverse effects to our sites of Mohican cultural significance.
0	The project is not located in our cultural area of interest; therefore, we do not have comment or need to consult further.
	We have no further comment at this time, but request to be included in future correspondence on the matter.
	We consider this project to be compliant with the Stockbridge-Munsee Tribal Historic Preservation Office's Section 106 review process, with agreed upon mitigations as detailed below:
	This site will require the on-site presence of a Tribal Cultural Resource Monitor during ground disturbing activities. Contact our office with construction schedule.
	A review fee is requested, information on which is attached.

	$500 standard fee $1,000 site visit required
	Upon initial review of your project proposal, we request further information as detailed below:
	This project has the potential to have adverse effects to historic or cultural resources which are important to our tribe. We recommend the following actions:

Additional Comments:

****Condition:** If archeological resources or human remains are found during construction, **you must immediately stop construction and notify our office immediately.**

Thank you for your consideration,

Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Mohican Tribal Historic Preservation
Extension office
65 1st Street
Troy, NY 12180
(518) 244-3164
Bonney.Hartley@mohican-nsn.gov
www.mohican-nsn.gov

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

November 9, 2017

Shannon Holsey, President
Stockbridge-Munsee Community, Band of the Mohicans
N8476 Moh He Con Nuck Road
Bowler, WI 54416

Re: Section 106 Compliance for West Fulton Fire Department Improvements Project, 807 West Fulton Road, West Fulton, Schoharie County, New York 12194

Dear President Shannon Holsey:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Community to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the St. Regis Mohawk Tribe, the Mohawk Nation, and the Stockbridge-Munsee Community Band of Mohicans.

Area of Potential Effect: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion. The existing fire station is a wood frame structure.

Proposed Project Description: The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower. Project plans are attached to this consultation request.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. GOSR initiated consultation with the New York State Historic Preservation Office and no comments have been received to date. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Community, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery
38-40 State St., 408N, Hampton Plaza
Albany, NY 12207

If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosure:
Project Location Map
Project Plans

Electronic letter sent to:
Bonney Hartley
THPO, New York Office
Stockbridge-Munsee Community, Band of the Mohicans
65 1st Street
Troy, NY 12180

West Fulton Fire House

October 5, 2017

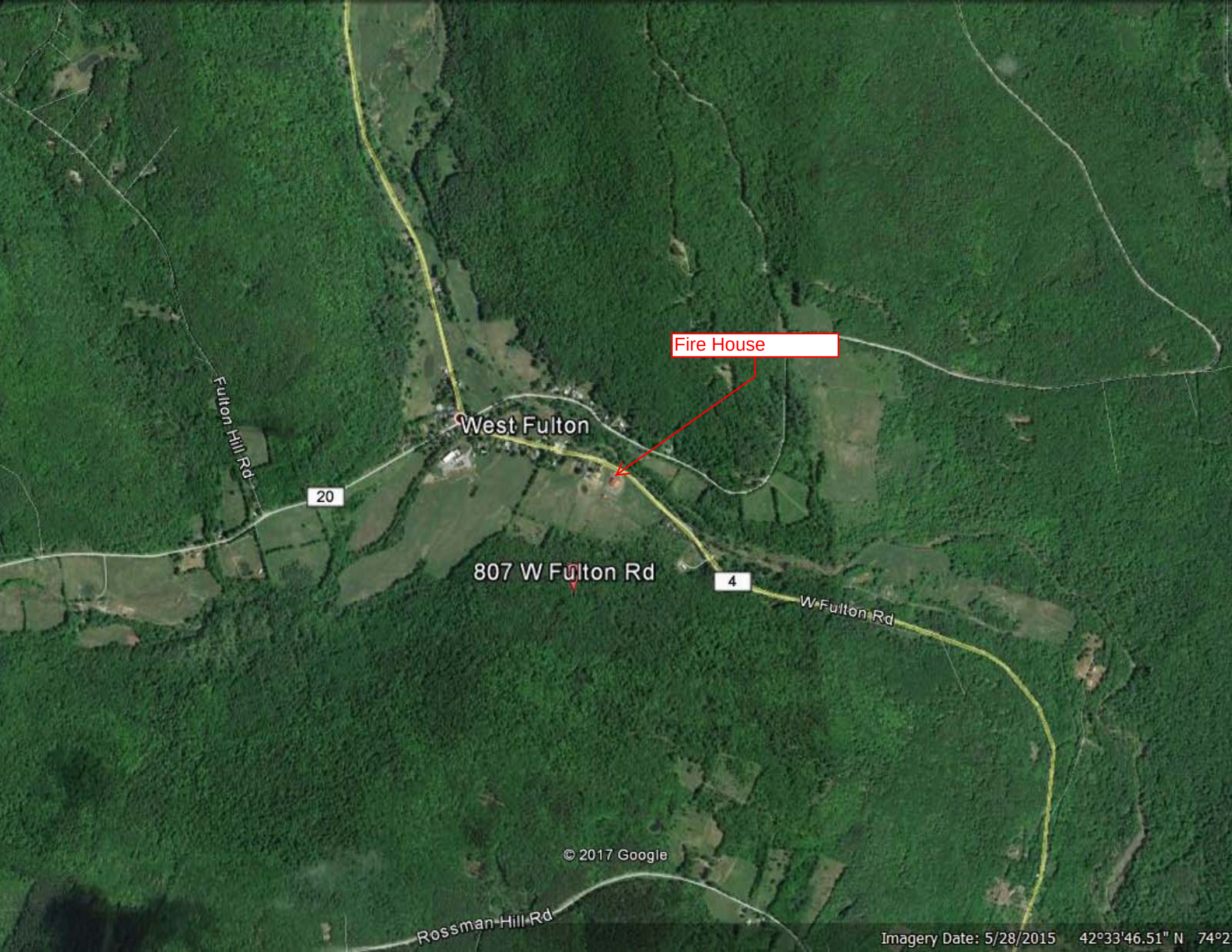
1:2,257

0 0.0275 0.055 0.11 mi

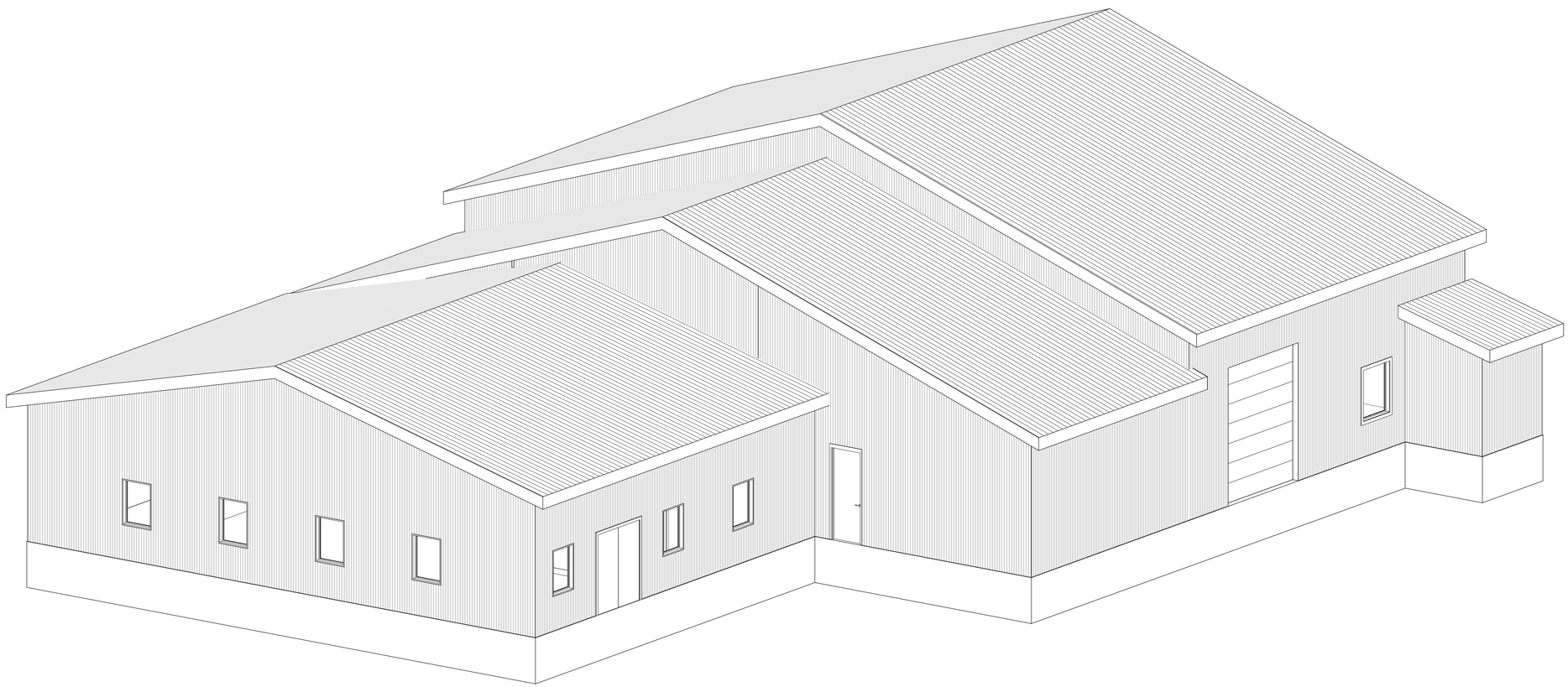
0 0.0425 0.085 0.17 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

WEST FULTON FIRE DEPARTMENT
SCHOHARIE COUNTY, NY
SCHEMATIC DESIGN
SEPTEMBER 8, 2017



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DATE: 7/11/2017
DRAWN BY: Author
SCALE:
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

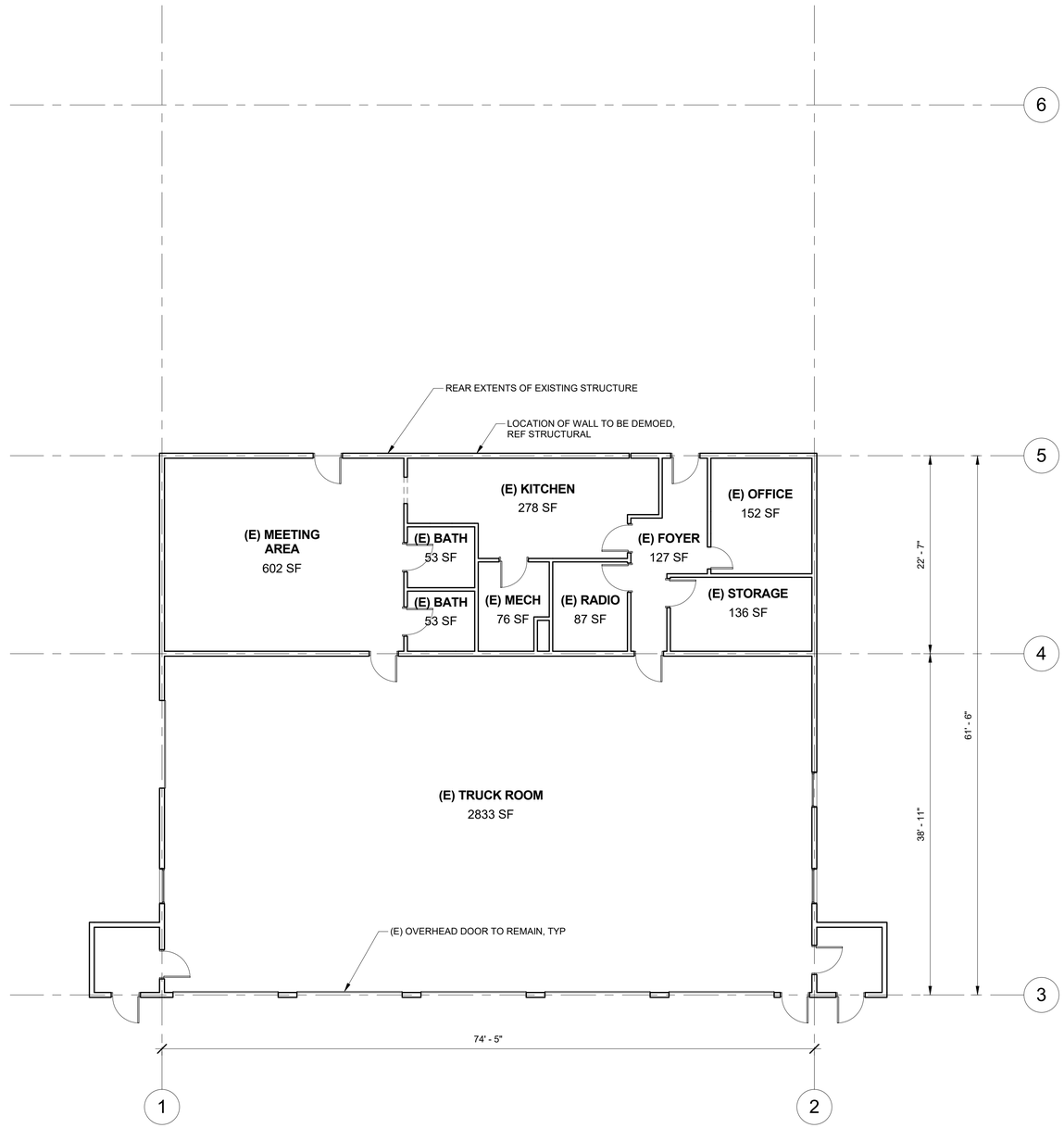
REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

COVER

SHEET:
COVER



1 / A1 Existing Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Existing Floor Plan

SHEET:
A1

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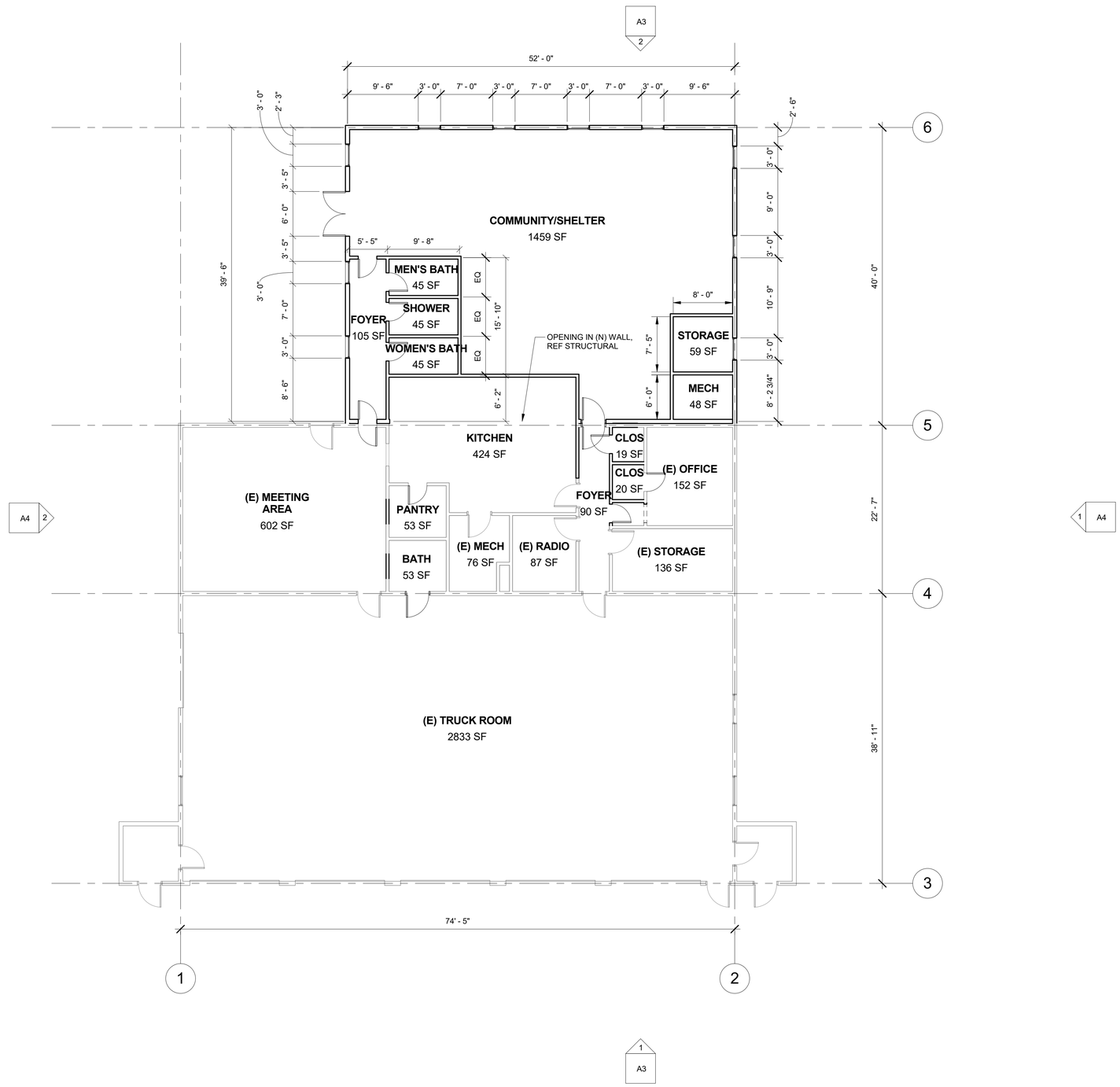

1 / A2 Proposed Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Proposed Floor Plan

SHEET: A2

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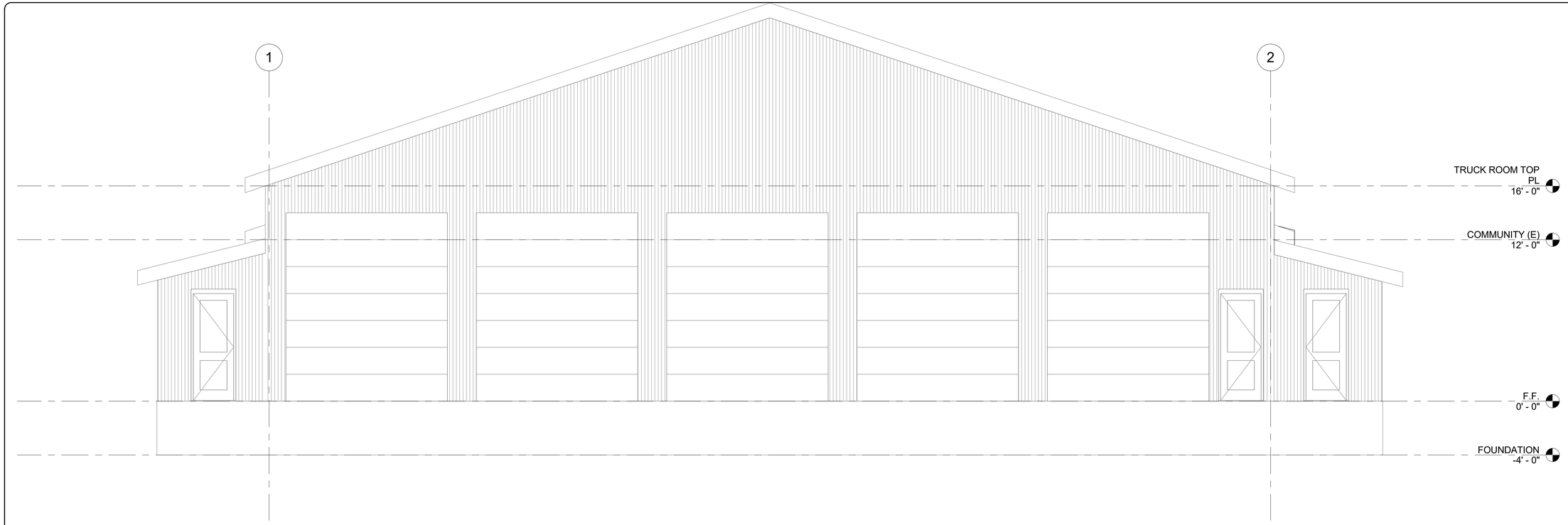
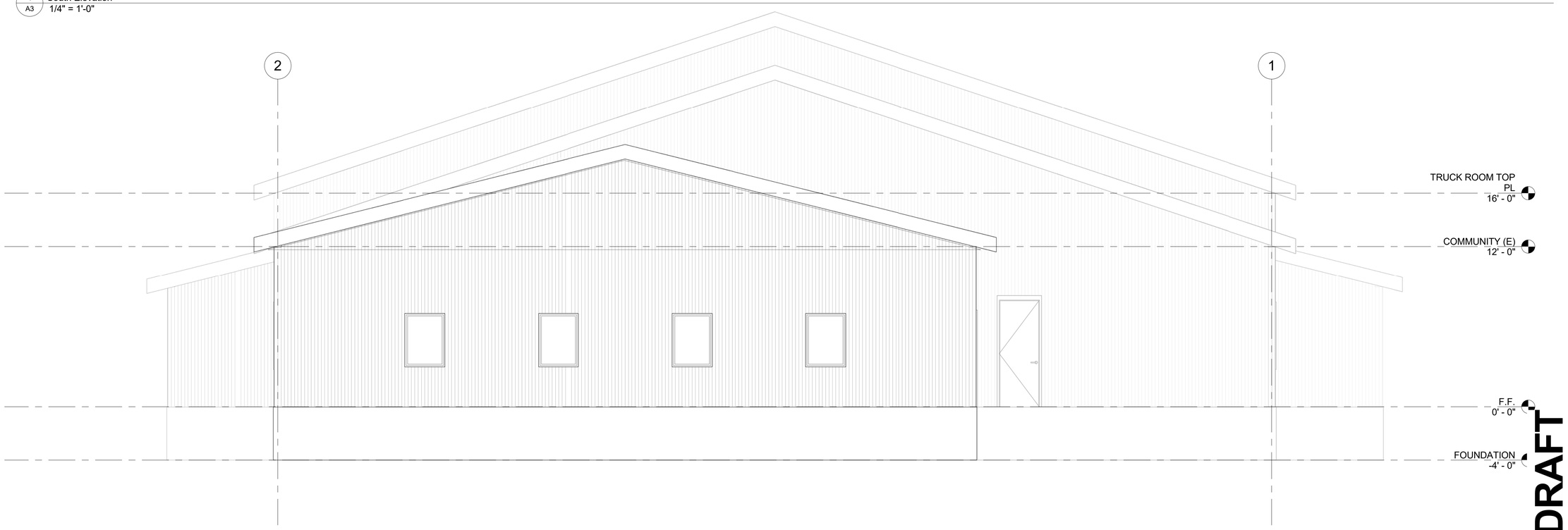


1 / A3 South Elevation
1/4" = 1'-0"



2 / A3 North Elevation
1/4" = 1'-0"

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/4" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

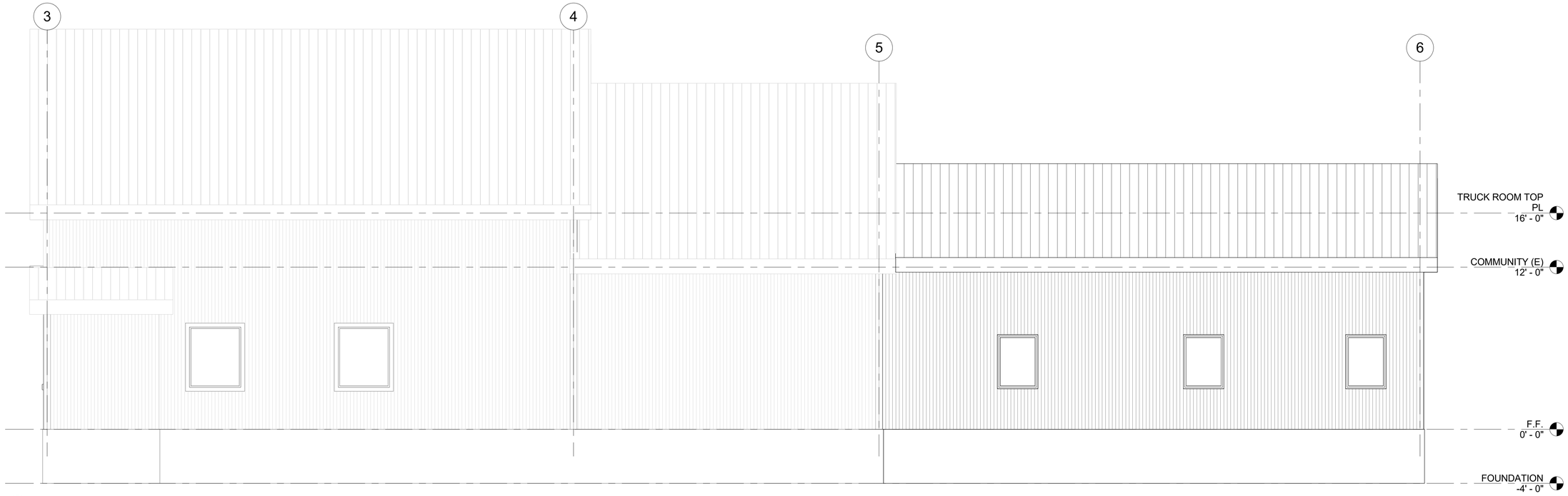
REVISIONS

NO.	DATE	DESCRIPTION

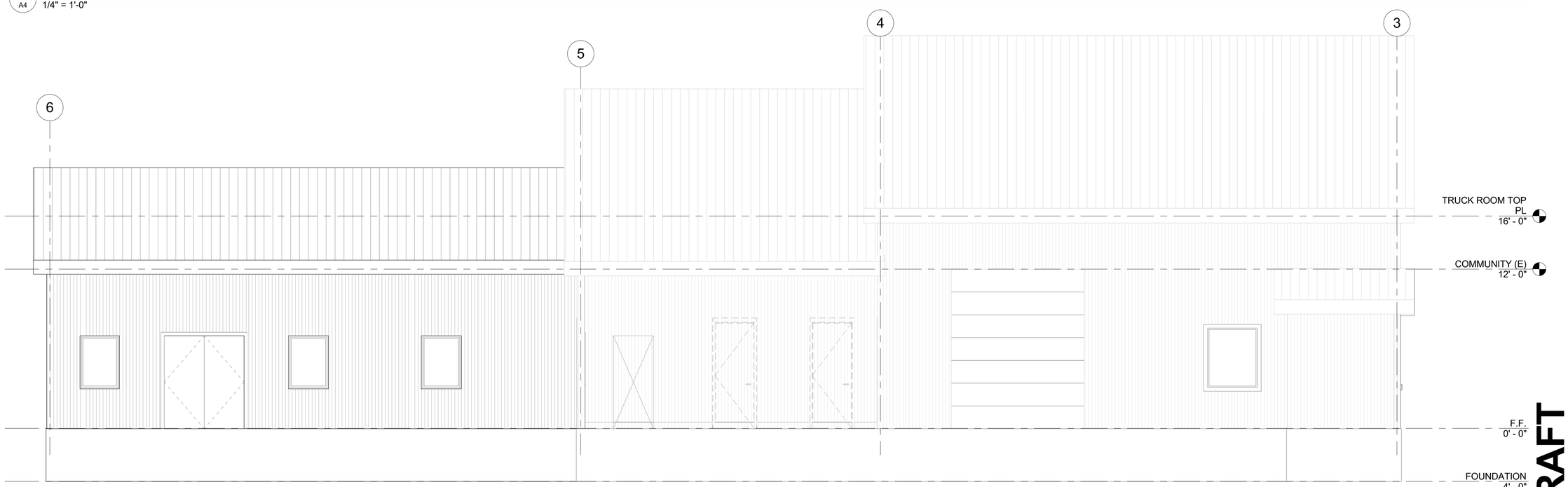
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A3



1 / A4 East Elevation
1/4" = 1'-0"



2 / A4 West Elevation
1/4" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/4" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A4

PROJECT DESCRIPTION:
1. ADDITION TO EXISTING SINGLE-STORY FIRE HOUSE
2. EXISTING BUILDING CONSISTS OF WOOD FRAMED CONSTRUCTION
3. ADDITION CONSISTS OF CONVENTIONAL WOOD FRAMED CONSTRUCTION
4. CONVENTIONAL SHALLOW FOUNDATIONS
5. CONCRETE SLAB-ON-GRADE
6. WOOD 2X STUD WALLS SHEATHED WITH PLYWOOD FOR LATERAL SYSTEM
7. PRE-ENGINEERED ROOF TRUSSES

GENERAL:
1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
4. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:
1. CONFORM TO 2015 INTERNATIONAL BUILDING CODE (IBC)
2. ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:
1. THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
2. CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:
1. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:
1. DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

DESIGN CRITERIA		
GEOTECHNICAL DESIGN CRITERIA		
DESIGN BASED ON GEOTECHNICAL REPORT BY:	XXXXXX, INC PROJECT NO.: XXXXXXX	
ALLOWABLE SOIL BEARING PRESSURE	2,500 PSF + 50% INCREASE FOR WIND OR SEISMIC LOADS	
SNOW DESIGN CRITERIA		
DESIGN ROOF SNOW LOAD	45 PSF MINIMUM	
SNOW DRIFT	AS SHOWN ON PLANS	
GROUND SNOW LOAD	P_g = 53 PSF	
FLAT ROOF SNOW LOAD	P_f = 45 PSF	
EXPOSURE FACTOR	C_e = 1.0 (PARTIAL EXPOSED)	
IMPORTANCE FACTOR	I_S = 1.20	
THERMAL FACTOR	C_t = 1.0	
WIND DESIGN CRITERIA		
MAIN WIND FORCE RESISTING SYSTEM	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDING	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	C	
GUST/INTERNAL PRESSURE	GC_{pi} = +/- 0.18	
SEISMIC DESIGN CRITERIA		
RISK CATEGORY	IV	
SITE CLASS	D (DEFAULT W/OUT GEOTECH REPORT)	
IMPORTANCE FACTOR	I_e = 1.25	
SEISMIC DESIGN CATEGORY	C	
MCE SPECTRAL ACCELERATIONS	S_S = 0.107	S_1 = 0.067
SITE COEFFICIENTS	F_a = 1.2	F_V = 1.7
DESIGN SPECTRAL ACCELERATIONS	S_{DS} = 0.181	S_{D1} = 0.107
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-10 SECTION 12.8	
	NORTH-SOUTH DIRECTION	EAST-WEST DIRECTION
SEISMIC LOAD RESISTING SYSTEM	LIGHT FRAMED WOOD SHEAR WALLS	LIGHT FRAMED WOOD SHEAR WALLS
RESPONSE MODIFICATION FACTOR	R = 6.5	R = 6.5
SEISMIC RESPONSE COEFFICIENT	C_S = 0.042	C_S = 0.042
REDUNDANCY FACTOR	ρ = 1.0	ρ = 1.0
DESIGN INELASTIC STORY DRIFT	Δ = XX INCHES	Δ = XX INCHES

STRUCTURAL OBSERVATION:
1. THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS		
CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
AT COMPLETION OF WOOD SHEAR WALLS	X	REF FOOTNOTE A, B
AT COMPLETION OF HORIZONTAL ROOF DIAPHRAGM	X	REF FOOTNOTE A, B
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

A. STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.
B. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.
C. STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

FOUNDATIONS:
1. FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL, AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
2. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW FINAL GRADES.
3. ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE PROJECT GEOTECHNICAL REPORT.
4. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITEWORK.
5. STRUCTURAL FILL MATERIALS, PLACEMENT, AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
6. BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS.
7. PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN UNDER THE GUIDANCE OF THE GEOTECHNICAL ENGINEER. MINIMUM TESTING FREQUENCY SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
9. ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
10. ALL FILL, BACKFILL AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL ENGINEER.

SPECIAL INSPECTION AND TESTING:
1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S0.03. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
HOLDOWN ANCHOR BOLT LAYOUT	X		
EMBEDDED STEEL ITEMS	X		
SLAB-ON-GRADE CONTROL JOINT LAYOUT	X		
STRUCTURAL STEEL MILL CERTS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL DECKING	X		
STEEL FASTENERS	X		
GLUED LAMINATED MEMBERS	X		
PREMANUFACTURED WOOD JOISTS	X	X	
PREMANUFACTURED WOOD TRUSSES	X	X	
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"

A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER "DESIGN CRITERIA."
C. THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
D. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:
1. ALL CONCRETE WORK SHALL CONFORM TO "ACI 318--BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
2. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS FOLLOWS:

CONCRETE STRENGTHS				
DESCRIPTION	f'c (PSI)	WATER - CEMENT RATIO BY WEIGHT	ENTRAINED AIR	OTHER
FOOTINGS, STEMWALLS	3,000	0.53	2% +/- 1.5%	
RETAINING WALLS	3,000	0.50	6% +/- 1.5%	
EXTERIOR SLAB-ON-GRADE	3,000	0.48	6% +/- 1.5%	
COLUMNS, BEAMS	4,000	0.45		
INTERIOR SLAB-ON-GRADE	4,000	0.48		

NOTES:
A. VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
B. CONCRETE MIXES SHALL BE NORMAL WEIGHT AND CONTAIN PORTLAND CEMENT CONFORMING TO ASTM C150 FOR TYPE I, OR TYPE II.
C. AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260.
D. COLUMNS THAT ARE AN INTEGRAL PART OF A WALL SHALL HAVE CONCRETE STRENGTH AS REQUIRED FOR COLUMNS.

3. MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:

MINIMUM CEMENT CONTENT	
f'c (PSI)	MINIMUM CEMENT CONTENT PER CUBIC YARD
3,000	470 LBS.
4,000	550 LBS.
5,000	630 LBS.

NOTES:
A. FLYASH CONFORMING TO ASTM C618 "TYPE F," OR "TYPE C" MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

4. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
5. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
6. A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 "TYPE F, OR TYPE "G" MAY BE USED IN CONCRETE MIXES PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
7. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
8. SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
9. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 10'-0" ON-CENTER EACH WAY FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
10. ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
11. ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET, OR WET SET.
12. ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
13. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
14. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
15. PREPARATION, CONSTRUCTION AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 5.12, 5.13 AND ACI 306R AND 305R.

SHORING AND RE-SHORING:
1. SHORING AND RE-SHORING IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.
2. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FARENHEIT SURROUNDING TEMPERATURE.	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

EPOXY REPAIR ADHESIVE:
1. EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.
2. ADHESIVE SHALL HAVE A MINIMUM SLANT SHEAR STRENGTH OF 5,000 PSI AND A MINIMUM TENSILE STRENGTH OF 4,000 PSI.
3. HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.
4. REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

REINFORCING STEEL:
1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO "ACI 318—BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND "ACI 315—MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
2. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
   A. SMOOTH WELDED WIRE FABRIC—ASTM A185
   B. CONCRETE COLUMN VERTICAL REINFORCEMENT—ASTM A706, GRADE 60
   C. ALL OTHER REINFORCEMENT—ASTM A615, GRADE 60
3. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.
4. REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE "CRSI MANUAL OF STANDARD PRACTICE," MSP-1.
5. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.
6. REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. "WET SETTING" OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.
8. ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.
9. THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

TYPICAL LAP SPLICE SCHEDULE (IN)						
BAR SIZE	3,000 PSI		4,000 PSI		5,000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17
#4	37	29	32	25	29	22
#5	47	36	40	31	36	28
#6	56	43	48	37	43	33
#7	81	63	70	54	63	49
#8	93	72	80	62	72	55
#9	105	81	91	70	81	63
#10	118	91	102	79	91	70
#11	131	101	113	87	101	78

NOTES:
A. FOR CENTER-TO-CENTER SPACING LESS THAN FOUR TIMES THE BAR DIAMETER, MULTIPLY THE ABOVE VALUES BY A FACTOR OF 1.4.
B. TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.
C. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
D. VALUES ARE FOR UNCOATED BARS.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)	
USE	COVER
COLUMN BARS	1-1/2" COVER TO TIES
SLAB-ON-GRADE BARS	1-1/2" COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

MINIMUM CONCRETE COVER (PRE-CAST)	
USE	COVER
COLUMN BARS	1" TO TIES

11. CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.
12. PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING WITH A MINIMUM 6" EMBEDMENT BELOW THE TOP OF FOOTING.
13. AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2'-0") PAST THE OPENING ON ALL SIDES.
14. PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4'-0" LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.
15. REFERENCE TYPICAL DETAILS FOR THE DISPOSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.
16. PROVIDE #5 CARRIER BAR AT 3'-0" MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.
17. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCMENT ON EACH LEG.

CONCRETE ACCESSORIES:
1. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON TYPE D2L (ICC ESR-2907) OR APPROVED EQUAL.
2. HEADED SHEAR STUDS SHALL BE NELSON HEADED ANCHORS WITH FLUXED ENDS (ICC ESR-2856) OR APPROVED EQUAL.
3. HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AUTOMATICALLY END-WELDED WITH THE MANUFACTURER'S STANDARD EQUIPMENT AND IN ACCORDANCE WITH THE ASSOCIATED ICC REPORTS.
4. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. EMBEDDED ITEMS SHALL NOT BE LOADED, NOR SHALL WELDS BE APPLIED, FOR A MINIMUM OF 7-DAYS AFTER CASTING OF CONCRETE.
5. APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

APPROVED POST-INSTALLED CONCRETE ANCHORS		
TYPE	ANCHOR	ICC REPORT
CONCRETE SCREW	SIMPSON TITEN HD	ICC ESR-2713
	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY ADHESIVE	SIMPSON AT-XP	ICC ESR-2508
	HILTI HIT-RE 500SD	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3037
	HILTI KWIK BOLT TZ	ICC ESR-1917

NOTES:
A. ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.
B. REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.
C. ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL, OR HOT-DIPPED GALVANIZED.

DRAFT

WARNING -- IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

DATE: 7/11/2017
DRAWN BY: AH
SCALE: 12" = 1'-0"
REVIEWED BY: AH
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S1

SAWN FRAMING LUMBER:

1. SAWN LUMBER SHALL CONFORM TO THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR THE WESTERN WOODS PRODUCTS ASSOCIATION (WWPA) GRADING RULES.
2. ALL LUMBER SHALL BE THE SPECIES AND GRADES AS FOLLOWS:

SAWN LUMBER		
USE	SPECIES/GRADE	Fb (PSI)--BASE VALUE
LUMBER 2" TO 4" THICK	DOUGLAS FIR-LARCH NO.2	900
BEAMS 5"x5" AND GREATER	DOUGLAS FIR-LARCH NO.1	1350
POSTS	DOUGLAS FIR-LARCH NO.1	1200

3. ALL DIMENSIONAL LUMBER AND TIMBERS SHALL BE KILN DRIED AND CERTIFIED IN WRITING BY THE SUPPLIER TO BE LESS THAN 19% MOISTURE CONTENT.
4. ALL LUMBER IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED (PT) PER THE AMERICAN WOOD PRESERVERS BUREAU (AWPB) UNLESS AN APPROVED MOISTURE BARRIER IS PROVIDED. ALL PT LUMBER SHALL BEAR THE AWPB QUALITY MARK.
5. CUTTING AND NOTCHING OF JOISTS AND STUDS SHALL CONFORM TO IBC SECTIONS 2308.8.2, 2308.9.10, 2308.10.4.2 AND THE LIMITATIONS AS NOTED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE SOLID LINES OF BLOCKING, SAME DEPTH OF FRAMING MEMBER, AT ALL BEARING POINTS.
7. JOIST BRIDGING SHALL BE REQUIRED WHERE JOISTS HAVE A DEPTH-TO THICKNESS RATIO GREATER THAN 5-TO-1 AND WHERE ONE EDGE IS UNSUPPORTED. JOIST BRIDGING SHALL BE SPACED AT 8'-0" ON CENTER MAXIMUM.

WOOD STRUCTURAL PANEL SHEATHING:

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE "U.S. PRODUCT STANDARD PS 1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD," THE "U.S. PRODUCT STANDARD PS 2 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL USE PANELS," OR THE "APA PRP-108 PERFORMANCE STANDARDS."
2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING AS FOLLOWS:

WOOD STRUCTURAL PANEL SHEATHING	
USE	THICKNESS/RATING
ROOF SHEATHING	5/8"-INDEX 40/20
WALL SHEATHING	15/32"-INDEX 32/16

3. ALL ROOF SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS SHALL BE STAGGERED.
4. ROOF SHEATHING SHALL BE BLOCKED, OR HAVE EDGES SUPPORTED BY PLYCLIPS.
5. SHEAR WALL SHEATHING SHALL BE PLYWOOD OR ORIENTED STRAND BOARD (OSB) PANELS CONFORMING TO THE REQUIREMENTS FOR ITS TYPE SPECIFIED IN DOC PS1 OR PS2.
6. SHEAR WALL SHEATHING SHALL BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY AND BE BLOCKED AT ALL PANEL EDGES. SHEET SIZES SHALL BE 4'X8' UNLESS AT BOUNDARIES OR FRAMING CHANGES. REFERENCE PLANS FOR ADDITIONAL REQUIREMENTS.

NAILING AND FASTENERS:

1. ALL FRAMING NAILS SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS AND CONFORM TO THE "STANDARD SPECIFICATION OF DRIVEN FASTENERS: NAILS, SPIKES, AND STAPLES" (ASTM F1667) AND "POWER-DRIVEN STAPLES AND NAILS FOR USE
2. NAILING NOT SHOWN SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.9.1, OR NER-272.
3. NAILS SHALL BE IDENTIFIED BY LABELS ATTACHED TO THEIR CONTAINERS, THAT SHOW THE MANUFACTURER'S NAME, NAIL SHANK DIAMETER, AND LENGTH.
4. NAIL SIZES SHALL BE AS FOLLOWS:

FRAMING NAILS		
NAIL TYPE	SHANK DIAMETER (IN)	MINIMUM PENETRATION INTO FRAMING MEMBER (IN)
6d	0.113	1.25
8d	0.131	1.50
10d	0.148	1.625
12d	0.148	1.625
16d	0.148	1.625

5. UNLESS OTHERWISE NOTED ON PLANS, PLYWOOD SHEATHING SHALL BE ATTACHED TO THE FRAMING SUPPORTS AS FOLLOWS:

SHEATHING NAILING		
USE	PANEL EDGES	INTERMEDIATE FRAMING MEMBERS
ROOF SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC
WALL SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC

NOTES:

A. ALL NAILS SHALL BE COMMON NAILS EXCEPT RING SHANKS SHALL BE USED FOR FASTENING ROOF SHEATHING.

6. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS. ALL A307 BOLTS SHALL HAVE CUT THREADS.
7. PRE-DRILL HOLES FOR LAG BOLTS. SOAP THREADS OF LAGS IMMEDIATELY PRIOR TO INSTALLATION.
8. JOIST HANGERS, HOLDOWNS, AND OTHER FRAMING ACESSORIES SHALL BE MANUFACTURED BY SIMPSON STRONG TIE (OR AN APPROVED EQUAL) AND BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HARDWARE FASTENERS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURER'S REQUIREMENTS. ANY PRODUCT SUBSTITUTIONS TO SIMPSON SHALL MEET OR EXCEED SIMPSON'S PUBLISHED DESIGN CAPACITIES AND MUST HAVE A CURRENT ICC EVALUATION REPORT FOR THE APPLICABLE CODES.
9. HANGERS NOT SHOWN SHALL BE SIMPSON U-TYPE, OR B-TYPE OF THE SIZE RECOMMENDED FOR THE SPECIFIC FRAMING MEMBER SHOWN ON PLAN.
10. FASTENERS IN CONTACT WITH PRESERVATIVE TREATED, OR FIRE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.
11. SILLS AT WALLS SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS DETAILED OTHERWISE. WASHERS TO BE MINIMUM 1/4"x3"x3" AS PER IBC 2305.3.11.
12. ALL SILL PLATES AND LEDGERS SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE.

GLUED LAMINATED MEMBERS:

1. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH THE "AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER" (ANSI A190.1), OR OTHER CODE-APPROVED DESIGN, MANUFACTURING AND QUALITY ASSURANCE PROCEEDURES.
2. ADHESIVE SHALL BE WET-USE EXTERIOR WATERPROOF GLUE.
3. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS INDENTIFICATION MARK OR BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE.
4. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER THE SHOP OR FIELD.
5. NOTCHING AND/OR BORING OF GLUED LAMINATED MEMBERS (EITHER IN THE SHOP, OR FIELD) IS STRICTLY PROHIBITED UNLESS AS SPECIFICALLY DETAILED IN THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
6. GLUED LAMINATED TIMBER BEAMS SHALL BE WESTERN SPECIES WITH THE FOLLOWING STRENGTH PROPERTIES:

GLUED LAMINATED TIMBER BEAMS				
COMBINATION SYMBOL (SPECIES)	USE	MODULUS OF ELASTICITY (PSI)	FLEXURAL STRESS (PSI)	HORIZONTAL SHEAR STRESS (PSI)
24F-V4 (DF/DF)	SIMPLE SPAN	1,800,000	2,400	265
24F-V8 (DF/DF)	CANTILEVERED OR CONTINUOUS	1,800,000	2,400	265

7. UNEXPOSED GLULAM MEMBERS SHALL BE FRAMING APPEARANCE GRADE. EXPOSED GLULAM MEMBERS SHALL BE ARCHITECTURAL APPEARANCE GRADE.
8. GLULAM MEMBERS NOTED AS "FRR" (FIRE RESISTANCE RATED) SHALL BE LAYED UP WITH ADDITIONAL TENSION LAMINATION(S) AS REQUIRED TO MEET 1 HOUR FIRE RESISTANCE RATING PER IBC 722.6.3.4. THE QUALITY STAMP ON "FRR" BEAMS SHALL INDICATE THAT THE MANUFACTURER HAS MADE THE REQUIRED LAYUP MODIFICATIONS.

ENGINEERED COMPOSITE LUMBER:

1. ENGINEERED COMPOSITE WOOD PRODUCTS SUCH AS LAMINATED VENEER LUMBER (LVL), PARALLEL STRAND LUMBER (PSL), AND LAMINATED STRAND LUMBER (LSL) SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS, MANUFACTURED BY TRUS-JOIST OR AN APPROVED EQUAL.
2. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM DESIGN PROPERTIES:

ENGINEERED COMPOSITE LUMBER		
COMPOSITE LUMBER TYPE	MODULUS OF ELASTICITY (PSI)	ALLOWABLE FLEXURAL STRESS (PSI)
LSL	1,500,000	2,350
LVL	1,900,000	2,600

NOTE:
FLEXURAL STRESSES NOTED ABOVE ARE FOR 12" DEEP MEMBERS. DEEPER MEMBERS SHALL BE DESIGNED FOR REDUCED STRESSES PER THE MANUFACTURER'S REQUIREMENTS.

ANCHOR BOLTS:

1. ANCHOR BOLTS FROM SILL PLATES TO FOUNDATION SHALL BE GALVANIZED.
2. ALL ANCHOR BOLTS SHALL HAVE A GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND NUT.
3. ANCHOR BOLTS SHALL BE PLACED SO THAT PLATE WASHER IS NO MORE THAN 1/2" FROM THE SHEATHED FACE OF THE SHEARWALL. FOR THE CONDITION WHERE SHEATHING IS APPLIED TO BOTH SIDES OF SHEARWALL, ALTERNATE ANCHOR BOLTS.
4. ANCHOR BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION (SIMILAR IF ALTERNATE ANCHORAGE IS SELECTED):
   A. ANCHOR BOLT MATERIAL TYPE
   B. ANCHOR BOLT SIZE
   C. OVERALL ANCHOR BOLT LENGTH
   D. ANCHOR BOLT EMBEDMENT
   E. ANCHOR BOLT PROJECTION (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR FIELD TOLERANCES)
   F. ANCHOR BOLT SPACING
   G. DIMENSIONS ANCHOR BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL ANCHOR BOLTS
   H. PLATE WASHER TYPE AND LOCATIONS
   I. SILL PLATE LENGTHS AND SPLICE LOCATIONS
6. SILLS AT WALL SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
7. ALL SILL PLATES SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
8. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL.

HOLDOWN ANCHOR BOLTS:

1. ALL HOLDOWN BOLTS AT SHEAR WALLS TO FOUNDATION SHALL NOT BE IN CONTACT W/ PRESERVATIVE TREATED (PT) WOOD. PT WOOD PLATES SHALL HAVE OVERSIZED HOLES 1/4" MIN & 3/8" MAX LARGER THAN BOLT SIZE. AS AN ALTERNATIVE, THE ANCHOR MAY BE SLEEVED WITH AN INSULATOR BUSHING OR GALVANIZED IN ACCORDANCE W/ ASTM A653.
2. HOLDOWN BOLTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
3. HOLDOWN BOLTS SHALL BE PLACED A MINIMUM OF 5" FROM THE END OF CONCRETE STEMWALLS. ADD ADDITIONAL 2x STUD AS REQUIRED.
4. SEE HOLDOWN SCHEDULE AND DETAILS ON SHEET S8.00 FOR TYPICAL HOLDOWN INSTALLATION REQUIREMENTS.
5. HOLDOWN BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
6. HOLDOWN BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL, THREADED ON BOTH ENDS UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION:
   A. HOLDOWN BOLT MATERIAL TYPE
   B. HOLDOWN BOLT SIZE
   C. OVERALL HOLDOWN BOLT LENGTH
   D. HOLDOWN BOLT EMBEDMENT INTO FOOTING
   E. HOLDOWN BOLT PROJECTION FOR HOLDOWN TYPE (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR A MINIMUM OF 2" FIELD TOLERANCE)
   F. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL HOLDOWN BOLTS
   G. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION, SIZE, TYPE, AND QUANTITY OF HOLDOWN POST OR BUILT-UP MEMBER
   H. HOLDOWN TYPE
   I. ALL ACCESSORIES (INCLUDING PLATE WASHERS, DOUBLE NUTS, ETC.) AND LOCATIONS

PREMANUFACTURED WOOD TRUSSES:

1. DESIGN OF THE PREMANUFACTURED WOOD ROOF TRUSS SYSTEM SHALL BE THE CONTRACTORS RESPONSIBILITY.
2. DESIGN SHALL CONFORM TO THE PROFILES SHOWN ON THE DRAWINGS AND THE REQUIREMENTS OF IBC SECTION 2303.4 AND THE "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES", TPI-24 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE.
3. THE DESIGNER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS TO THE STRUCTURE REQUIRED TO TRANSFER DESIGN LOADS INTO THE STRUCTURAL SYSTEM OF THE BUILDING.
4. MANUFACTURER SHALL DESIGN AND FURNISH ALL WOOD FRAMING CONNECTIONS NECESSARY TO TRANSMIT DESIGN LOADS, INCLUDING SEISMIC AND WIND LOADS, TO THE BEARING AND SHEAR WALL SUPPORTS.
5. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS SHOWING LAYOUT AND ANY DETAILING NECESSARY FOR DETERMINING FIT AND PLACEMENT IN THE STRUCTURE.
6. METAL PLATE CONNECTED TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS AND ANY SNOW DRIFTING/SLIDING SNOW INDICATED ON DRAWINGS:

PREMANUFACTURED WOOD TRUSS LOADING	
LOADING TYPE	UNIFORMLY DISTRIBUTED LOAD (PSF)
ROOF LIVE LOAD	20
ROOF SNOW LOAD	25
ROOF DEAD LOAD	TOP CHORD: 14
	BOTTOM CHORD: 9.5

WIND UPLIFT (PSF)	
FIELD	57
PERIMETER	89
CORNER	121

NOTES:

1. WIND UPLIFT PRESSURES SHOWN ABOVE DO NOT INCLUDE ROOF DEAD LOAD.
2. WIND UPLIFT PRESSURES SHOWN ABOVE ARE UNFACTORED.

7. CONTRACTOR TO VERIFY ALL WEIGHTS AND LOCATIONS OF CONCENTRATED LOADS DUE TO ROOF TOP MECHANICAL UNITS, MECHANICAL PIPING, ELECTRICAL UNITS, FOLDING PARTITIONS AND OTHER CONCENTRATED LOADS PRIOR TO TRUSS FABRICATION.
8. TRUSS MANUFACTURER SHALL DESIGN ALL DRAG TRUSSES AND DRAG STRUTS FOR THE FOLLOWING:
   A. SHEAR LOADS AS INDICATED ON THE PLANS AND NOTES.
   B. DRAG TRUSSES TO COLLECT LOAD ALONG THE TOP CHORD AND TRANSFER TO THE BOTTOM CHORD THROUGH WEB MEMBERS.
   C. ALL TOP AND BOTTOM CHORDS TO HAVE CAPACITY OF TRANSFERING SHEAR LOADS THROUGH SPLICES.
9. THE TRUSS MANUFACTURER SHALL SUBMIT DESIGNS, SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED FOR REVIEW AND APPROVAL.
10. DEFLECTION OF MEMBERS DUE TO DESIGN LOADS SHALL NOT EXCEED THE FOLLOWING (UNLESS NOTED OTHERWISE):
    ROOFS: LIVE LOAD - 1/360 OF SPAN, TOTAL LOAD - 1/240 OF SPAN
11. DESIGN, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE THE FOLLOWING INFORMATION:
    A. DEFLECTION DESIGN CRITERIA
    B. LIVE, SNOW, DEAD, WIND, SEISMIC AND MECHANICAL DESIGN LOADS
    C. ERECTION AND PLACEMENT CRITERIA
    D. DETAILS OF ALL BRIDGING, BRACING, STIFFENERS, BLOCKING AND CONNECTIONS
    E. LOCATION AND FRAMING FOR ALL EQUIPMENT LOADS OVER 500 LBS
    F. LOCATION AND FRAMING FOR ALL SUSPENDED WALLS AND EQUIPMENT
12. LOWER CHORDS SHALL BE CAMBERED TO PROVIDE FOR LONG-TERM DEAD LOAD DEFLECTION AT GYPSUM BOARD CEILINGS.
13. DO NOT NOTCH OR DRILL TRUSS MEMBERS WITH OUT APPROVAL OF THE TRUSS MANUFACTURER AND THEIR ENGINEER.

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DELAWARE ENGINEERING, D.P.C.
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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S2

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER

TABLE 5

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X (a)	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

TABLE 6

REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SEISMIC CATEGORIES C, D, E, F)

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
STRUCTURAL WOOD					
CONNECTIONS FOR DIAPHRAGM CHORDS, COLLECTORS, BRACING, AND SHEAR WALL ANCHORAGE AND HOLDOWNS				X	ALL CONNECTIONS VISUALLY INSPECTED
FASTENING OF DIAPHRAGM AND SHEAR WALL SHEATHING WITH EDGE NAILING ≤4"				X	SPECIAL INSPECTION IS NOT REQUIRED WHEN FASTENER SPACING IS GREATER THAN 4" ON CENTER FOR WOOD SHEAR WALLS, DIAPHRAGMS, NAILING, BUILDING AND OTHER COMPONENTS IN THE SEISMIC FORCE-RESISTING SYSTEM.
ARCHITECTURAL COMPONENTS					
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.11	ASCE 7-10 Section 13.5.6		X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.11.5			X (a)	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.11.6			X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	
PROCESS MECHANICAL COMPONENTS					
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1909.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
WOOD					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
PREFABRICATED WOOD SHEAR PANELS	1705.5 1704.2.5	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO HOLDOWN ANCHOR SIZE AND PLACEMENT, INCLUDING EMBEDMENT LENGTH, SPACING, AND EDGE DISTANCE

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REVISIONS

NO.	DATE	DESCRIPTION

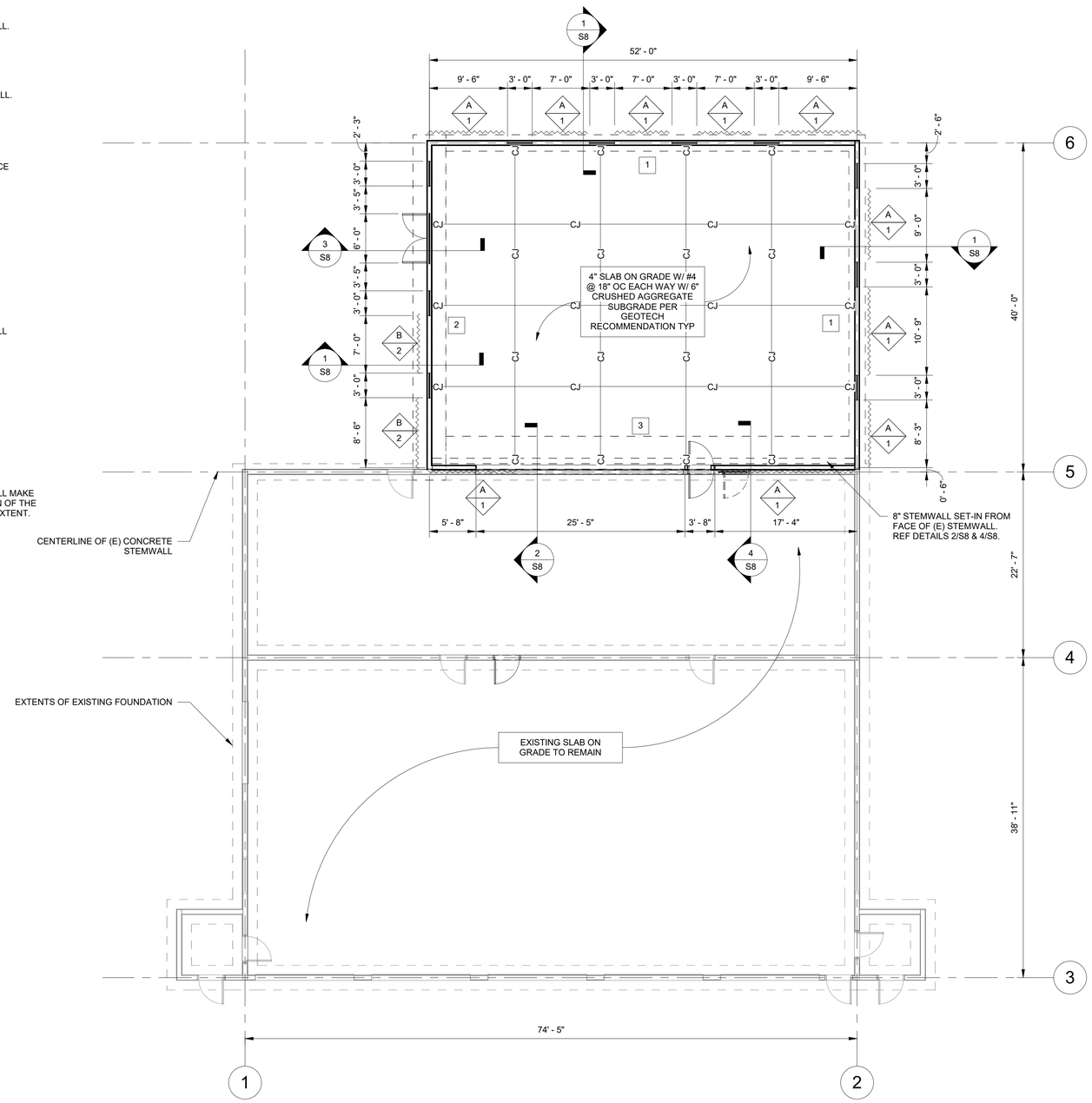
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Special Inspection

SHEET: S3

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S4 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

B. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOILS UNLESS SPECIFIED OTHERWISE IN THE STRUCTURAL DETAIL OR SPECIFIED IN THE GEOTECHNICAL REPORT.

C. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION FOR NEW FOUNDATION SYSTEM.

D. UNDER-SLAB VAPOR BARRIER AND FOUNDATION DRAINAGE SHALL BE PROVIDED AS SPECIFIED IN THE GEOTECHNICAL REPORT AS WELL AS THE GOVERNING BUILDING CODE (IBC).

E. CONTROL JOINTS SHALL BE PROVIDED AS INDICATED ON THE FOUNDATION PLAN. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT MAXIMUM SPACING AS SPECIFIED ON SHEET S1 IF THE PROVIDED LAYOUT INDICATES LARGER SPACING.

F. ALL ELEVATIONS TO FINISHED FLOORS (TOP OF SLAB) SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

G. ALL BOTTOM OF (N) FOOTING ELEVATIONS SHALL BE 4'-0" BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED.

Structural Foundation Schedule				
Type Mark	Width	Foundation Thickness	Longitudinal Reinforcement	Transverse Reinforcement
1	2' - 0"	1' - 0"	(3) #4, BOTTOM	#4@18" OC, BOTTOM
2	4' - 0"	2' - 0"	(5) #4, TOP & BOTTOM	#4@18" OC, TOP & BOTTOM
3	4' - 0"	1' - 0"	(5) #4, BOTTOM	#4@18" OC, TOP & BOTTOM

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS					
MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
2	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 2 / S7 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTICAL ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

WOOD SHEAR WALL SCHEDULE					
WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

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DATE: 7/11/2017
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REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

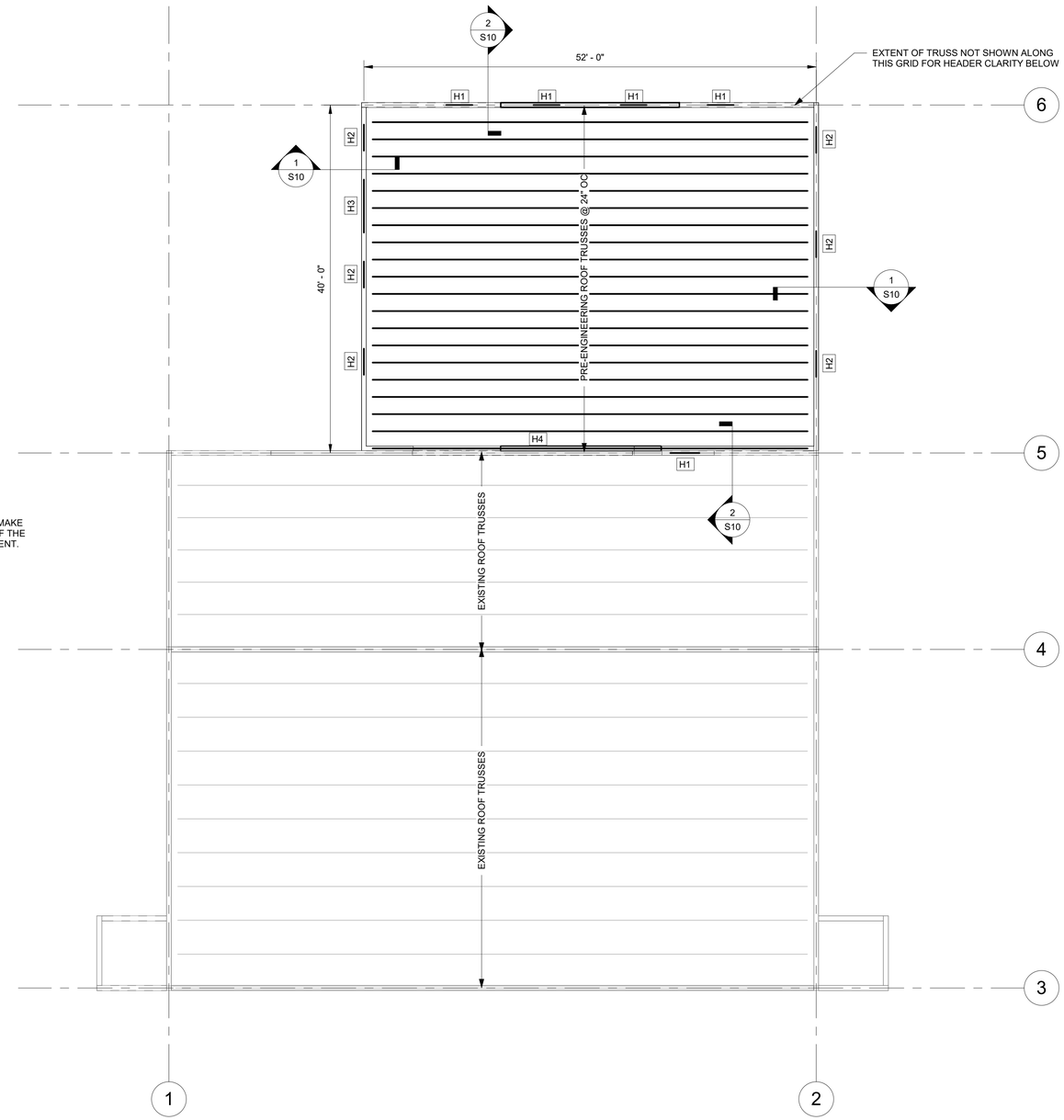
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Foundation Plan

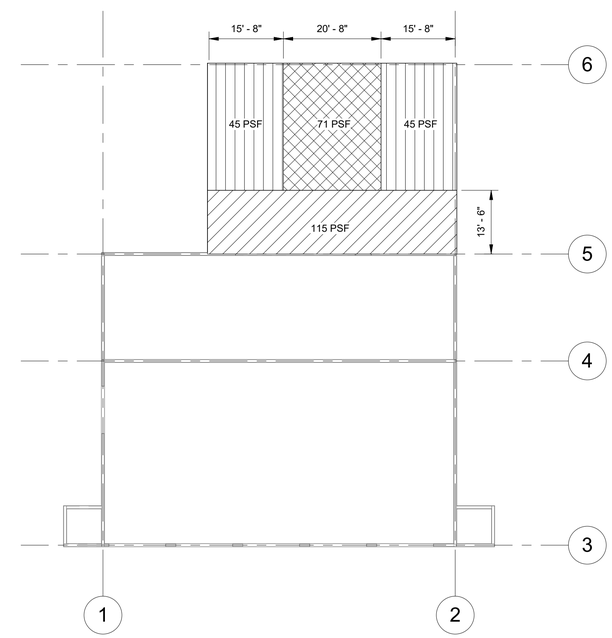
SHEET: S4

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- H- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- DX INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- XX PSF / XX'-XX" INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S6 ROOF FRAMING PLAN
1/8" = 1'-0"



2 / S6 SNOW DRIFT PLAN
1/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

B. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION OF ROOF STRUCTURE.

C. ROOF SHEATHING SHALL BE PROVIDED AS SPECIFIED ON SHEET S1, TYPICAL UNLESS NOTED OTHERWISE.

D. ROOF SHEATHING SHALL BE NAILED TO ROOF FRAMING AND BLOCKING WITH 0.148" DIA x 3" NAILS AT 6" OC AT PANEL EDGES, 6" OC AT DIAPHRAGM BOUNDARIES, 12" OC FIELD, TYPICAL UNLESS NOTED OTHERWISE.

E. TRUSS MANUFACTURER SHALL REVIEW ALL PLANS AND DETAILS TO ACCOUNT FOR ALL LOADINGS AND TYPICAL CONNECTION CONDITIONS.

F. NON-BEARING WALLS ARE NOT SHOWN ON STRUCTURAL PLANS. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.

Structural Header Schedule	
Mark	Section
H1	4x6 SPF #2
H2	(2)1 3/4 x 11 7/8 LVL
H3	(3) 1 3/4 x 11 7/8 LVL
H4	(3)1 3/4 x 22 LVL

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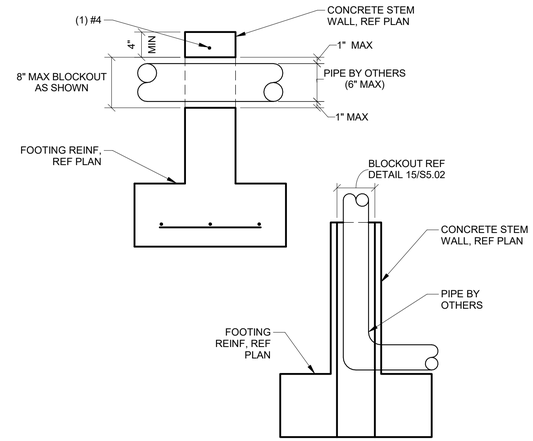
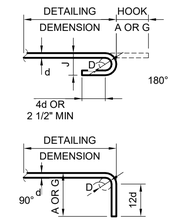
Roof Framing Plan

SHEET:
S6



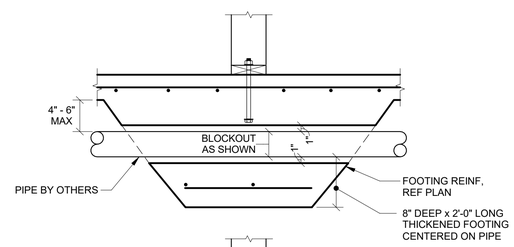
5 / S7 PIPE PENETRATION AT STEMWALL
1" = 1'-0"

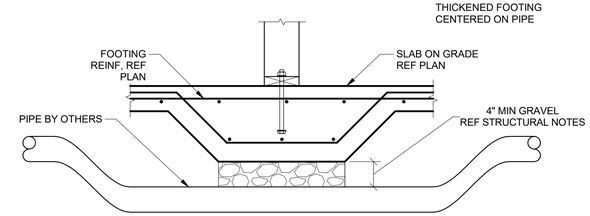
RECOMMENDED END HOOKS
ALL GRADES OF STEEL
D = FINISHED BEND DIAMETER



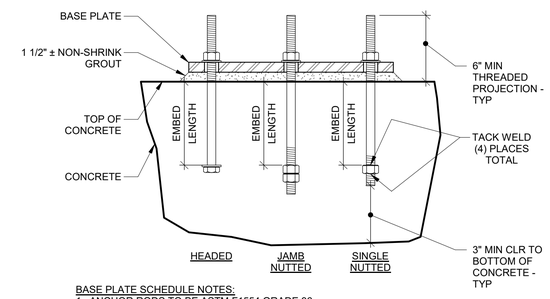
BAR SIZE	D, IN.	180° HOOKS, FT - IN.		90° HOOKS FT - IN.
		A OR G	J	A OR G
#3	2 1/4	0-5	0-3	0-6
#4	3	0-6	0-4	0-8
#5	3 3/4	0-7	0-5	0-10
#6	4 1/2	0-8	0-6	1-0
#7	5 1/4	0-10	0-7	1-2
#8	6	0-11	0-8	1-4
#9	9 1/2	1-3	0-11 3/4	1-7
#10	10 3/4	1-5	1-1 1/4	1-10
#11	12	1-7	1-2 3/4	2-0
#12	18 1/4	2-3	1-9 3/4	2-7

1 / S7 REBAR END HOOK DETAIL
1/2" = 1'-0"



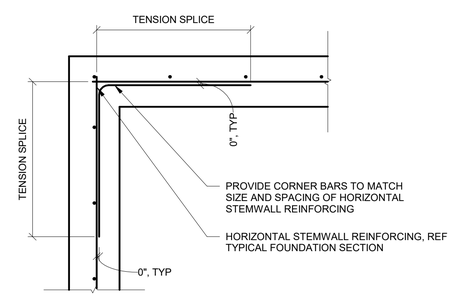


4 / S7 PIPE PENETRATION AT FOOTING
1" = 1'-0"

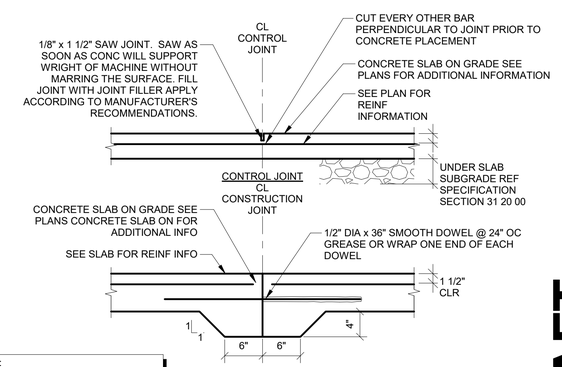


BASE PLATE SCHEDULE NOTES:
1. ANCHOR RODS TO BE ASTM F1554 GRADE 36.
2. NUTS FOR ANCHOR RODS SHALL BE STANDARD HEX NUTS TYPE ASTM A563-A.
3. WASHER FOR ANCHOR RODS SHALL BE ASTM F436. PROVIDE WASHER BETWEEN ALL NUTS AND BASE PL's
4. ALL ANCHOR ROD EMBEDED ENDS SHALL BE ONE OF THE FOLLOWING (SEE ANCHOR ROD EMBEDMENT DETAIL):
   a. HEADED
   b. JAMB NUTTED (DOUBLE NUTTED)
   c. SINGLE NUTTED (TACK WELD IN (4) LOCATIONS TO SECURE NUT IN PLACE)
5. ALL HOLES IN BASE PLATES SHALL BE ANCHOR ROD DIAMETER + 3/16" MAXIMUM.
6. ANCHOR RODS, NUTS AND WASHERS PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

2 / S7 ANCHOR ROD EMBEDMENT DETAIL
1" = 1'-0"



6 / S7 Typical Wall Corner Reinforcement
1" = 1'-0"



NOTES:
CONTRACTOR MAY USE EITHER CONTROL JOINTS OR CONSTRUCTION JOINTS AT LOCATIONS INDICATED ON PLANS.

3 / S7 SLAB JOINTS
1" = 1'-0"

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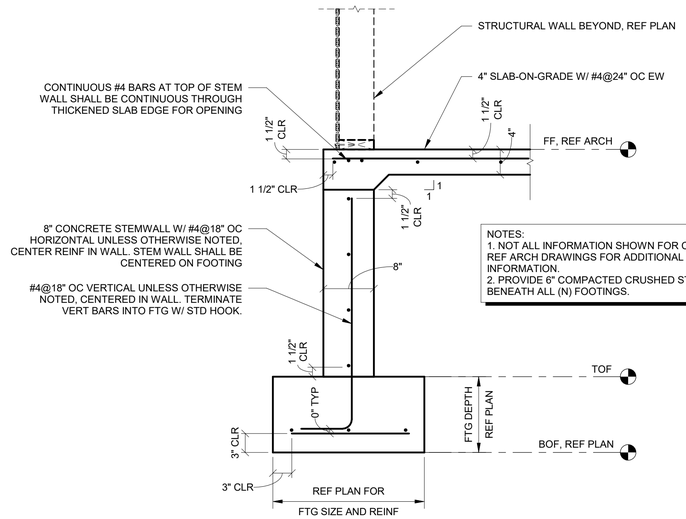
West Fulton, NY 12194

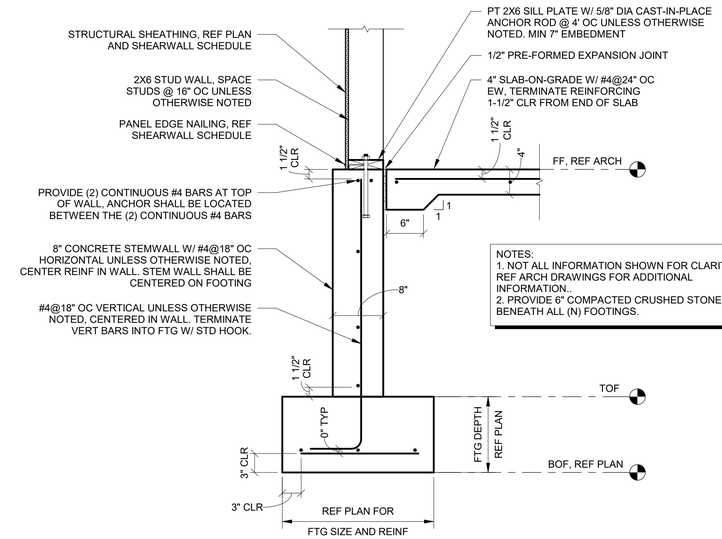
Typical Foundation Details

SHEET: S7



NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

3 / S8 Typical Foundation at Opening (N)
1" = 1'-0"



NOTES:
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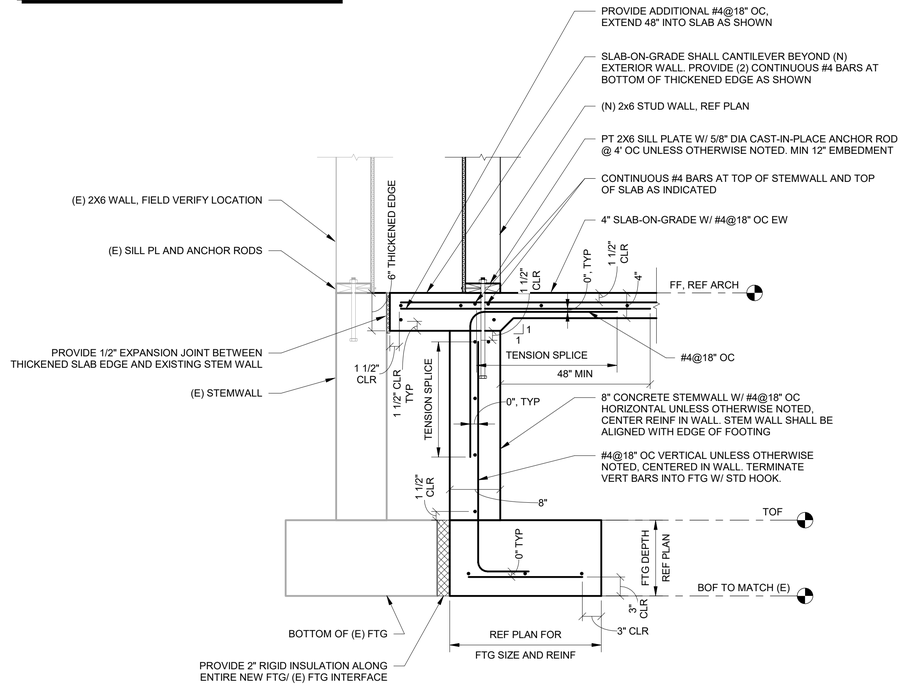
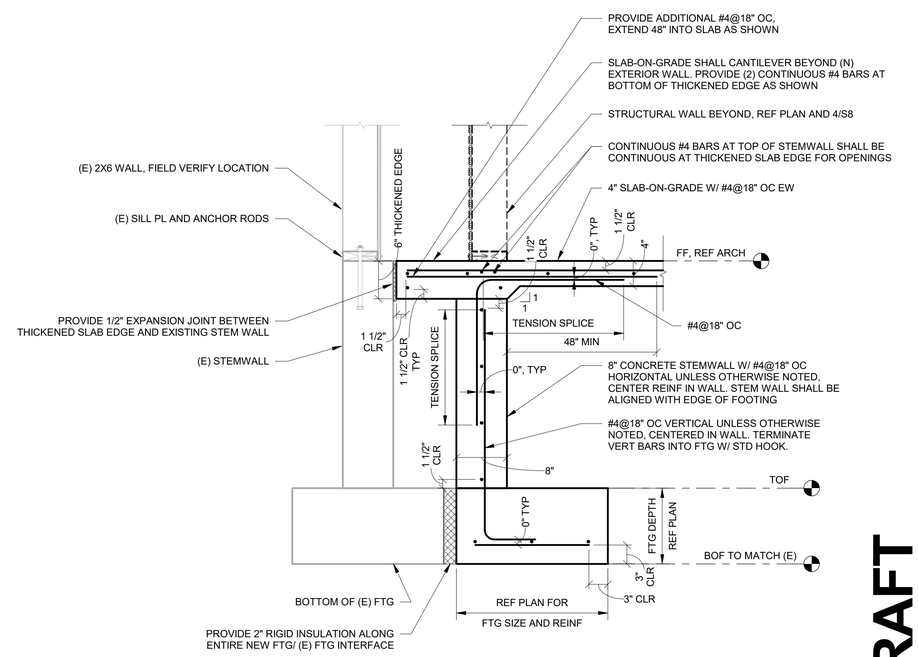
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

1 / S8 Typical Foundation Section
1" = 1'-0"

NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. BOTTOM OF (N) FTG TO MATCH BOTTOM OF (E) FTG.
3. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.



4 / S8 Typical Foundation at Existing Structure
1" = 1'-0"



2 / S8 Foundation at Doorway
1" = 1'-0"

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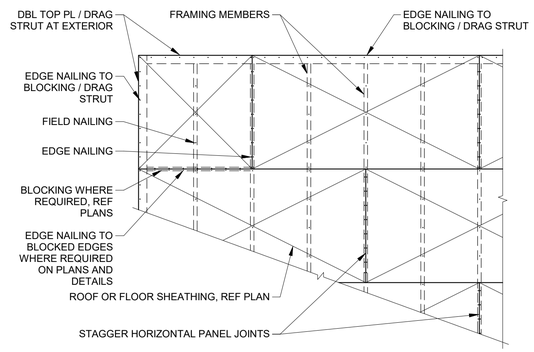
Foundation Details

SHEET:
S8

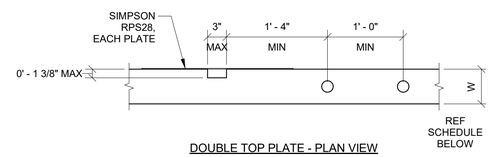
NOTE: USE EDGE NAILING AT ALL INTERIOR SHEAR WALLS AND DRAG STRUTS, UNO



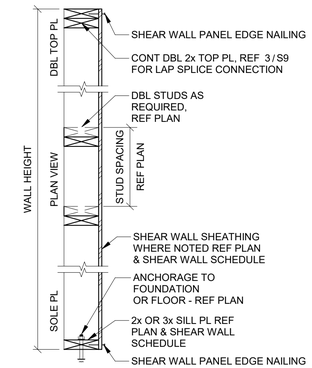
6 / S9 PLYWOOD FLOOR OR ROOF DIAPHRAGM
3/8" = 1'-0"

NOTES:
1. 'W' INDICATES WIDTH OR DEPTH OF MEMBER
2. ALL HOLES SHALL BE DRILLED, NOT SAWN
3. ALL NOTCHES TO HAVVE CORNERS PRE-DRILLED. OVERCUTS WILL NOT BE ALLOWED

SILL OR SOLE PLATE - PLAN VIEW



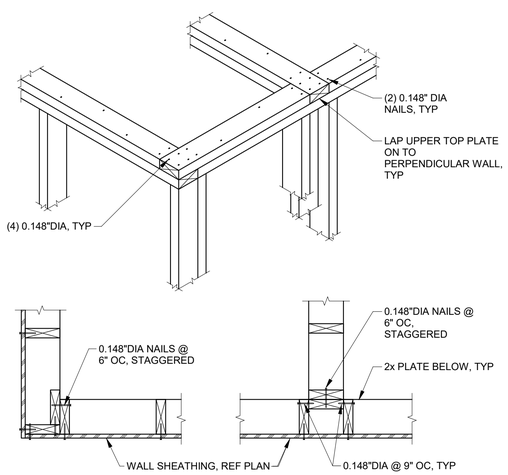
DOUBLE TOP PLATE - PLAN VIEW



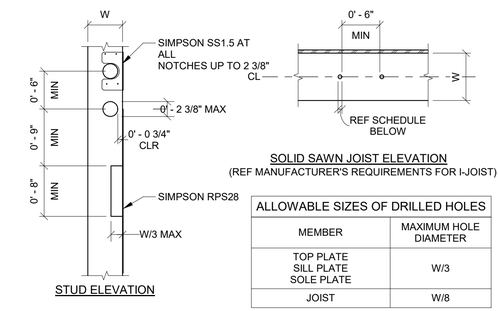
NOTE:
1. REF ARCH FOR WALL FINISHES, FURRING, ETC.
2. REF ARCH FOR ADDITIONAL REQ'D TO MAINTAIN FIRE RATING.

TYPICAL WALL CONSTRUCTION

1 / S9 BEARING WALL DETAIL
12" = 1'-0"



7 / S9 WALL FRAMING AT CORNERS AND INTERSECTIONS
1" = 1'-0"

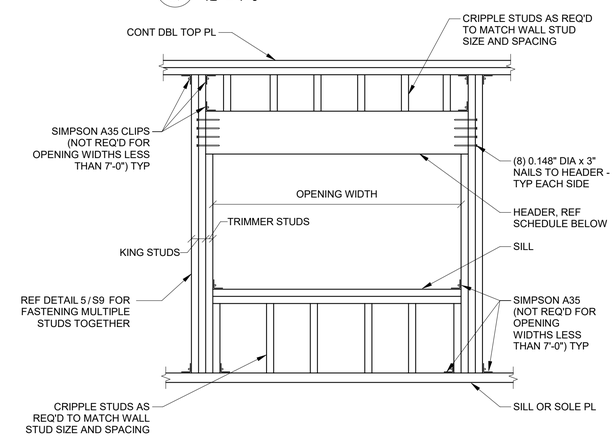


STUD ELEVATION

SOLID SAWN JOIST ELEVATION
(REF MANUFACTURER'S REQUIREMENTS FOR I-JOIST)

ALLOWABLE SIZES OF DRILLED HOLES	
MEMBER	MAXIMUM HOLE DIAMETER
TOP PLATE SILL PLATE SOLE PLATE	W/3
JOIST	W/8

4 / S9 ALLOWABLE HOLES AND NOTCHES IN WOOD FRAMING
1" = 1'-0"

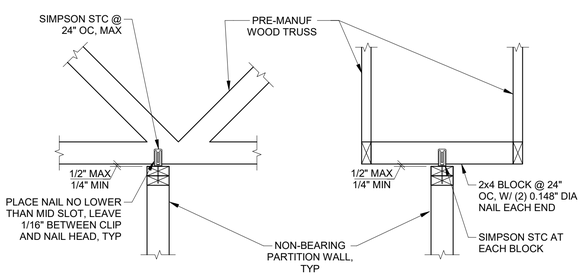


LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	REF PLAN	(2) 2x	(1) 2x	(3) 2x
6'-1" TO 12'-0"	REF PLAN	(3) 2x	(2) 2x	(4) 2x
12'-1" TO 30'-0"	REF PLAN	(3) 2x	(3) 2x	(4) 2x

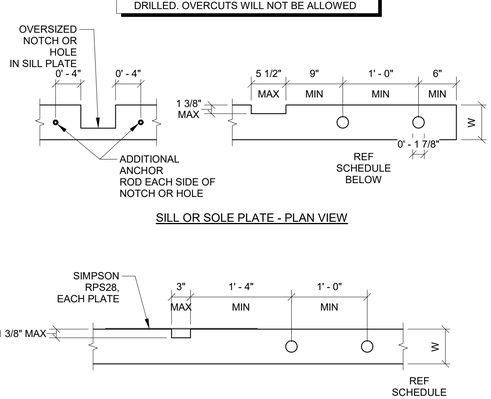
NON-LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	4x6	(1) 2x	(1) 2x	(1) 2x
6'-1" TO 10'-6"	4x8	(2) 2x	(1) 2x	(2) 2x
10'-7" TO 14'-0"	4x10	(3) 2x	(1) 2x	(3) 2x

NOTES:
1. HEADER SIZES ARE INDICATED ON THE PLANS FOR LOAD BEARING WALLS
2. THE DEPTH OF 2x SILLS, TRIMMERS AND KING STUDS SHALL MATCH THE WALL THICKNESS
3. DETAIL APPLICABLE FOR BOTH SEMI AND FULL HEIGHT OPENINGS IN WALLS.

2 / S9 WINDOW / DOOR HEADER DETAIL AND SCHEDULE
1" = 1'-0"



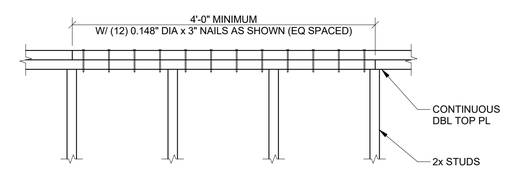
8 / S9 NON-BEARING PARTITION WALLS AT ROOF
1" = 1'-0"



BUILT-UP MEMBER	FASTENER SIZE	FASTENER SPACING	FASTENER END DIST	FASTENER EDGE DIST	ROWS OF FASTENERS
(2) 2x4	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(3) 2x4	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(4) OR MORE 2x4	1/2" DIA BOLT	9"	4"	1.5"	1 - STAGGER
(2) 2x6	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	2
(3) 2x6	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	2
(4) OR MORE 2x6	1/2" DIA BOLT	9"	4"	1.25"	2

NOTES:
1. PLYWOOD SHEATHING OR GYP BOARD FASTENERS SHALL BE STAGGERED TO EA STUD IN BUILT-UP MEMBER.
2. NAILS & SCREWS SHALL STAGGERED EACH SIDE OF BUITL-UP MEMBER.
3. BOLTS SHALL HAVE STANDARD PLATE WASHERS BETWEEN WOOD AND BOLT HEAD AND NUT HEAD.
4. NUTS TO BE TIGHTENED TO INSURE ALL WOOD LAMS ARE IN CONTACT.
5. 1/4" DIA SDS SCREWS OF SAME LENGTH MAY BE SUBSTITUTED FOR NAILS W/ 9" SPACING & 4" END DIST.

5 / S9 BUILT-UP WOOD POSTS
1" = 1'-0"



3 / S9 DOUBLE TOP PLATE SPLICE CONNECTION
1" = 1'-0"

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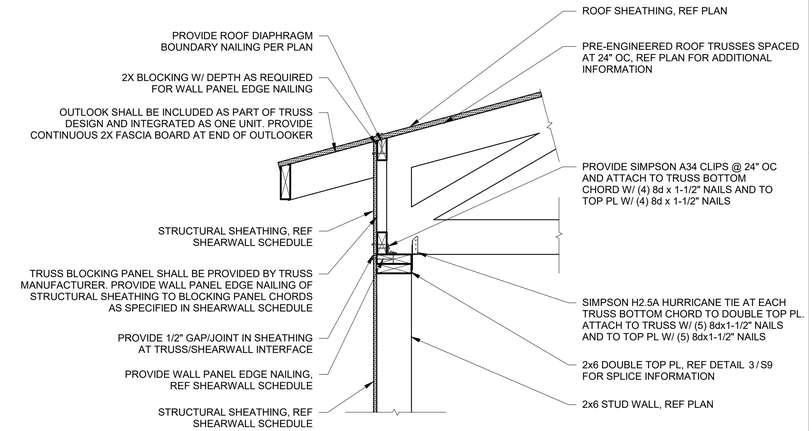
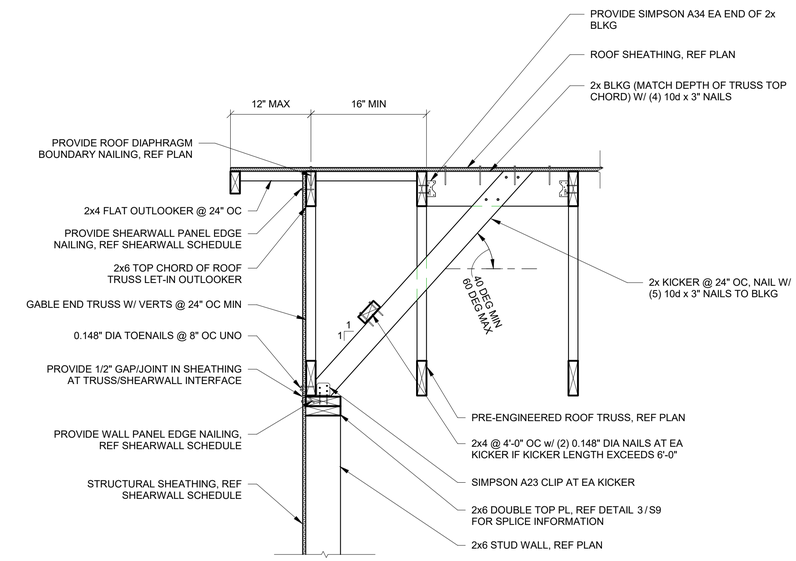
Framing Details

SHEET: S9

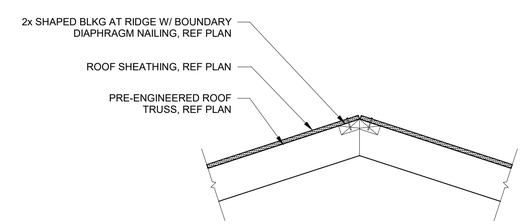


1 / S10 Typical Wall Detail - Truss Perpendicular
1" = 1'-0"



NOTES:
1. SIMPSON A34 CLIPS AND H2.5A HURRICANE TIES FOR TRUSS ARE NOT SHOWN FOR CLARITY. REF 1 / S10 FOR ADDITIONAL INFORMATION ON TYPICAL CONNECTION.

2 / S10 Typical Wall Detail - Truss Parallel
1" = 1'-0"



3 Ridge Blocking
1" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

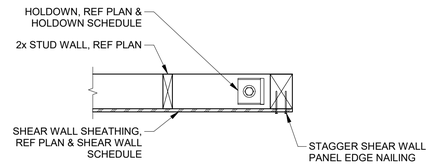
REVISIONS

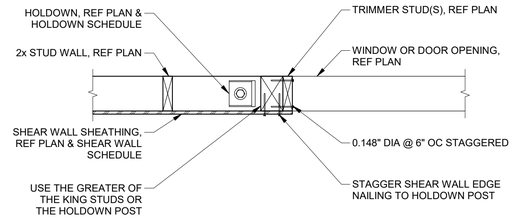
NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

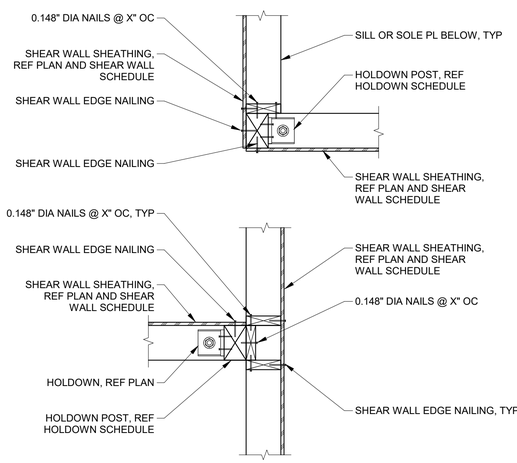
Framing Details

SHEET:
S10

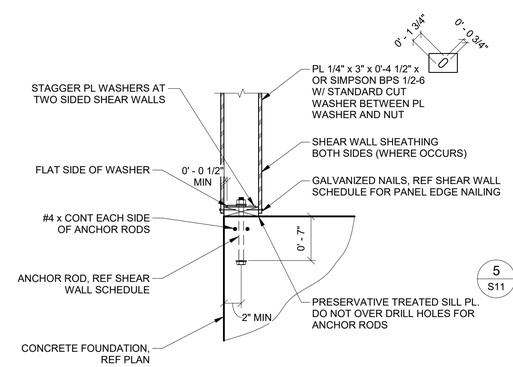




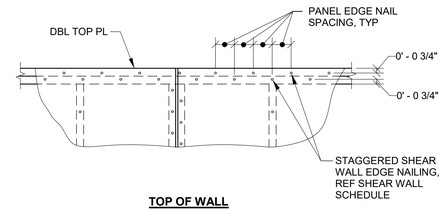
6 S11 HOLDOWN AT END OF WALL OR OPENING
1" = 1'-0"



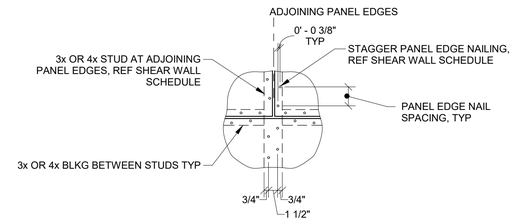
7 S11 HOLDOWN AT WALL CORNERS AND INTERSECTIONS
1" = 1'-0"



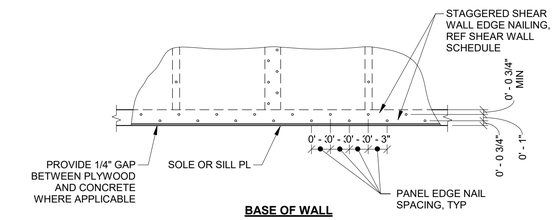
8 S11 SHEAR WALL SILL PLATE CONNECTION TO FOUNDATION
1" = 1'-0"



TOP OF WALL

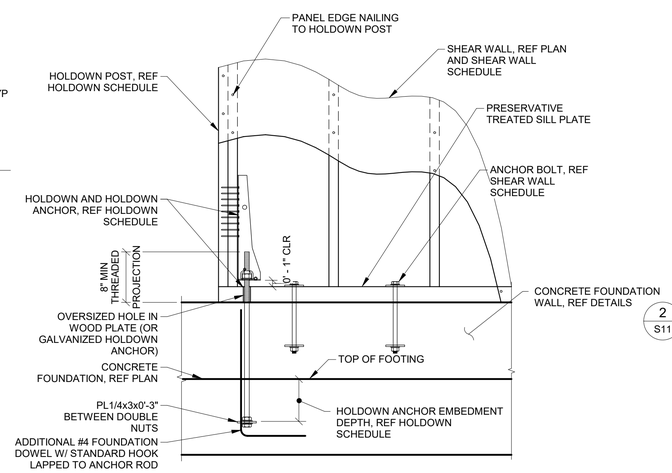


VERTICAL AND HORIZONTAL PANEL JOINTS OF WALL

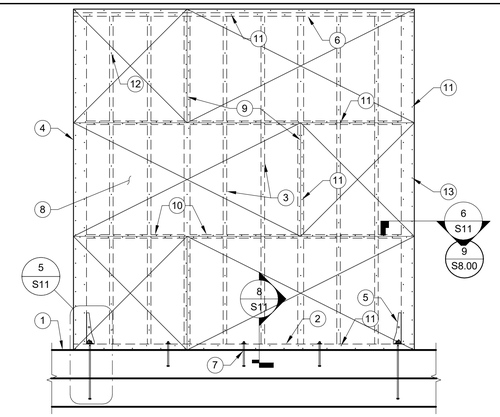


BASE OF WALL

4 S11 SHEAR WALL PANEL EDGE NAILING
1" = 1'-0"



5 S11 TYPICAL SHEAR WALL HOLDOWN AT FOUNDATION
1" = 1'-0"



SHEAR WALL ELEVATION NOTES:
1. FOUNDATION REF PLAN.
2. PRESERVATIVE TREATED SILL PLATE REF SHEAR WALL SCHEDULE.
3. WALL STUDS.
4. HOLDOWN POST REF HOLDOWN SCHEDULE.
5. HOLDOWN ANCHOR. REFERENCE PLANS & HOLDOWN SCHEDULE FOR HOLDOWN ATTACHMENT & ANCHORAGE TO FOUNDATION.
6. DOUBLE TOP PLATE. REFERENCE 3/S9 FOR DOUBLE TOP PLATE SPLICE DETAIL.
7. ANCHOR BOLTS W/ STEEL PLATE WASHERS. THERE SHALL BE A MINIMUM OF TWO ANCHORS FOR EACH SILL PIECE (ANY MODIFICATION TO SILL REMOVING MORE THAN 25% CROSS-SECTION SHALL BE CONSIDERED BREAKING PLATE) W/ ONE ANCHOR LOCATED NOT LESS THAN 4-1/2" NOR MORE THAN 12" FROM THE END OF EACH PIECE.
8. WOOD STRUCTURAL PANEL SHEATHING. ORIENTATION MAY BE EITHER HORIZONTAL OR VERTICAL AT CONTRACTORS OPTION. MINIMUM DIMENSION OF AN INDIVIDUAL PANEL SHALL BE 24" IN EITHER DIRECTION.
9. STAGGER ALL VERTICAL PANEL JOINTS WHERE POSSIBLE.
10. ALL PANEL EDGES ARE TO BE BLOCKED. REFERENCE SHEAR WALL SCHEDULE FOR FRAMING THICKNESS AT ADJOINING PANEL EDGES.
11. PANEL EDGE NAILING, REFERENCE SHEAR WALL SCHEDULE.
12. PANEL FIELD NAILING TO INTERMEDIATE SUPPORT MEMBERS AT 12" OC.
13. PROVIDE EDGE NAILING TO EACH HOLDOWN POST. WHERE HOLDOWN POST CONSISTS OF BUILT-UP MEMBERS, PROVIDE STAGGERED NAILING TO EACH PIECE AND LAMINATE IN ACCORDANCE W/ SHEAR WALL SCHEDULE.
14. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS & FOR INFORMATION NOT SHOWN.

1 S11 TYPICAL SHEAR WALL ELEVATION
3/8" = 1'-0"

WOOD SHEAR WALL SCHEDULE

WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)
C	15/32"	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
D	15/32" (2) SIDES	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
E	15/32" (2) SIDES	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

2 S11 WOOD SHEAR WALL SCHEDULE
12" = 1'-0"

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS

MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU2-SDS2.5	(2) 2x STUDS	(6) SDS 1/4" x 2-1/2"	5/8"	0'-8"
2	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
3	HDU5-SDS2.5	(2) 2x STUDS	(14) SDS 1/4" x 2-1/2"	5/8"	0'-9"
4	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"
5	HD19	6X6 DF#1 POST	(5) 1" DIA BOLTS	1-1/4"	1'-0"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 4/S500 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTIC ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

3 S11 HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS
12" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Shearwall Details

SHEET: S11

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

November 9, 2017

Mohawk Nation Council of Chiefs
Of Haudenosaunee Six Nations Confederacy
Akwesasne Territory Box 336
Via Rooseveltown, NY 13683-0366

Re: Section 106 Compliance for West Fulton Fire Department Improvements Project, 807 West Fulton Road, West Fulton, Schoharie County, New York 12194

Dear Mohawk Nation Council of Chiefs:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the St. Regis Mohawk Tribe, the Mohawk Nation, and the Stockbridge-Munsee Community Band of Mohicans.

Area of Potential Effect: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion. The existing fire station is a wood frame structure.

Proposed Project Description: The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower. Project plans are attached to this consultation request.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. GOSR initiated consultation with the New York State Historic Preservation Office and no comments have been received to date. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery
38-40 State St., 408N, Hampton Plaza
Albany, NY 12207

If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosure:
Project Location Map
Project Plans

West Fulton Fire House

October 5, 2017

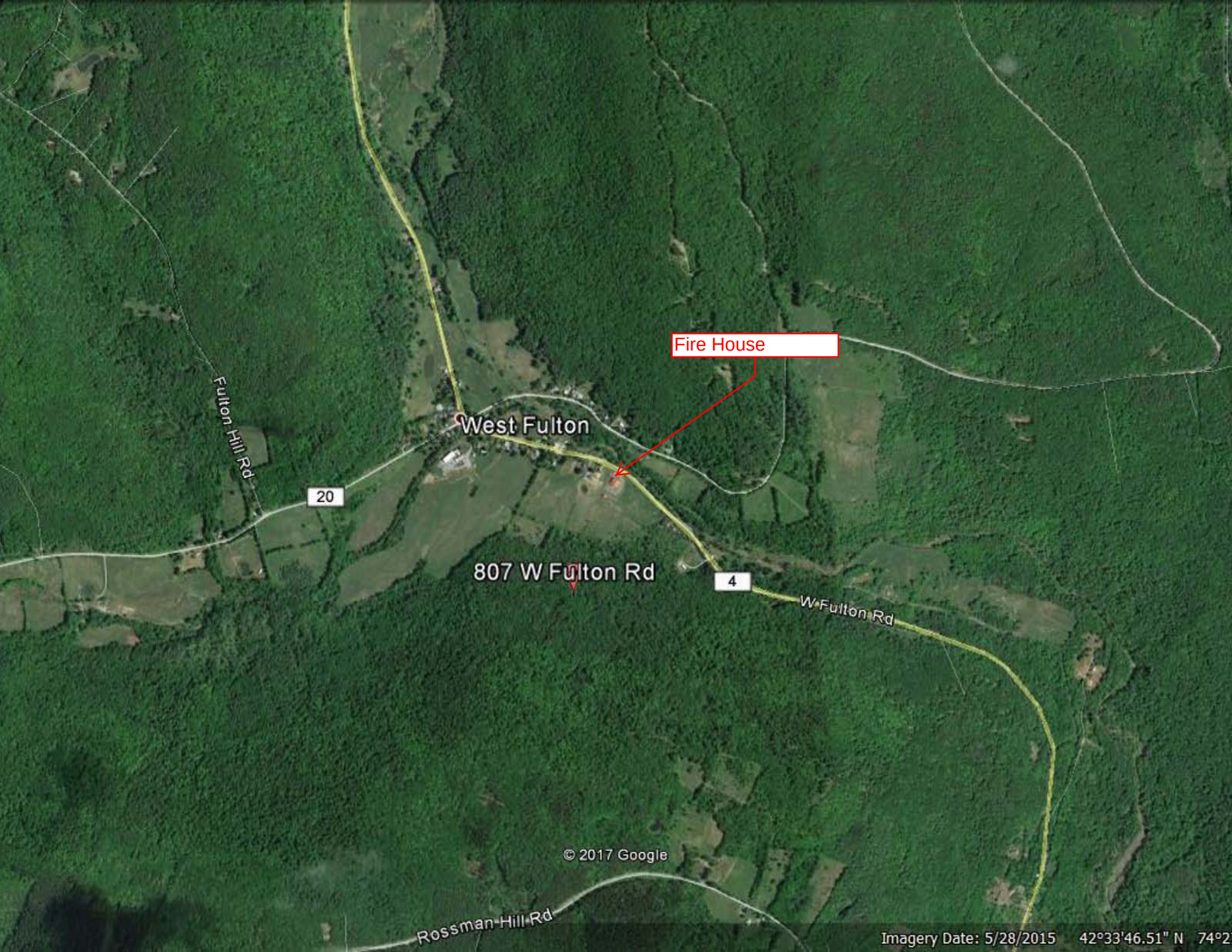
1:2,257

0 0.0275 0.055 0.11 mi

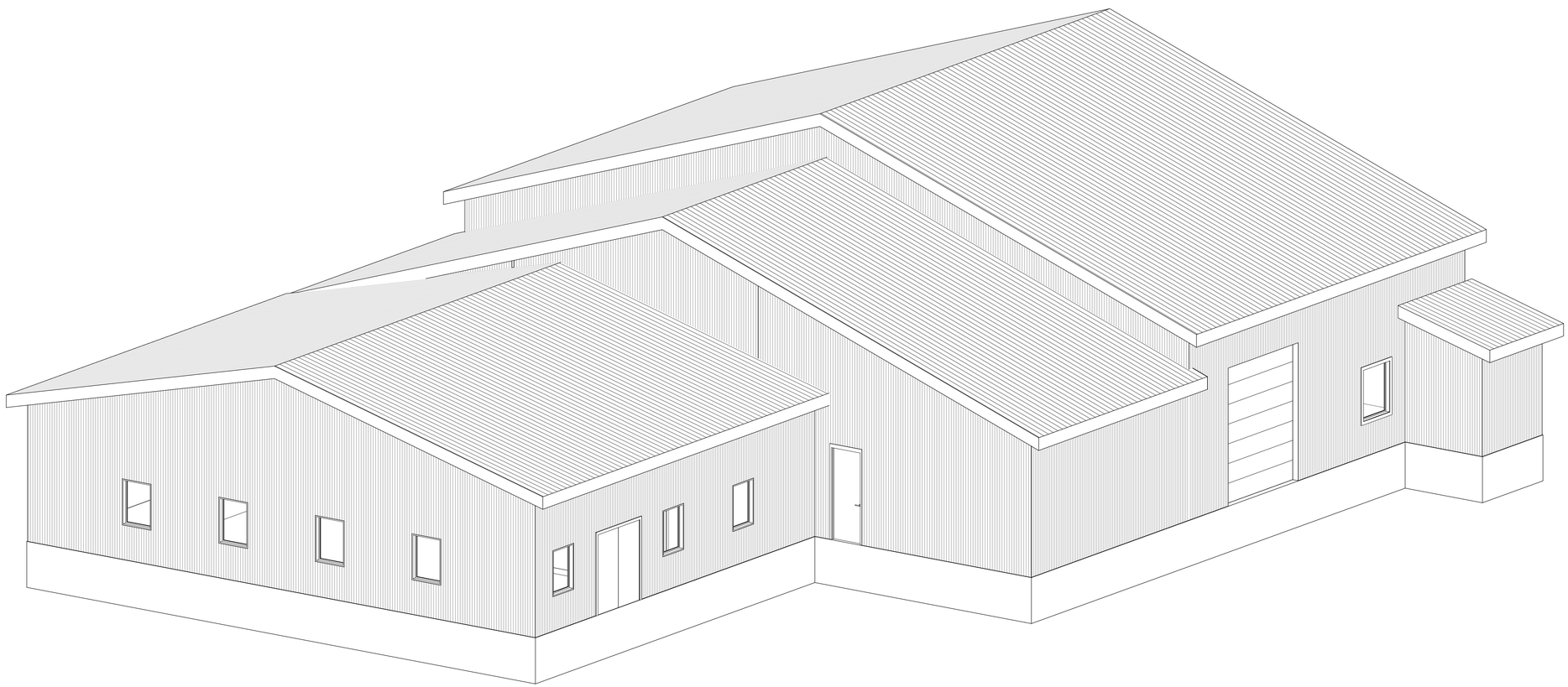
0 0.0425 0.085 0.17 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

WEST FULTON FIRE DEPARTMENT
SCHOHARIE COUNTY, NY
SCHEMATIC DESIGN
SEPTEMBER 8, 2017



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SCALE:
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

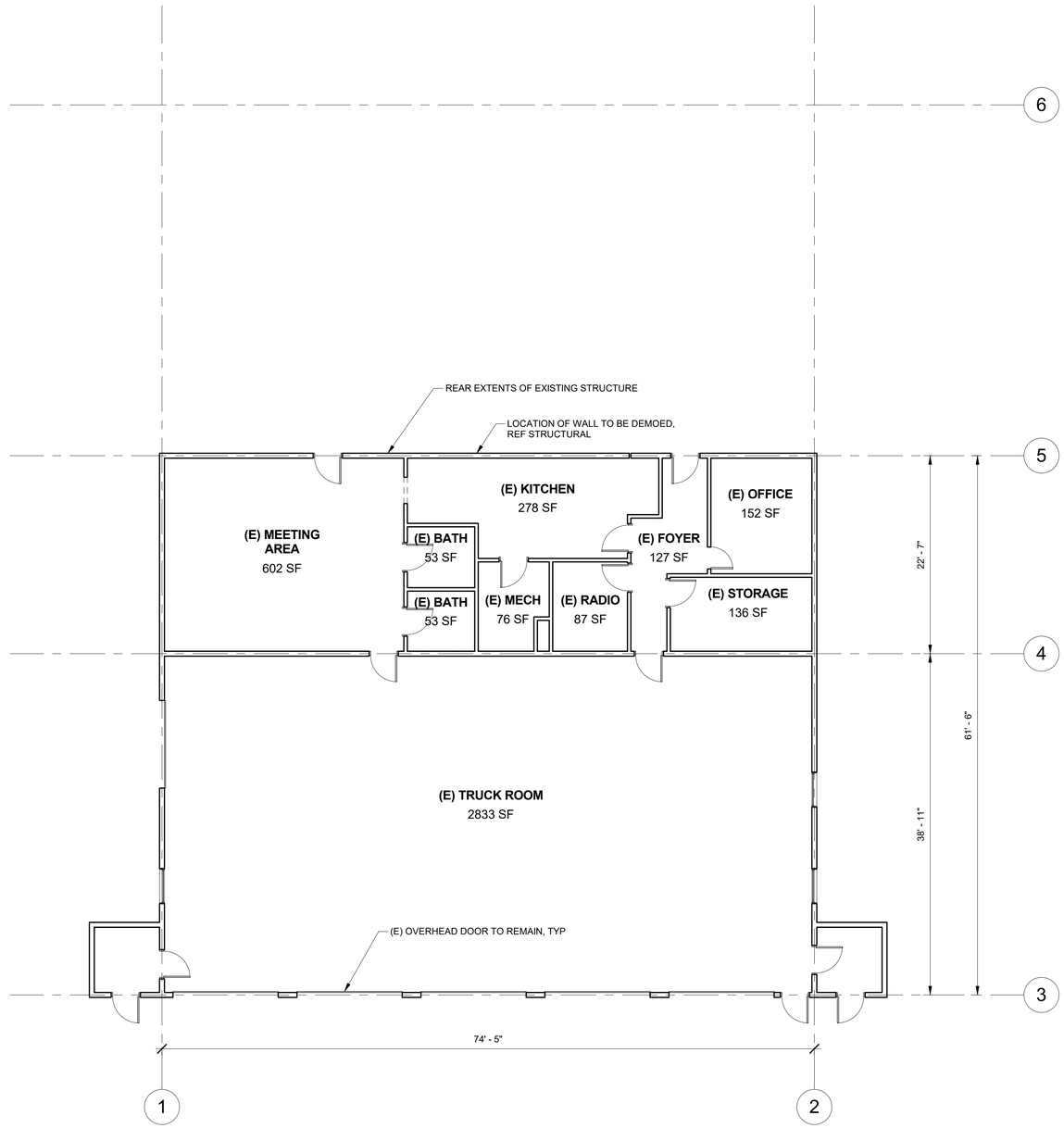
REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

COVER

SHEET:
COVER



1 / A1 Existing Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

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REVISIONS

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West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Existing Floor Plan

SHEET:
A1

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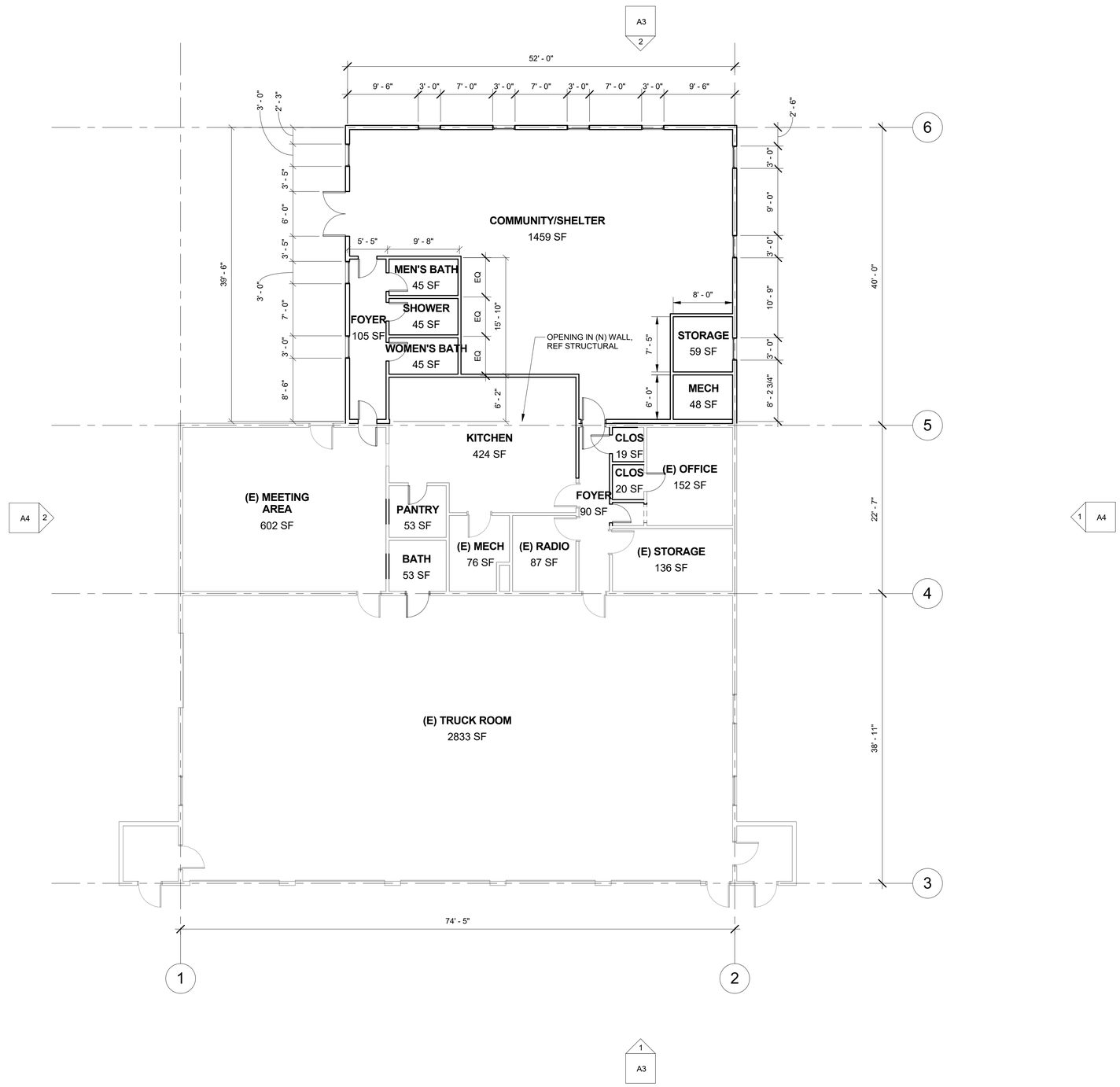

1 / A2 Proposed Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/8" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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REVISIONS

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West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Proposed Floor Plan

SHEET: A2

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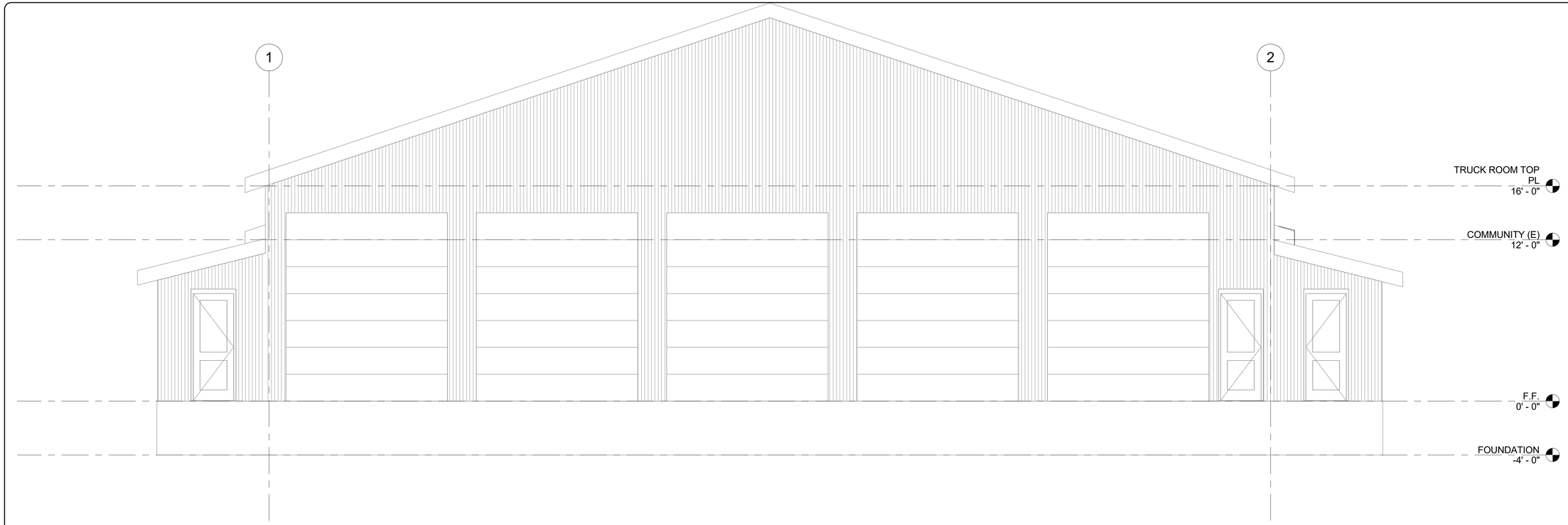
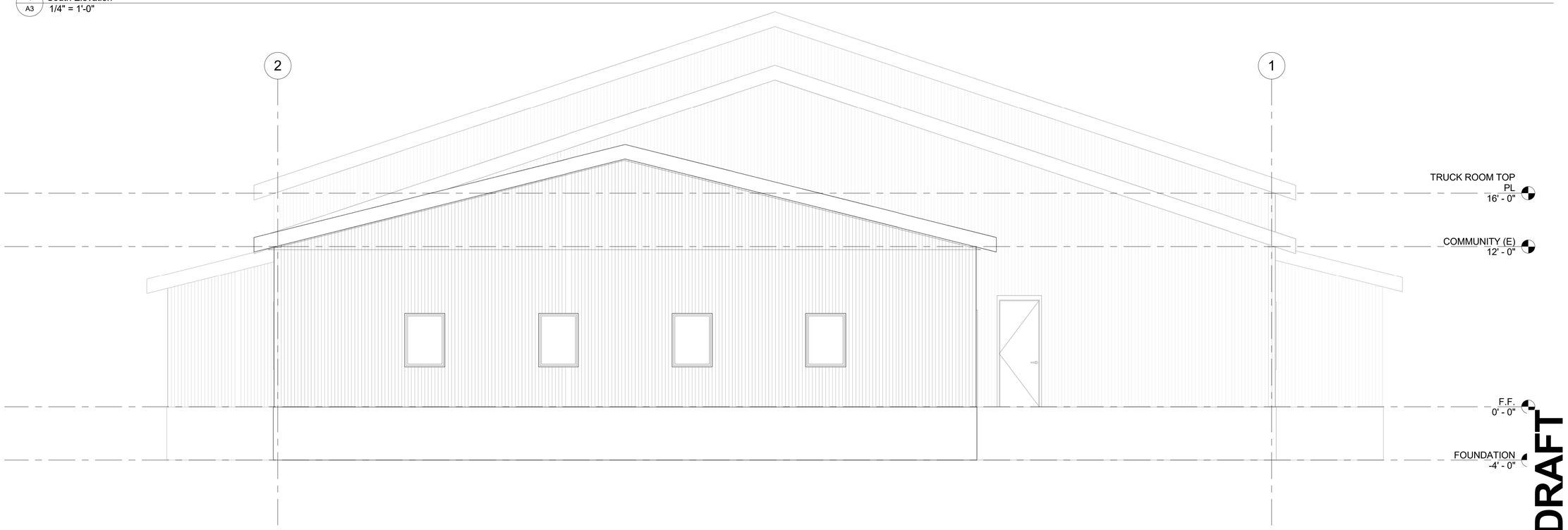


1 / A3 South Elevation
1/4" = 1'-0"



2 / A3 North Elevation
1/4" = 1'-0"

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REVISIONS

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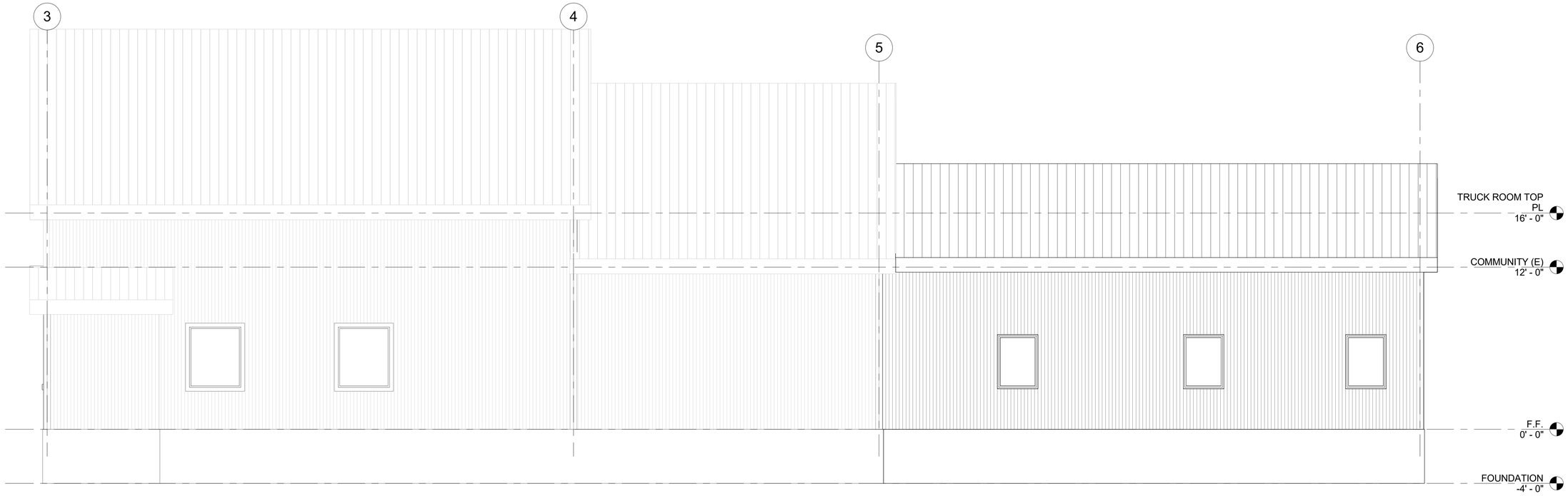
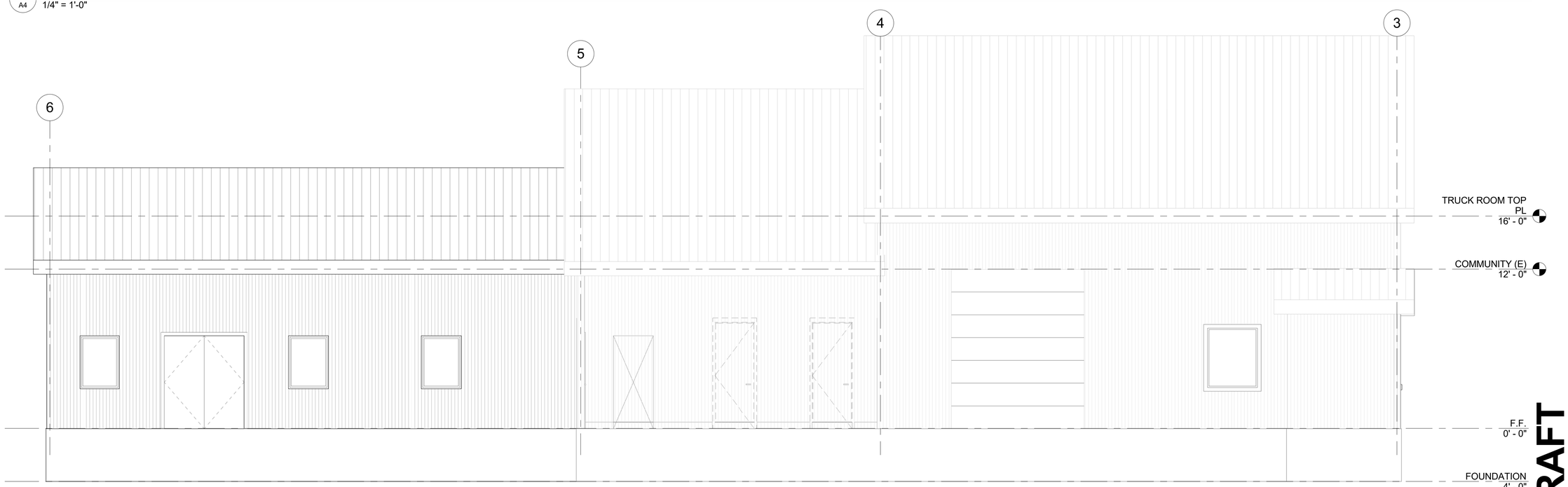
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A3



1 / A4 East Elevation
1/4" = 1'-0"



2 / A4 West Elevation
1/4" = 1'-0"

DRAFT

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8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A4

PROJECT DESCRIPTION:
1. ADDITION TO EXISTING SINGLE-STORY FIRE HOUSE
2. EXISTING BUILDING CONSISTS OF WOOD FRAMED CONSTRUCTION
3. ADDITION CONSISTS OF CONVENTIONAL WOOD FRAMED CONSTRUCTION
4. CONVENTIONAL SHALLOW FOUNDATIONS
5. CONCRETE SLAB-ON-GRADE
6. WOOD 2X STUD WALLS SHEATHED WITH PLYWOOD FOR LATERAL SYSTEM
7. PRE-ENGINEERED ROOF TRUSSES

GENERAL:
1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
4. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:
1. CONFORM TO 2015 INTERNATIONAL BUILDING CODE (IBC)
2. ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:
1. THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
2. CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:
1. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:
1. DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

DESIGN CRITERIA		
GEOTECHNICAL DESIGN CRITERIA		
DESIGN BASED ON GEOTECHNICAL REPORT BY:	XXXXXX, INC PROJECT NO.: XXXXXXX	
ALLOWABLE SOIL BEARING PRESSURE	2,500 PSF + 50% INCREASE FOR WIND OR SEISMIC LOADS	
SNOW DESIGN CRITERIA		
DESIGN ROOF SNOW LOAD	45 PSF MINIMUM	
SNOW DRIFT	AS SHOWN ON PLANS	
GROUND SNOW LOAD	P_g = 53 PSF	
FLAT ROOF SNOW LOAD	P_f = 45 PSF	
EXPOSURE FACTOR	C_e = 1.0 (PARTIAL EXPOSED)	
IMPORTANCE FACTOR	I_S = 1.20	
THERMAL FACTOR	C_t = 1.0	
WIND DESIGN CRITERIA		
MAIN WIND FORCE RESISTING SYSTEM	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDING	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	C	
GUST/INTERNAL PRESSURE	GC_{pi} = +/- 0.18	
SEISMIC DESIGN CRITERIA		
RISK CATEGORY	IV	
SITE CLASS	D (DEFAULT W/OUT GEOTECH REPORT)	
IMPORTANCE FACTOR	I_e = 1.25	
SEISMIC DESIGN CATEGORY	C	
MCE SPECTRAL ACCELERATIONS	S_S = 0.107	S_1 = 0.067
SITE COEFFICIENTS	F_a = 1.2	F_V = 1.7
DESIGN SPECTRAL ACCELERATIONS	S_{DS} = 0.181	S_{D1} = 0.107
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-10 SECTION 12.8	
	NORTH-SOUTH DIRECTION	EAST-WEST DIRECTION
SEISMIC LOAD RESISTING SYSTEM	LIGHT FRAMED WOOD SHEAR WALLS	LIGHT FRAMED WOOD SHEAR WALLS
RESPONSE MODIFICATION FACTOR	R = 6.5	R = 6.5
SEISMIC RESPONSE COEFFICIENT	C_S = 0.042	C_S = 0.042
REDUNDANCY FACTOR	ρ = 1.0	ρ = 1.0
DESIGN INELASTIC STORY DRIFT	Δ = XX INCHES	Δ = XX INCHES

STRUCTURAL OBSERVATION:
1. THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS		
CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
AT COMPLETION OF WOOD SHEAR WALLS	X	REF FOOTNOTE A, B
AT COMPLETION OF HORIZONTAL ROOF DIAPHRAGM	X	REF FOOTNOTE A, B
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

A. STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.
B. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.
C. STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

FOUNDATIONS:
1. FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL, AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
2. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW FINAL GRADES.
3. ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE PROJECT GEOTECHNICAL REPORT.
4. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITEWORK.
5. STRUCTURAL FILL MATERIALS, PLACEMENT, AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
6. BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS.
7. PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN UNDER THE GUIDANCE OF THE GEOTECHNICAL ENGINEER. MINIMUM TESTING FREQUENCY SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
9. ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
10. ALL FILL, BACKFILL AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL ENGINEER.

SPECIAL INSPECTION AND TESTING:
1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S0.03. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
HOLDOWN ANCHOR BOLT LAYOUT	X		
EMBEDDED STEEL ITEMS	X		
SLAB-ON-GRADE CONTROL JOINT LAYOUT	X		
STRUCTURAL STEEL MILL CERTS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL DECKING	X		
STEEL FASTENERS	X		
GLUED LAMINATED MEMBERS	X		
PREMANUFACTURED WOOD JOISTS	X	X	
PREMANUFACTURED WOOD TRUSSES	X	X	
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"

A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER "DESIGN CRITERIA."
C. THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
D. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:
1. ALL CONCRETE WORK SHALL CONFORM TO "ACI 318--BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
2. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS FOLLOWS:

CONCRETE STRENGTHS				
DESCRIPTION	f'c (PSI)	WATER - CEMENT RATIO BY WEIGHT	ENTRAINED AIR	OTHER
FOOTINGS, STEMWALLS	3,000	0.53	2% +/- 1.5%	
RETAINING WALLS	3,000	0.50	6% +/- 1.5%	
EXTERIOR SLAB-ON-GRADE	3,000	0.48	6% +/- 1.5%	
COLUMNS, BEAMS	4,000	0.45		
INTERIOR SLAB-ON-GRADE	4,000	0.48		

NOTES:
A. VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
B. CONCRETE MIXES SHALL BE NORMAL WEIGHT AND CONTAIN PORTLAND CEMENT CONFORMING TO ASTM C150 FOR TYPE I, OR TYPE II.
C. AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260.
D. COLUMNS THAT ARE AN INTEGRAL PART OF A WALL SHALL HAVE CONCRETE STRENGTH AS REQUIRED FOR COLUMNS.

3. MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:

MINIMUM CEMENT CONTENT	
f'c (PSI)	MINIMUM CEMENT CONTENT PER CUBIC YARD
3,000	470 LBS.
4,000	550 LBS.
5,000	630 LBS.

NOTES:
A. FLYASH CONFORMING TO ASTM C618 "TYPE F," OR "TYPE C" MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

4. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
5. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
6. A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 "TYPE F, OR TYPE "G" MAY BE USED IN CONCRETE MIXES PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
7. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
8. SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
9. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 10'-0" ON-CENTER EACH WAY FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
10. ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
11. ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET, OR WET SET.
12. ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
13. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
14. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
15. PREPARATION, CONSTRUCTION AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 5.12, 5.13 AND ACI 306R AND 305R.

SHORING AND RE-SHORING:
1. SHORING AND RE-SHORING IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.
2. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FARENHEIT SURROUNDING TEMPERATURE.	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

EPOXY REPAIR ADHESIVE:
1. EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.
2. ADHESIVE SHALL HAVE A MINIMUM SLANT SHEAR STRENGTH OF 5,000 PSI AND A MINIMUM TENSILE STRENGTH OF 4,000 PSI.
3. HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.
4. REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

REINFORCING STEEL:
1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO "ACI 318—BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND "ACI 315—MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
2. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
   A. SMOOTH WELDED WIRE FABRIC—ASTM A185
   B. CONCRETE COLUMN VERTICAL REINFORCEMENT—ASTM A706, GRADE 60
   C. ALL OTHER REINFORCEMENT—ASTM A615, GRADE 60
3. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.
4. REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE "CRSI MANUAL OF STANDARD PRACTICE," MSP-1.
5. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.
6. REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. "WET SETTING" OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.
8. ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.
9. THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

TYPICAL LAP SPLICE SCHEDULE (IN)						
BAR SIZE	3,000 PSI		4,000 PSI		5,000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17
#4	37	29	32	25	29	22
#5	47	36	40	31	36	28
#6	56	43	48	37	43	33
#7	81	63	70	54	63	49
#8	93	72	80	62	72	55
#9	105	81	91	70	81	63
#10	118	91	102	79	91	70
#11	131	101	113	87	101	78

NOTES:
A. FOR CENTER-TO-CENTER SPACING LESS THAN FOUR TIMES THE BAR DIAMETER, MULTIPLY THE ABOVE VALUES BY A FACTOR OF 1.4.
B. TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.
C. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
D. VALUES ARE FOR UNCOATED BARS.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)	
USE	COVER
COLUMN BARS	1-1/2" COVER TO TIES
SLAB-ON-GRADE BARS	1-1/2" COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

MINIMUM CONCRETE COVER (PRE-CAST)	
USE	COVER
COLUMN BARS	1" TO TIES

11. CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.
12. PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING WITH A MINIMUM 6" EMBEDMENT BELOW THE TOP OF FOOTING.
13. AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2'-0") PAST THE OPENING ON ALL SIDES.
14. PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4'-0" LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.
15. REFERENCE TYPICAL DETAILS FOR THE DISPOSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.
16. PROVIDE #5 CARRIER BAR AT 3'-0" MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.
17. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCMENT ON EACH LEG.

CONCRETE ACCESSORIES:
1. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON TYPE D2L (ICC ESR-2907) OR APPROVED EQUAL.
2. HEADED SHEAR STUDS SHALL BE NELSON HEADED ANCHORS WITH FLUXED ENDS (ICC ESR-2856) OR APPROVED EQUAL.
3. HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AUTOMATICALLY END-WELDED WITH THE MANUFACTURER'S STANDARD EQUIPMENT AND IN ACCORDANCE WITH THE ASSOCIATED ICC REPORTS.
4. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. EMBEDDED ITEMS SHALL NOT BE LOADED, NOR SHALL WELDS BE APPLIED, FOR A MINIMUM OF 7-DAYS AFTER CASTING OF CONCRETE.
5. APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

APPROVED POST-INSTALLED CONCRETE ANCHORS		
TYPE	ANCHOR	ICC REPORT
CONCRETE SCREW	SIMPSON TITEN HD	ICC ESR-2713
	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY ADHESIVE	SIMPSON AT-XP	ICC ESR-2508
	HILTI HIT-RE 500SD	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3037
	HILTI KWIK BOLT TZ	ICC ESR-1917

NOTES:
A. ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.
B. REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.
C. ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL, OR HOT-DIPPED GALVANIZED.

DRAFT

WARNING -- IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

DATE: 7/11/2017
DRAWN BY: AH
SCALE: 12" = 1'-0"
REVIEWED BY: AH
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S1

SAWN FRAMING LUMBER:

1. SAWN LUMBER SHALL CONFORM TO THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR THE WESTERN WOODS PRODUCTS ASSOCIATION (WWPA) GRADING RULES.
2. ALL LUMBER SHALL BE THE SPECIES AND GRADES AS FOLLOWS:

SAWN LUMBER		
USE	SPECIES/GRADE	Fb (PSI)--BASE VALUE
LUMBER 2" TO 4" THICK	DOUGLAS FIR-LARCH NO.2	900
BEAMS 5"x5" AND GREATER	DOUGLAS FIR-LARCH NO.1	1350
POSTS	DOUGLAS FIR-LARCH NO.1	1200

3. ALL DIMENSIONAL LUMBER AND TIMBERS SHALL BE KILN DRIED AND CERTIFIED IN WRITING BY THE SUPPLIER TO BE LESS THAN 19% MOISTURE CONTENT.
4. ALL LUMBER IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED (PT) PER THE AMERICAN WOOD PRESERVERS BUREAU (AWPB) UNLESS AN APPROVED MOISTURE BARRIER IS PROVIDED. ALL PT LUMBER SHALL BEAR THE AWPB QUALITY MARK.
5. CUTTING AND NOTCHING OF JOISTS AND STUDS SHALL CONFORM TO IBC SECTIONS 2308.8.2, 2308.9.10, 2308.10.4.2 AND THE LIMITATIONS AS NOTED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE SOLID LINES OF BLOCKING, SAME DEPTH OF FRAMING MEMBER, AT ALL BEARING POINTS.
7. JOIST BRIDGING SHALL BE REQUIRED WHERE JOISTS HAVE A DEPTH-TO THICKNESS RATIO GREATER THAN 5-TO-1 AND WHERE ONE EDGE IS UNSUPPORTED. JOIST BRIDGING SHALL BE SPACED AT 8'-0" ON CENTER MAXIMUM.

WOOD STRUCTURAL PANEL SHEATHING:

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE "U.S. PRODUCT STANDARD PS 1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD," THE "U.S. PRODUCT STANDARD PS 2 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL USE PANELS," OR THE "APA PRP-108 PERFORMANCE STANDARDS."
2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING AS FOLLOWS:

WOOD STRUCTURAL PANEL SHEATHING	
USE	THICKNESS/RATING
ROOF SHEATHING	5/8"-INDEX 40/20
WALL SHEATHING	15/32"-INDEX 32/16

3. ALL ROOF SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS SHALL BE STAGGERED.
4. ROOF SHEATHING SHALL BE BLOCKED, OR HAVE EDGES SUPPORTED BY PLYCLIPS.
5. SHEAR WALL SHEATHING SHALL BE PLYWOOD OR ORIENTED STRAND BOARD (OSB) PANELS CONFORMING TO THE REQUIREMENTS FOR ITS TYPE SPECIFIED IN DOC PS1 OR PS2.
6. SHEAR WALL SHEATHING SHALL BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY AND BE BLOCKED AT ALL PANEL EDGES. SHEET SIZES SHALL BE 4'X8' UNLESS AT BOUNDARIES OR FRAMING CHANGES. REFERENCE PLANS FOR ADDITIONAL REQUIREMENTS.

NAILING AND FASTENERS:

1. ALL FRAMING NAILS SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS AND CONFORM TO THE "STANDARD SPECIFICATION OF DRIVEN FASTENERS: NAILS, SPIKES, AND STAPLES" (ASTM F1667) AND "POWER-DRIVEN STAPLES AND NAILS FOR USE
2. NAILING NOT SHOWN SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.9.1, OR NER-272.
3. NAILS SHALL BE IDENTIFIED BY LABELS ATTACHED TO THEIR CONTAINERS, THAT SHOW THE MANUFACTURER'S NAME, NAIL SHANK DIAMETER, AND LENGTH.
4. NAIL SIZES SHALL BE AS FOLLOWS:

FRAMING NAILS		
NAIL TYPE	SHANK DIAMETER (IN)	MINIMUM PENETRATION INTO FRAMING MEMBER (IN)
6d	0.113	1.25
8d	0.131	1.50
10d	0.148	1.625
12d	0.148	1.625
16d	0.148	1.625

5. UNLESS OTHERWISE NOTED ON PLANS, PLYWOOD SHEATHING SHALL BE ATTACHED TO THE FRAMING SUPPORTS AS FOLLOWS:

SHEATHING NAILING		
USE	PANEL EDGES	INTERMEDIATE FRAMING MEMBERS
ROOF SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC
WALL SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC

NOTES:

A. ALL NAILS SHALL BE COMMON NAILS EXCEPT RING SHANKS SHALL BE USED FOR FASTENING ROOF SHEATHING.

6. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS. ALL A307 BOLTS SHALL HAVE CUT THREADS.
7. PRE-DRILL HOLES FOR LAG BOLTS. SOAP THREADS OF LAGS IMMEDIATELY PRIOR TO INSTALLATION.
8. JOIST HANGERS, HOLDOWNS, AND OTHER FRAMING ACESSORIES SHALL BE MANUFACTURED BY SIMPSON STRONG TIE (OR AN APPROVED EQUAL) AND BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HARDWARE FASTENERS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURER'S REQUIREMENTS. ANY PRODUCT SUBSTITUTIONS TO SIMPSON SHALL MEET OR EXCEED SIMPSON'S PUBLISHED DESIGN CAPACITIES AND MUST HAVE A CURRENT ICC EVALUATION REPORT FOR THE APPLICABLE CODES.
9. HANGERS NOT SHOWN SHALL BE SIMPSON U-TYPE, OR B-TYPE OF THE SIZE RECOMMENDED FOR THE SPECIFIC FRAMING MEMBER SHOWN ON PLAN.
10. FASTENERS IN CONTACT WITH PRESERVATIVE TREATED, OR FIRE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.
11. SILLS AT WALLS SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS DETAILED OTHERWISE. WASHERS TO BE MINIMUM 1/4"x3"x3" AS PER IBC 2305.3.11.
12. ALL SILL PLATES AND LEDGERS SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE.

GLUED LAMINATED MEMBERS:

1. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH THE "AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER" (ANSI A190.1), OR OTHER CODE-APPROVED DESIGN, MANUFACTURING AND QUALITY ASSURANCE PROCEEDURES.
2. ADHESIVE SHALL BE WET-USE EXTERIOR WATERPROOF GLUE.
3. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS INDENTIFICATION MARK OR BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE.
4. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER THE SHOP OR FIELD.
5. NOTCHING AND/OR BORING OF GLUED LAMINATED MEMBERS (EITHER IN THE SHOP, OR FIELD) IS STRICTLY PROHIBITED UNLESS AS SPECIFICALLY DETAILED IN THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
6. GLUED LAMINATED TIMBER BEAMS SHALL BE WESTERN SPECIES WITH THE FOLLOWING STRENGTH PROPERTIES:

GLUED LAMINATED TIMBER BEAMS				
COMBINATION SYMBOL (SPECIES)	USE	MODULUS OF ELASTICITY (PSI)	FLEXURAL STRESS (PSI)	HORIZONTAL SHEAR STRESS (PSI)
24F-V4 (DF/DF)	SIMPLE SPAN	1,800,000	2,400	265
24F-V8 (DF/DF)	CANTILEVERED OR CONTINUOUS	1,800,000	2,400	265

7. UNEXPOSED GLULAM MEMBERS SHALL BE FRAMING APPEARANCE GRADE. EXPOSED GLULAM MEMBERS SHALL BE ARCHITECTURAL APPEARANCE GRADE.
8. GLULAM MEMBERS NOTED AS "FRR" (FIRE RESISTANCE RATED) SHALL BE LAYED UP WITH ADDITIONAL TENSION LAMINATION(S) AS REQUIRED TO MEET 1 HOUR FIRE RESISTANCE RATING PER IBC 722.6.3.4. THE QUALITY STAMP ON "FRR" BEAMS SHALL INDICATE THAT THE MANUFACTURER HAS MADE THE REQUIRED LAYUP MODIFICATIONS.

ENGINEERED COMPOSITE LUMBER:

1. ENGINEERED COMPOSITE WOOD PRODUCTS SUCH AS LAMINATED VENEER LUMBER (LVL), PARALLEL STRAND LUMBER (PSL), AND LAMINATED STRAND LUMBER (LSL) SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS, MANUFACTURED BY TRUS-JOIST OR AN APPROVED EQUAL.
2. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM DESIGN PROPERTIES:

ENGINEERED COMPOSITE LUMBER		
COMPOSITE LUMBER TYPE	MODULUS OF ELASTICITY (PSI)	ALLOWABLE FLEXURAL STRESS (PSI)
LSL	1,500,000	2,350
LVL	1,900,000	2,600

NOTE:
FLEXURAL STRESSES NOTED ABOVE ARE FOR 12" DEEP MEMBERS. DEEPER MEMBERS SHALL BE DESIGNED FOR REDUCED STRESSES PER THE MANUFACTURER'S REQUIREMENTS.

ANCHOR BOLTS:

1. ANCHOR BOLTS FROM SILL PLATES TO FOUNDATION SHALL BE GALVANIZED.
2. ALL ANCHOR BOLTS SHALL HAVE A GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND NUT.
3. ANCHOR BOLTS SHALL BE PLACED SO THAT PLATE WASHER IS NO MORE THAN 1/2" FROM THE SHEATHED FACE OF THE SHEARWALL. FOR THE CONDITION WHERE SHEATHING IS APPLIED TO BOTH SIDES OF SHEARWALL, ALTERNATE ANCHOR BOLTS.
4. ANCHOR BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION (SIMILAR IF ALTERNATE ANCHORAGE IS SELECTED):
   A. ANCHOR BOLT MATERIAL TYPE
   B. ANCHOR BOLT SIZE
   C. OVERALL ANCHOR BOLT LENGTH
   D. ANCHOR BOLT EMBEDMENT
   E. ANCHOR BOLT PROJECTION (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR FIELD TOLERANCES)
   F. ANCHOR BOLT SPACING
   G. DIMENSIONS ANCHOR BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL ANCHOR BOLTS
   H. PLATE WASHER TYPE AND LOCATIONS
   I. SILL PLATE LENGTHS AND SPLICE LOCATIONS
6. SILLS AT WALL SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
7. ALL SILL PLATES SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
8. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL.

HOLDOWN ANCHOR BOLTS:

1. ALL HOLDOWN BOLTS AT SHEAR WALLS TO FOUNDATION SHALL NOT BE IN CONTACT W/ PRESERVATIVE TREATED (PT) WOOD. PT WOOD PLATES SHALL HAVE OVERSIZED HOLES 1/4" MIN & 3/8" MAX LARGER THAN BOLT SIZE. AS AN ALTERNATIVE, THE ANCHOR MAY BE SLEEVED WITH AN INSULATOR BUSHING OR GALVANIZED IN ACCORDANCE W/ ASTM A653.
2. HOLDOWN BOLTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
3. HOLDOWN BOLTS SHALL BE PLACED A MINIMUM OF 5" FROM THE END OF CONCRETE STEMWALLS. ADD ADDITIONAL 2x STUD AS REQUIRED.
4. SEE HOLDOWN SCHEDULE AND DETAILS ON SHEET S8.00 FOR TYPICAL HOLDOWN INSTALLATION REQUIREMENTS.
5. HOLDOWN BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
6. HOLDOWN BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL, THREADED ON BOTH ENDS UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION:
   A. HOLDOWN BOLT MATERIAL TYPE
   B. HOLDOWN BOLT SIZE
   C. OVERALL HOLDOWN BOLT LENGTH
   D. HOLDOWN BOLT EMBEDMENT INTO FOOTING
   E. HOLDOWN BOLT PROJECTION FOR HOLDOWN TYPE (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR A MINIMUM OF 2" FIELD TOLERANCE)
   F. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL HOLDOWN BOLTS
   G. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION, SIZE, TYPE, AND QUANTITY OF HOLDOWN POST OR BUILT-UP MEMBER
   H. HOLDOWN TYPE
   I. ALL ACCESSORIES (INCLUDING PLATE WASHERS, DOUBLE NUTS, ETC.) AND LOCATIONS

PREMANUFACTURED WOOD TRUSSES:

1. DESIGN OF THE PREMANUFACTURED WOOD ROOF TRUSS SYSTEM SHALL BE THE CONTRACTORS RESPONSIBILITY.
2. DESIGN SHALL CONFORM TO THE PROFILES SHOWN ON THE DRAWINGS AND THE REQUIREMENTS OF IBC SECTION 2303.4 AND THE "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES", TPI-24 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE.
3. THE DESIGNER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS TO THE STRUCTURE REQUIRED TO TRANSFER DESIGN LOADS INTO THE STRUCTURAL SYSTEM OF THE BUILDING.
4. MANUFACTURER SHALL DESIGN AND FURNISH ALL WOOD FRAMING CONNECTIONS NECESSARY TO TRANSMIT DESIGN LOADS, INCLUDING SEISMIC AND WIND LOADS, TO THE BEARING AND SHEAR WALL SUPPORTS.
5. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS SHOWING LAYOUT AND ANY DETAILING NECESSARY FOR DETERMINING FIT AND PLACEMENT IN THE STRUCTURE.
6. METAL PLATE CONNECTED TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS AND ANY SNOW DRIFTING/SLIDING SNOW INDICATED ON DRAWINGS:

PREMANUFACTURED WOOD TRUSS LOADING	
LOADING TYPE	UNIFORMLY DISTRIBUTED LOAD (PSF)
ROOF LIVE LOAD	20
ROOF SNOW LOAD	25
ROOF DEAD LOAD	TOP CHORD: 14
	BOTTOM CHORD: 9.5

WIND UPLIFT (PSF)	
FIELD	57
PERIMETER	89
CORNER	121

NOTES:

1. WIND UPLIFT PRESSURES SHOWN ABOVE DO NOT INCLUDE ROOF DEAD LOAD.
2. WIND UPLIFT PRESSURES SHOWN ABOVE ARE UNFACTORED.

7. CONTRACTOR TO VERIFY ALL WEIGHTS AND LOCATIONS OF CONCENTRATED LOADS DUE TO ROOF TOP MECHANICAL UNITS, MECHANICAL PIPING, ELECTRICAL UNITS, FOLDING PARTITIONS AND OTHER CONCENTRATED LOADS PRIOR TO TRUSS FABRICATION.
8. TRUSS MANUFACTURER SHALL DESIGN ALL DRAG TRUSSES AND DRAG STRUTS FOR THE FOLLOWING:
   A. SHEAR LOADS AS INDICATED ON THE PLANS AND NOTES.
   B. DRAG TRUSSES TO COLLECT LOAD ALONG THE TOP CHORD AND TRANSFER TO THE BOTTOM CHORD THROUGH WEB MEMBERS.
   C. ALL TOP AND BOTTOM CHORDS TO HAVE CAPACITY OF TRANSFERING SHEAR LOADS THROUGH SPLICES.
9. THE TRUSS MANUFACTURER SHALL SUBMIT DESIGNS, SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED FOR REVIEW AND APPROVAL.
10. DEFLECTION OF MEMBERS DUE TO DESIGN LOADS SHALL NOT EXCEED THE FOLLOWING (UNLESS NOTED OTHERWISE):
    ROOFS: LIVE LOAD - 1/360 OF SPAN, TOTAL LOAD - 1/240 OF SPAN
11. DESIGN, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE THE FOLLOWING INFORMATION:
    A. DEFLECTION DESIGN CRITERIA
    B. LIVE, SNOW, DEAD, WIND, SEISMIC AND MECHANICAL DESIGN LOADS
    C. ERECTION AND PLACEMENT CRITERIA
    D. DETAILS OF ALL BRIDGING, BRACING, STIFFENERS, BLOCKING AND CONNECTIONS
    E. LOCATION AND FRAMING FOR ALL EQUIPMENT LOADS OVER 500 LBS
    F. LOCATION AND FRAMING FOR ALL SUSPENDED WALLS AND EQUIPMENT
12. LOWER CHORDS SHALL BE CAMBERED TO PROVIDE FOR LONG-TERM DEAD LOAD DEFLECTION AT GYPSUM BOARD CEILINGS.
13. DO NOT NOTCH OR DRILL TRUSS MEMBERS WITH OUT APPROVAL OF THE TRUSS MANUFACTURER AND THEIR ENGINEER.

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PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S2

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER

TABLE 5

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X (a)	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

TABLE 6

REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SEISMIC CATEGORIES C, D, E, F)

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
STRUCTURAL WOOD					
CONNECTIONS FOR DIAPHRAGM CHORDS, COLLECTORS, BRACING, AND SHEAR WALL ANCHORAGE AND HOLDOWNS				X	ALL CONNECTIONS VISUALLY INSPECTED
FASTENING OF DIAPHRAGM AND SHEAR WALL SHEATHING WITH EDGE NAILING ≤4"				X	SPECIAL INSPECTION IS NOT REQUIRED WHEN FASTENER SPACING IS GREATER THAN 4" ON CENTER FOR WOOD SHEAR WALLS, DIAPHRAGMS, NAILING, BUILDING AND OTHER COMPONENTS IN THE SEISMIC FORCE-RESISTING SYSTEM.
ARCHITECTURAL COMPONENTS					
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.11	ASCE 7-10 Section 13.5.6		X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.11.5			X (a)	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.11.6			X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	
PROCESS MECHANICAL COMPONENTS					
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1909.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
WOOD					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
PREFABRICATED WOOD SHEAR PANELS	1705.5 1704.2.5	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO HOLDOWN ANCHOR SIZE AND PLACEMENT, INCLUDING EMBEDMENT LENGTH, SPACING, AND EDGE DISTANCE

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REVISIONS

NO.	DATE	DESCRIPTION

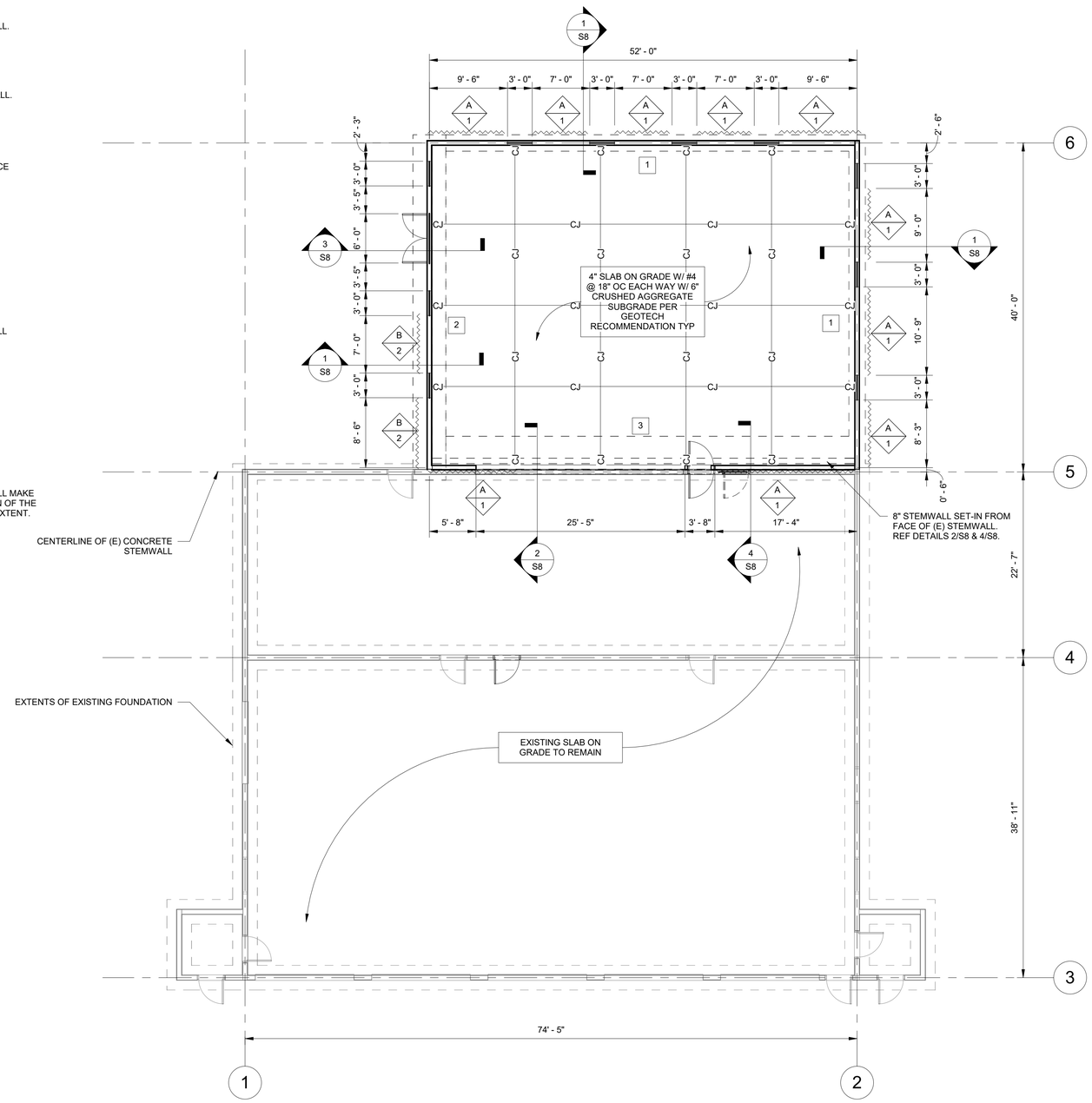
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Special Inspection

SHEET: S3

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S4 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

B. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOILS UNLESS SPECIFIED OTHERWISE IN THE STRUCTURAL DETAIL OR SPECIFIED IN THE GEOTECHNICAL REPORT.

C. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION FOR NEW FOUNDATION SYSTEM.

D. UNDER-SLAB VAPOR BARRIER AND FOUNDATION DRAINAGE SHALL BE PROVIDED AS SPECIFIED IN THE GEOTECHNICAL REPORT AS WELL AS THE GOVERNING BUILDING CODE (IBC).

E. CONTROL JOINTS SHALL BE PROVIDED AS INDICATED ON THE FOUNDATION PLAN. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT MAXIMUM SPACING AS SPECIFIED ON SHEET S1 IF THE PROVIDED LAYOUT INDICATES LARGER SPACING.

F. ALL ELEVATIONS TO FINISHED FLOORS (TOP OF SLAB) SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

G. ALL BOTTOM OF (N) FOOTING ELEVATIONS SHALL BE 4'-0" BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED.

Structural Foundation Schedule				
Type Mark	Width	Foundation Thickness	Longitudinal Reinforcement	Transverse Reinforcement
1	2' - 0"	1' - 0"	(3) #4, BOTTOM	#4@18" OC, BOTTOM
2	4' - 0"	2' - 0"	(5) #4, TOP & BOTTOM	#4@18" OC, TOP & BOTTOM
3	4' - 0"	1' - 0"	(5) #4, BOTTOM	#4@18" OC, TOP & BOTTOM

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS					
MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
2	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 2 / S7 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTICAL ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

WOOD SHEAR WALL SCHEDULE					
WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

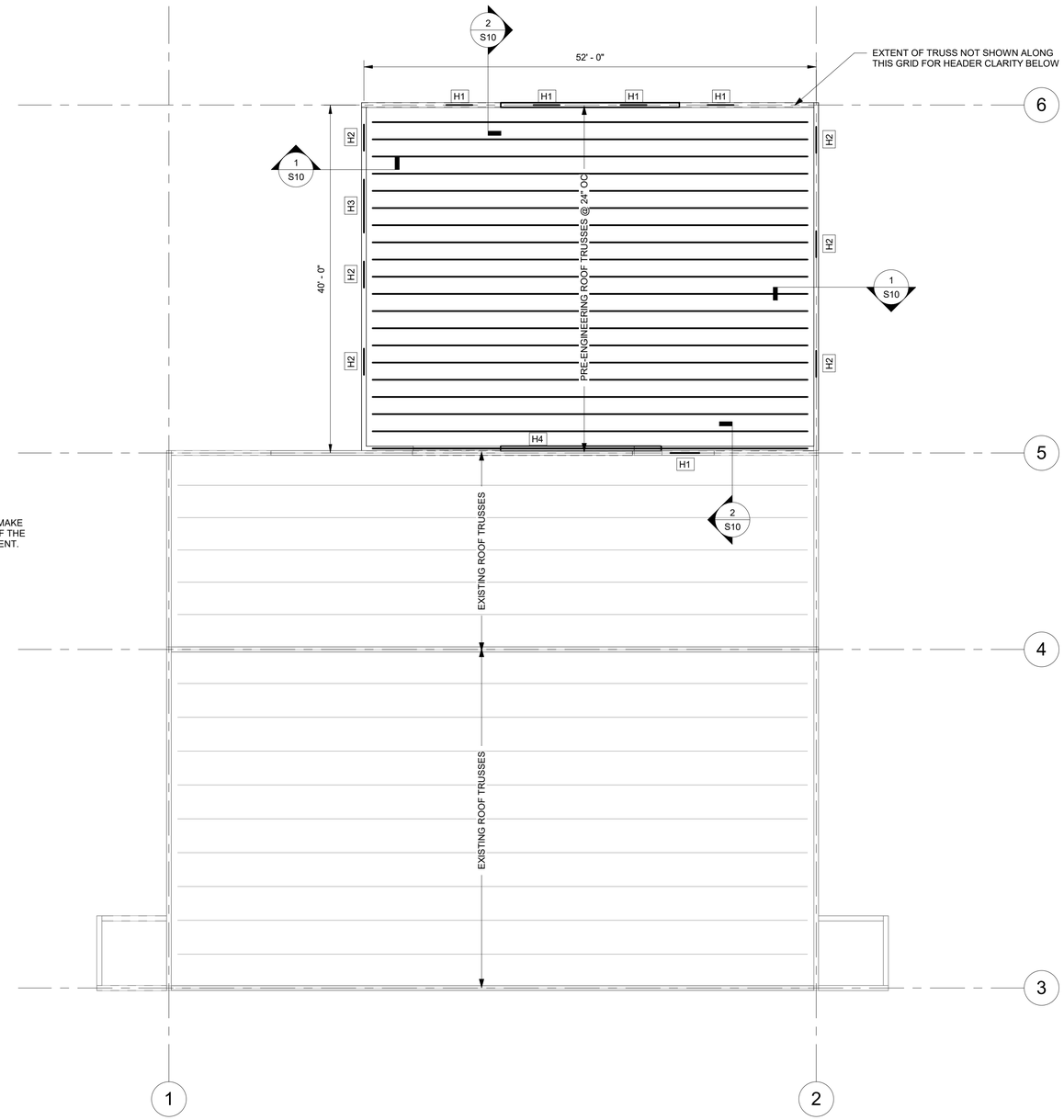
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Foundation Plan

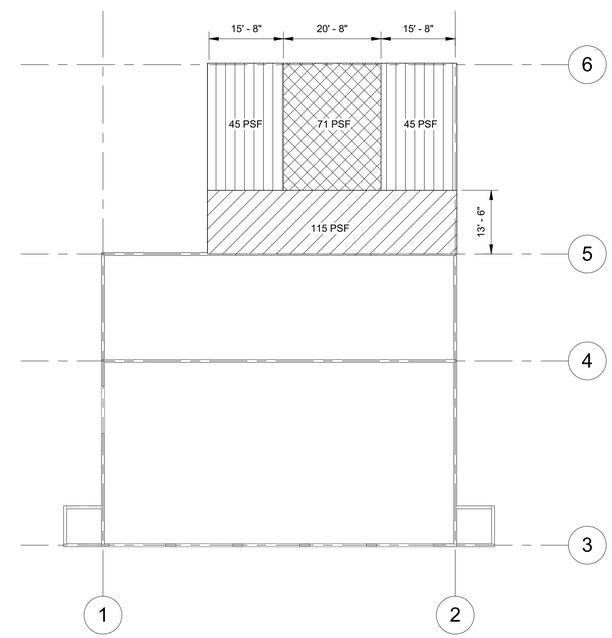
SHEET: S4

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- H- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- DX INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- XX PSF / XX'-XX" INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S6 ROOF FRAMING PLAN
1/8" = 1'-0"



2 / S6 SNOW DRIFT PLAN
1/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

B. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION OF ROOF STRUCTURE.

C. ROOF SHEATHING SHALL BE PROVIDED AS SPECIFIED ON SHEET S1, TYPICAL UNLESS NOTED OTHERWISE.

D. ROOF SHEATHING SHALL BE NAILED TO ROOF FRAMING AND BLOCKING WITH 0.148" DIA x 3" NAILS AT 6" OC AT PANEL EDGES, 6" OC AT DIAPHRAGM BOUNDARIES, 12" OC FIELD, TYPICAL UNLESS NOTED OTHERWISE.

E. TRUSS MANUFACTURER SHALL REVIEW ALL PLANS AND DETAILS TO ACCOUNT FOR ALL LOADINGS AND TYPICAL CONNECTION CONDITIONS.

F. NON-BEARING WALLS ARE NOT SHOWN ON STRUCTURAL PLANS. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.

Structural Header Schedule	
Mark	Section
H1	4x6 SPF #2
H2	(2)1 3/4 x 11 7/8 LVL
H3	(3) 1 3/4 x 11 7/8 LVL
H4	(3)1 3/4 x 22 LVL

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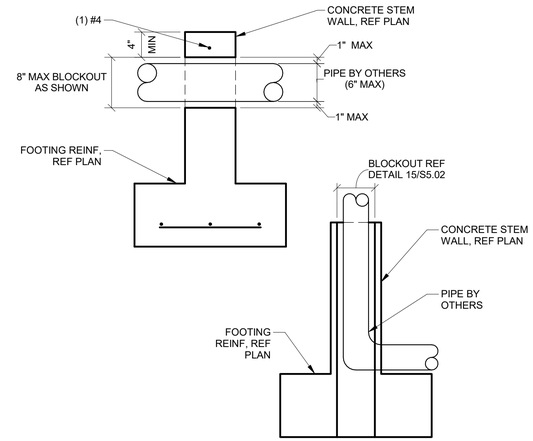
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

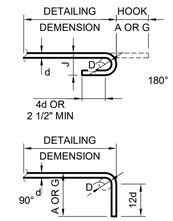
Roof Framing Plan

SHEET:
S6



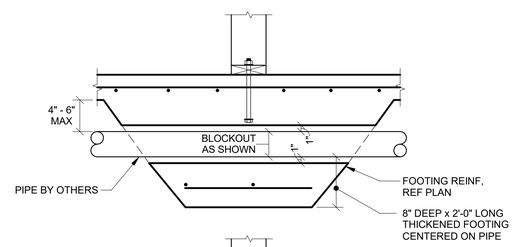
5 / S7 PIPE PENETRATION AT STEMWALL
1" = 1'-0"

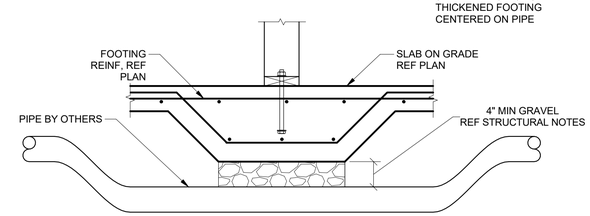
RECOMMENDED END HOOKS
ALL GRADES OF STEEL
D = FINISHED BEND DIAMETER



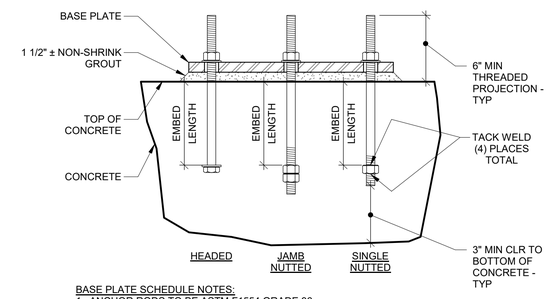
BAR SIZE	D, IN.	180° HOOKS, FT - IN.		90° HOOKS FT - IN.
		A OR G	J	A OR G
#3	2 1/4	0-5	0-3	0-6
#4	3	0-6	0-4	0-8
#5	3 3/4	0-7	0-5	0-10
#6	4 1/2	0-8	0-6	1-0
#7	5 1/4	0-10	0-7	1-2
#8	6	0-11	0-8	1-4
#9	9 1/2	1-3	0-11 3/4	1-7
#10	10 3/4	1-5	1-1 1/4	1-10
#11	12	1-7	1-2 3/4	2-0
#12	18 1/4	2-3	1-9 3/4	2-7

1 / S7 REBAR END HOOK DETAIL
1/2" = 1'-0"



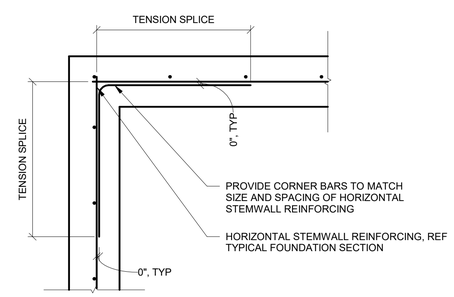


4 / S7 PIPE PENETRATION AT FOOTING
1" = 1'-0"

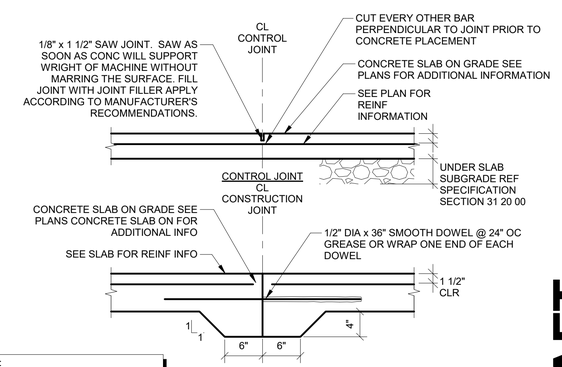


BASE PLATE SCHEDULE NOTES:
1. ANCHOR RODS TO BE ASTM F1554 GRADE 36.
2. NUTS FOR ANCHOR RODS SHALL BE STANDARD HEX NUTS TYPE ASTM A563-A.
3. WASHER FOR ANCHOR RODS SHALL BE ASTM F436. PROVIDE WASHER BETWEEN ALL NUTS AND BASE PL's
4. ALL ANCHOR ROD EMBEDED ENDS SHALL BE ONE OF THE FOLLOWING (SEE ANCHOR ROD EMBEDMENT DETAIL):
   a. HEADED
   b. JAMB NUTTED (DOUBLE NUTTED)
   c. SINGLE NUTTED (TACK WELD IN (4) LOCATIONS TO SECURE NUT IN PLACE)
5. ALL HOLES IN BASE PLATES SHALL BE ANCHOR ROD DIAMETER + 3/16" MAXIMUM.
6. ANCHOR RODS, NUTS AND WASHERS PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

2 / S7 ANCHOR ROD EMBEDMENT DETAIL
1" = 1'-0"



6 / S7 Typical Wall Corner Reinforcement
1" = 1'-0"



NOTES:
CONTRACTOR MAY USE EITHER CONTROL JOINTS OR CONSTRUCTION JOINTS AT LOCATIONS INDICATED ON PLANS.

3 / S7 SLAB JOINTS
1" = 1'-0"

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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

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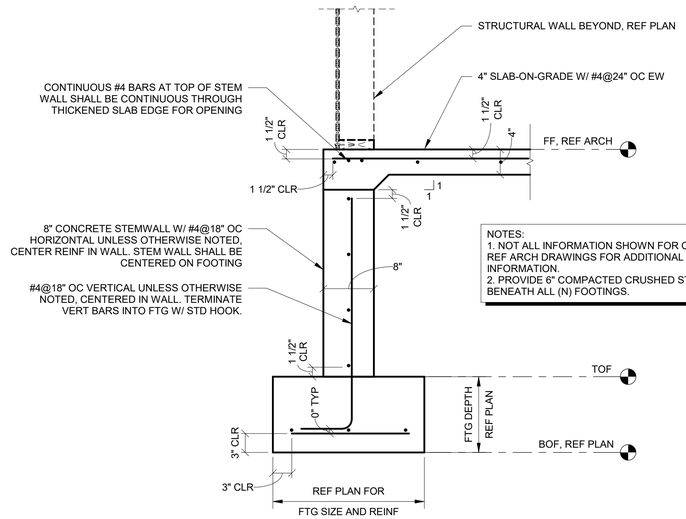
807 W Fulton Road
West Fulton, NY 12194

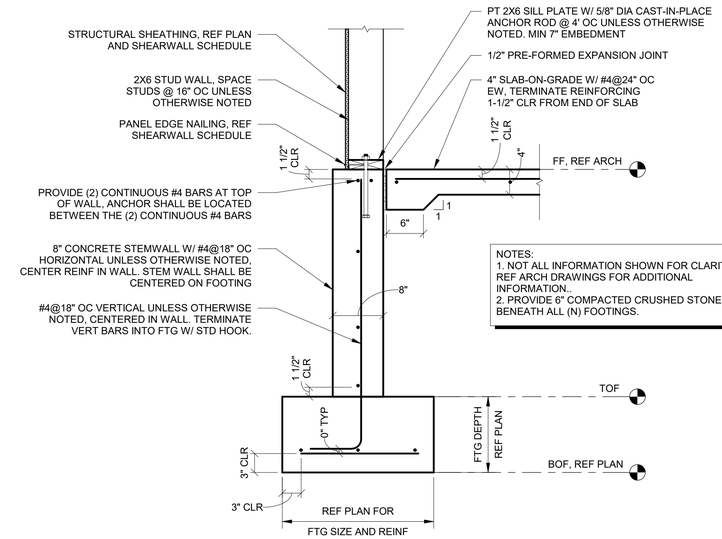
Typical Foundation Details

SHEET: S7



NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

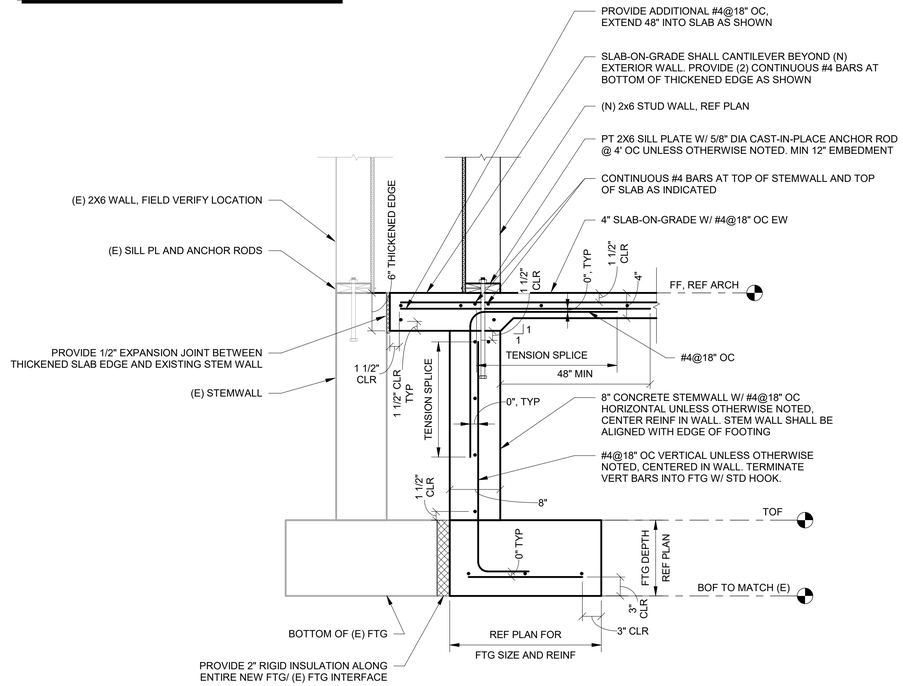
3 / S8 Typical Foundation at Opening (N)
1" = 1'-0"



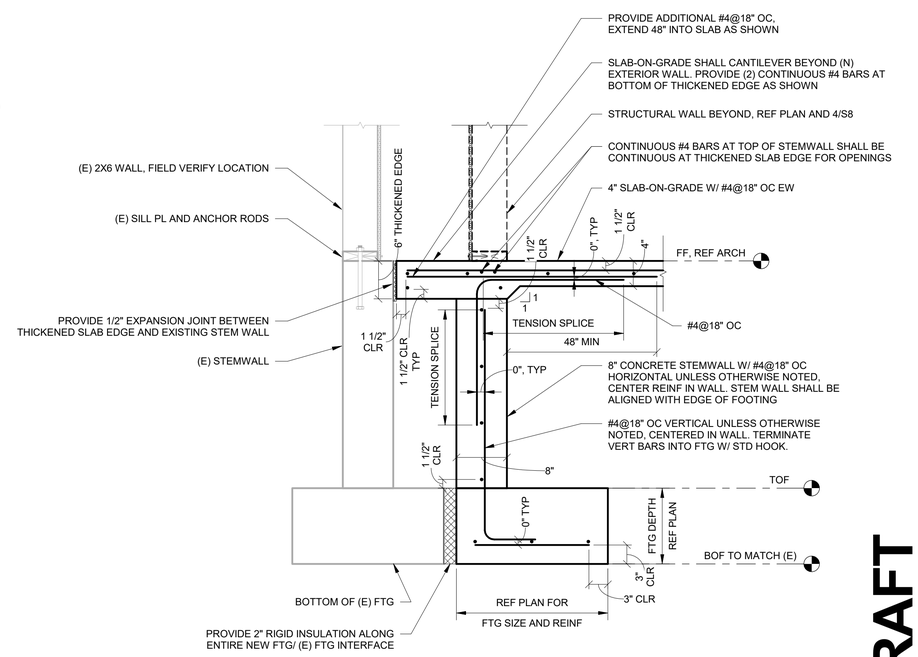
NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

1 / S8 Typical Foundation Section
1" = 1'-0"

NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. BOTTOM OF (N) FTG TO MATCH BOTTOM OF (E) FTG.
3. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.



4 / S8 Typical Foundation at Existing Structure
1" = 1'-0"



2 / S8 Foundation at Doorway
1" = 1'-0"

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DATE:	7/11/2017
DRAWN BY:	Author
SCALE:	1" = 1'-0"
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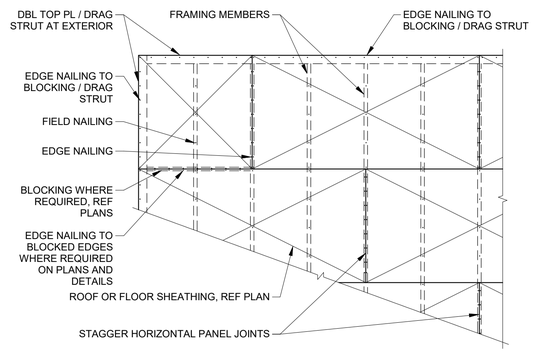
Foundation Details

SHEET:
S8

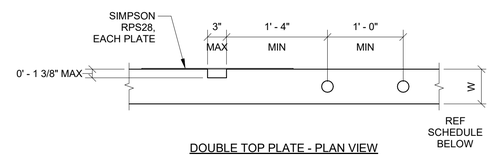
NOTE: USE EDGE NAILING AT ALL INTERIOR SHEAR WALLS AND DRAG STRUTS, UNO



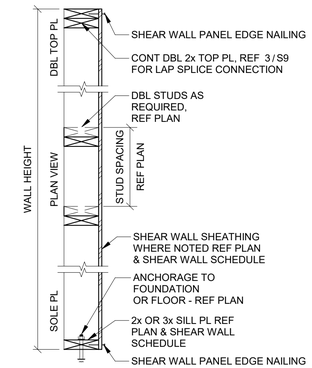
6 / S9 PLYWOOD FLOOR OR ROOF DIAPHRAGM
3/8" = 1'-0"

NOTES:
1. 'W' INDICATES WIDTH OR DEPTH OF MEMBER
2. ALL HOLES SHALL BE DRILLED, NOT SAWN
3. ALL NOTCHES TO HAVVE CORNERS PRE-DRILLED. OVERCUTS WILL NOT BE ALLOWED

SILL OR SOLE PLATE - PLAN VIEW



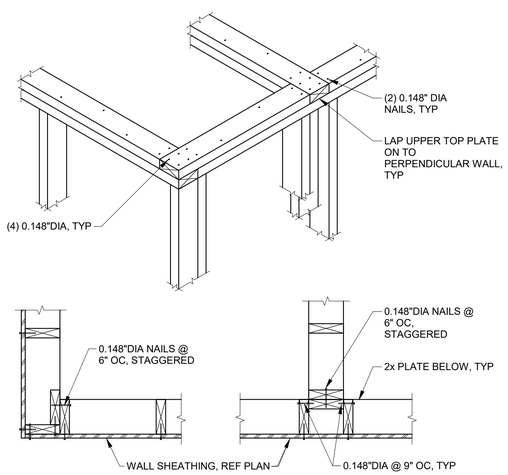
DOUBLE TOP PLATE - PLAN VIEW



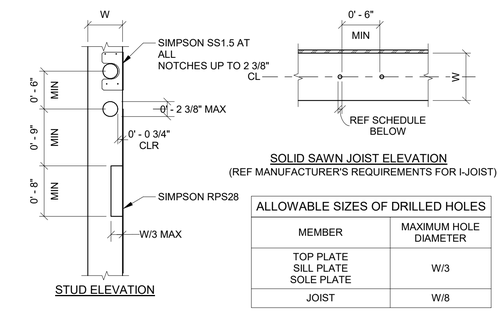
NOTE:
1. REF ARCH FOR WALL FINISHES, FURRING, ETC.
2. REF ARCH FOR ADDITIONAL REQ'D TO MAINTAIN FIRE RATING.

TYPICAL WALL CONSTRUCTION

1 / S9 BEARING WALL DETAIL
12" = 1'-0"



7 / S9 WALL FRAMING AT CORNERS AND INTERSECTIONS
1" = 1'-0"

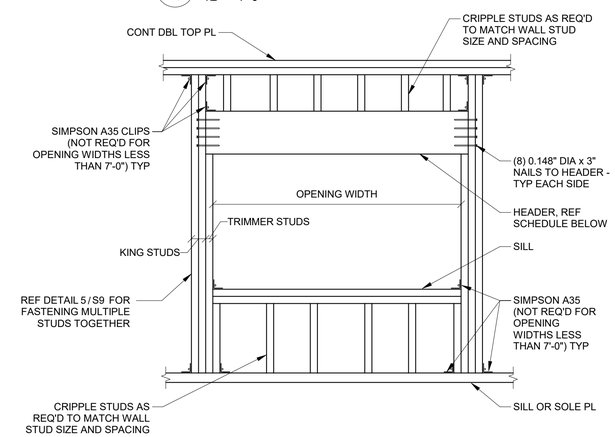


STUD ELEVATION

SOLID SAWN JOIST ELEVATION
(REF MANUFACTURER'S REQUIREMENTS FOR I-JOIST)

ALLOWABLE SIZES OF DRILLED HOLES	
MEMBER	MAXIMUM HOLE DIAMETER
TOP PLATE SILL PLATE SOLE PLATE	W/3
JOIST	W/8

4 / S9 ALLOWABLE HOLES AND NOTCHES IN WOOD FRAMING
1" = 1'-0"

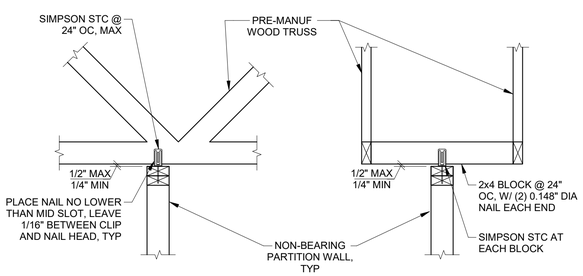


LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	REF PLAN	(2) 2x	(1) 2x	(3) 2x
6'-1" TO 12'-0"	REF PLAN	(3) 2x	(2) 2x	(4) 2x
12'-1" TO 30'-0"	REF PLAN	(3) 2x	(3) 2x	(4) 2x

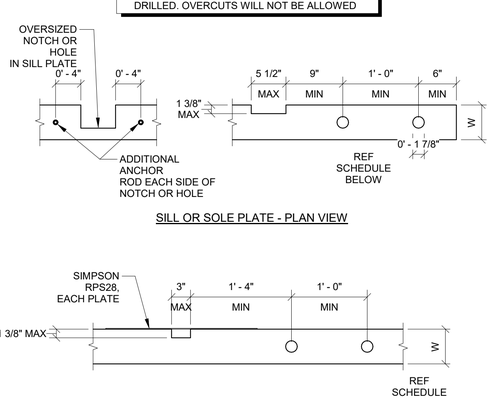
NON-LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	4x6	(1) 2x	(1) 2x	(1) 2x
6'-1" TO 10'-6"	4x8	(2) 2x	(1) 2x	(2) 2x
10'-7" TO 14'-0"	4x10	(3) 2x	(1) 2x	(3) 2x

NOTES:
1. HEADER SIZES ARE INDICATED ON THE PLANS FOR LOAD BEARING WALLS
2. THE DEPTH OF 2x SILLS, TRIMMERS AND KING STUDS SHALL MATCH THE WALL THICKNESS
3. DETAIL APPLICABLE FOR BOTH SEMI AND FULL HEIGHT OPENINGS IN WALLS.

2 / S9 WINDOW / DOOR HEADER DETAIL AND SCHEDULE
1" = 1'-0"



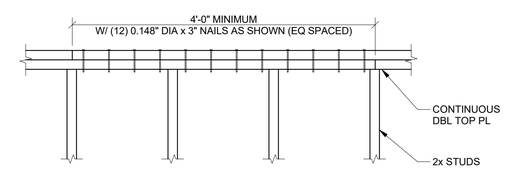
8 / S9 NON-BEARING PARTITION WALLS AT ROOF
1" = 1'-0"



BUILT-UP MEMBER	FASTENER SIZE	FASTENER SPACING	FASTENER END DIST	FASTENER EDGE DIST	ROWS OF FASTENERS
(2) 2x4	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(3) 2x4	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(4) OR MORE 2x4	1/2" DIA BOLT	9"	4"	1.5"	1 - STAGGER
(2) 2x6	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	2
(3) 2x6	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	2
(4) OR MORE 2x6	1/2" DIA BOLT	9"	4"	1.25"	2

NOTES:
1. PLYWOOD SHEATHING OR GYP BOARD FASTENERS SHALL BE STAGGERED TO EA STUD IN BUILT-UP MEMBER.
2. NAILS & SCREWS SHALL STAGGERED EACH SIDE OF BUITL-UP MEMBER.
3. BOLTS SHALL HAVE STANDARD PLATE WASHERS BETWEEN WOOD AND BOLT HEAD AND NUT HEAD.
4. NUTS TO BE TIGHTENED TO INSURE ALL WOOD LAMS ARE IN CONTACT.
5. 1/4" DIA SDS SCREWS OF SAME LENGTH MAY BE SUBSTITUTED FOR NAILS W/ 9" SPACING & 4" END DIST.

5 / S9 BUILT-UP WOOD POSTS
1" = 1'-0"



3 / S9 DOUBLE TOP PLATE SPLICE CONNECTION
1" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

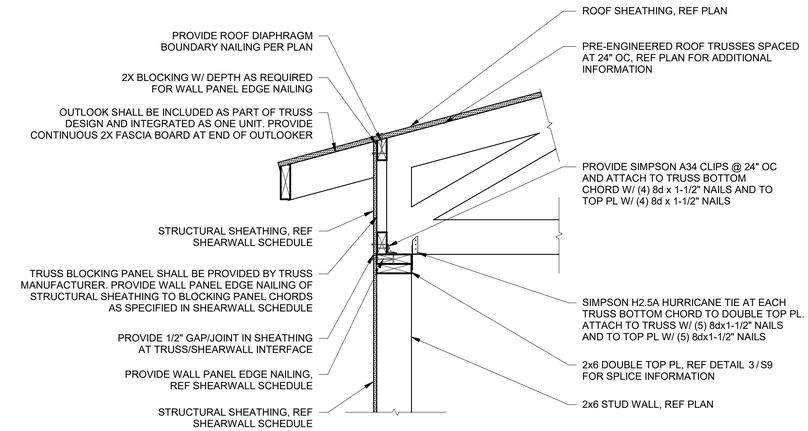
REVISIONS

NO.	DATE	DESCRIPTION

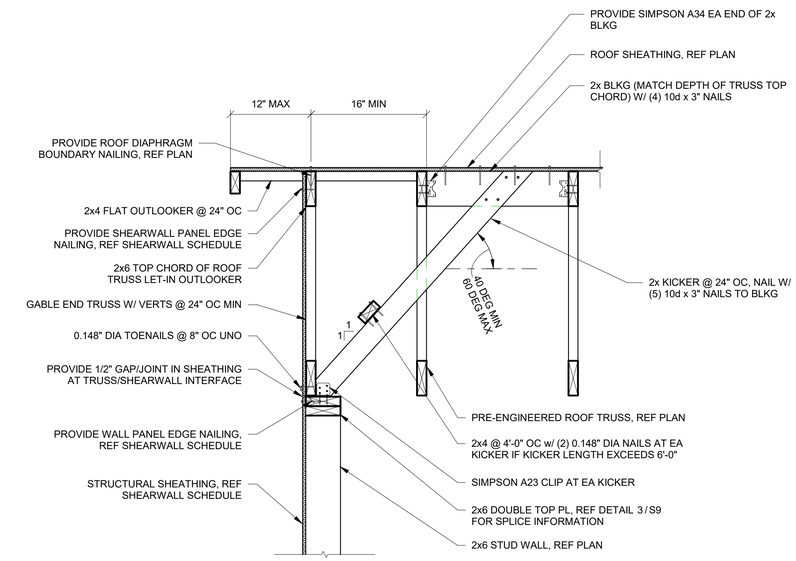
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Framing Details

SHEET: S9

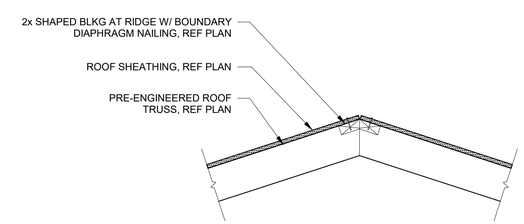


1 / S10 Typical Wall Detail - Truss Perpendicular
1" = 1'-0"



NOTES:
1. SIMPSON A34 CLIPS AND H2.5A HURRICANE TIES FOR TRUSS ARE NOT SHOWN FOR CLARITY. REF 1 / S10 FOR ADDITIONAL INFORMATION ON TYPICAL CONNECTION.

2 / S10 Typical Wall Detail - Truss Parallel
1" = 1'-0"



3 Ridge Blocking
1" = 1'-0"

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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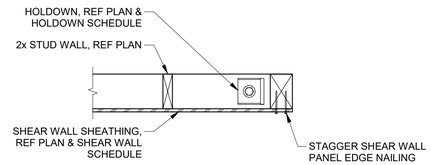
REVISIONS

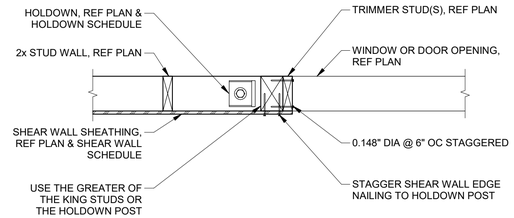
NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

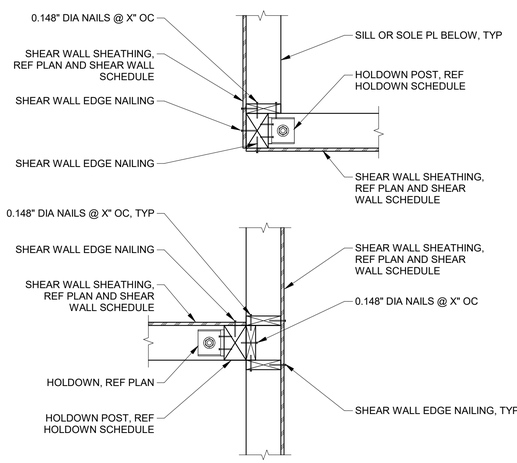
Framing Details

SHEET:
S10

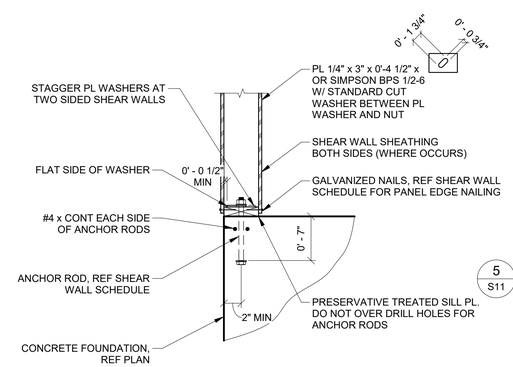




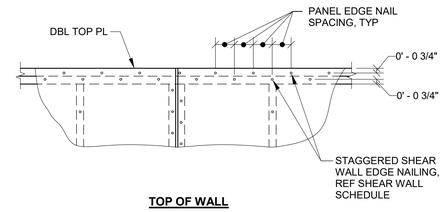
6 S11 HOLDOWN AT END OF WALL OR OPENING
1" = 1'-0"



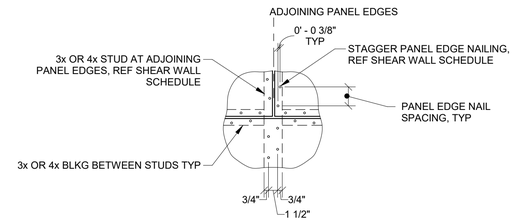
7 S11 HOLDOWN AT WALL CORNERS AND INTERSECTIONS
1" = 1'-0"



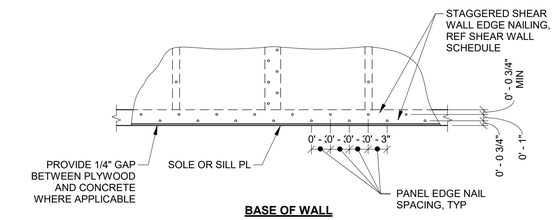
8 S11 SHEAR WALL SILL PLATE CONNECTION TO FOUNDATION
1" = 1'-0"



TOP OF WALL

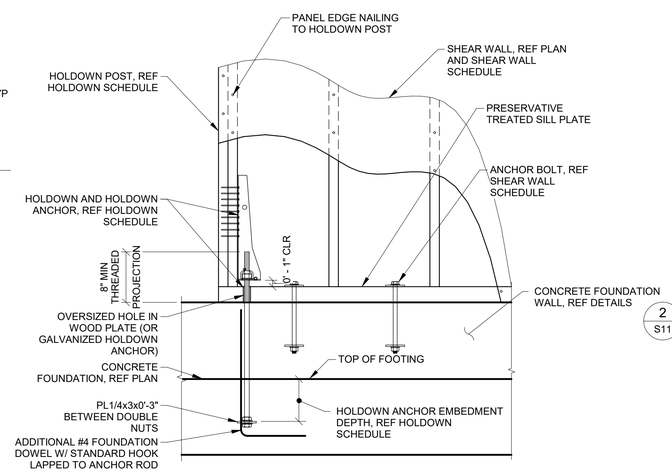


VERTICAL AND HORIZONTAL PANEL JOINTS OF WALL

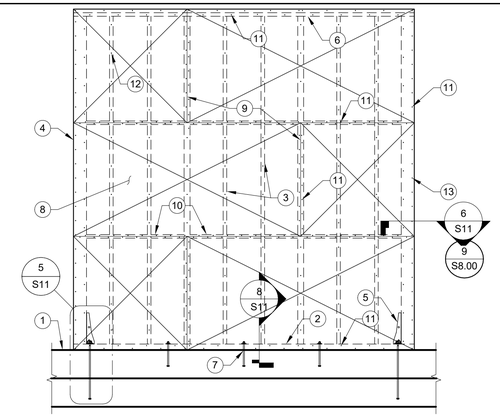


BASE OF WALL

4 S11 SHEAR WALL PANEL EDGE NAILING
1" = 1'-0"



5 S11 TYPICAL SHEAR WALL HOLDOWN AT FOUNDATION
1" = 1'-0"



SHEAR WALL ELEVATION NOTES:
1. FOUNDATION REF PLAN.
2. PRESERVATIVE TREATED SILL PLATE REF SHEAR WALL SCHEDULE.
3. WALL STUDS.
4. HOLDOWN POST REF HOLDOWN SCHEDULE.
5. HOLDOWN ANCHOR. REFERENCE PLANS & HOLDOWN SCHEDULE FOR HOLDOWN ATTACHMENT & ANCHORAGE TO FOUNDATION.
6. DOUBLE TOP PLATE. REFERENCE 3/S9 FOR DOUBLE TOP PLATE SPLICE DETAIL.
7. ANCHOR BOLTS W/ STEEL PLATE WASHERS. THERE SHALL BE A MINIMUM OF TWO ANCHORS FOR EACH SILL PIECE (ANY MODIFICATION TO SILL REMOVING MORE THAN 25% CROSS-SECTION SHALL BE CONSIDERED BREAKING PLATE) W/ ONE ANCHOR LOCATED NOT LESS THAN 4-1/2" NOR MORE THAN 12" FROM THE END OF EACH PIECE.
8. WOOD STRUCTURAL PANEL SHEATHING. ORIENTATION MAY BE EITHER HORIZONTAL OR VERTICAL AT CONTRACTORS OPTION. MINIMUM DIMENSION OF AN INDIVIDUAL PANEL SHALL BE 24" IN EITHER DIRECTION.
9. STAGGER ALL VERTICAL PANEL JOINTS WHERE POSSIBLE.
10. ALL PANEL EDGES ARE TO BE BLOCKED. REFERENCE SHEAR WALL SCHEDULE FOR FRAMING THICKNESS AT ADJOINING PANEL EDGES.
11. PANEL EDGE NAILING, REFERENCE SHEAR WALL SCHEDULE.
12. PANEL FIELD NAILING TO INTERMEDIATE SUPPORT MEMBERS AT 12" OC.
13. PROVIDE EDGE NAILING TO EACH HOLDOWN POST. WHERE HOLDOWN POST CONSISTS OF BUILT-UP MEMBERS, PROVIDE STAGGERED NAILING TO EACH PIECE AND LAMINATE IN ACCORDANCE W/ SHEAR WALL SCHEDULE.
14. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS & FOR INFORMATION NOT SHOWN.

1 S11 TYPICAL SHEAR WALL ELEVATION
3/8" = 1'-0"

WOOD SHEAR WALL SCHEDULE

WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)
C	15/32"	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
D	15/32" (2) SIDES	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
E	15/32" (2) SIDES	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

2 S11 WOOD SHEAR WALL SCHEDULE
12" = 1'-0"

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS

MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU2-SDS2.5	(2) 2x STUDS	(6) SDS 1/4" x 2-1/2"	5/8"	0'-8"
2	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
3	HDU5-SDS2.5	(2) 2x STUDS	(14) SDS 1/4" x 2-1/2"	5/8"	0'-9"
4	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"
5	HD19	6X6 DF#1 POST	(5) 1" DIA BOLTS	1-1/4"	1'-0"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 4/S500 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTIC ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

3 S11 HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS
12" = 1'-0"

DRAFT

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DATE: 7/11/2017
DRAWN BY: Author
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REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Shearwall Details

SHEET: S11

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

November 9, 2017

Ron LaFrance, Jr.; Paul Thompson; and Beverly Cook, Chiefs
St. Regis Mohawk Tribe
412 State Route 37
Akwesasne, NY 13655

Re: Section 106 Compliance for West Fulton Fire Department Improvements Project, 807 West Fulton Road, West Fulton, Schoharie County, New York 12194

Dear Chiefs of the St. Regis Mohawk Tribe:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR) is acting under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"). GOSR is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Tribe to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 302706(b)), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the St. Regis Mohawk Tribe, the Mohawk Nation, and the Stockbridge-Munsee Community Band of Mohicans.

Area of Potential Effect: The proposed project includes improvements to the existing West Fulton Volunteer Fire Department located on a 13.5-acre parcel at 807 West Fulton Road, West Fulton, New York 12194. The parcel is open grass on the northern portion and wooded on the southern portion. The existing fire station is a wood frame structure.

Proposed Project Description: The proposed project includes a 2,080-square foot wood frame addition including a community room/shelter, office space, mechanical space, storage space, laundry area, and bathrooms. The addition will be constructed on a four-inch concrete slab. The current kitchen area will be expanded into the addition. Energy efficient heating and ventilation system will be provided in the addition and emergency lighting will be provided for entire station. The septic system will be increased in size to accommodate the addition. The parking area will be increased and will be ADA compliant. A new backup generator will be installed and fueled by a diesel tank. Emergency communications will be increased by installing a repeater tower. Project plans are attached to this consultation request.

Several components of the proposed project will require significant earthwork, including but not limited to the building addition, septic system/leach field expansion, generator pad and cell tower. No acquisition is anticipated as the existing site is large enough to accommodate all contemplated improvements.

During Hurricane Irene and Tropical Storm Lee, the Town of Fulton experienced significant flooding that forced residents of the community to evacuate their homes. The West Fulton Fire Volunteer Fire Department facility served as the primary shelter location. This is the only facility in the area that is American Red Cross (ARC)-certified as an emergency shelter. Fire Department services are essential to public safety, before, during, and after a disaster event. Having a dedicated, certified shelter is especially critical during an emergency event. During Hurricane Irene and Tropical Storm Lee the department facility fulfilled first responder duties and sheltered an estimated 100 people in a space planned to service less than half that number of people. This created the potential for multiple uses—emergency response and sheltering survivors—to interfere with each other, threatening the efficiency of the response and the safety of the survivors.

GOSR is completing an environmental review for this project pursuant to HUD NEPA regulations. GOSR initiated consultation with the New York State Historic Preservation Office and no comments have been received to date. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Tribe, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery
38-40 State St., 408N, Hampton Plaza
Albany, NY 12207

If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosure:
Project Location Map
Project Plans

Electronic letter sent to:
Arnold Printup
Saint Regis Mohawk Tribe, THPO
412 State Route 37
Akwesasne, NY 13655

West Fulton Fire House

October 5, 2017

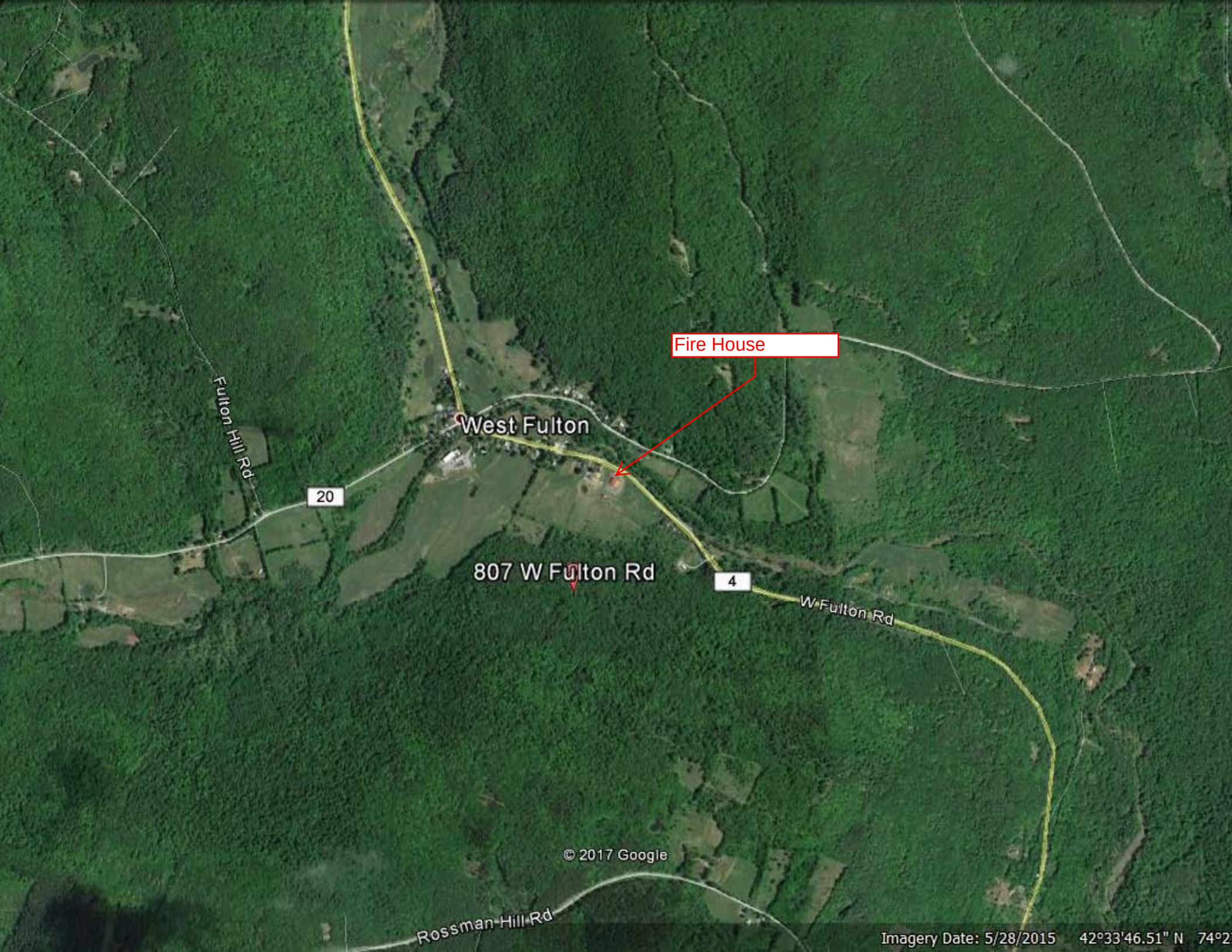
1:2,257

0 0.0275 0.055 0.11 mi

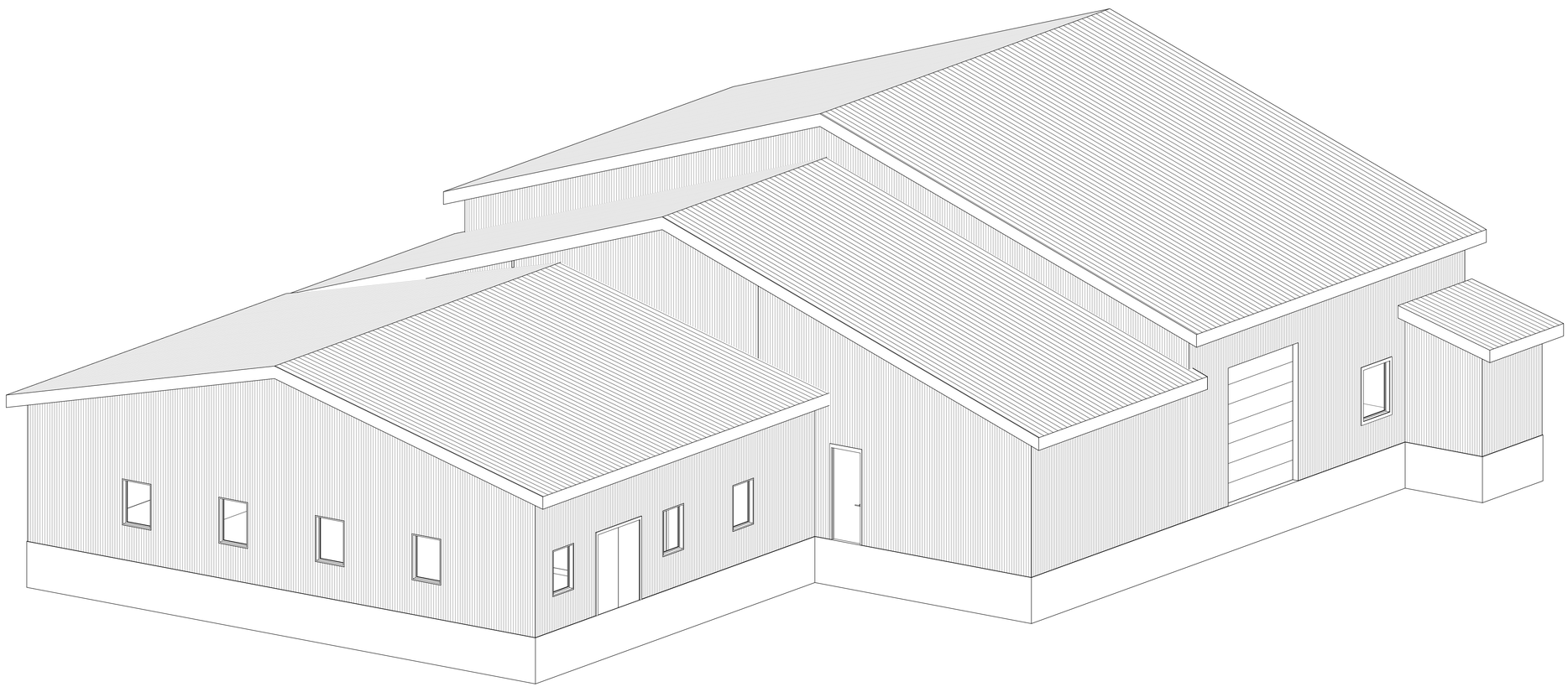
0 0.0425 0.085 0.17 km

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: GOSR
Not a legal document


Fire House
West Fulton
Fulton Hill Rd
20
807 W Fulton Rd
4
W Fulton Rd
© 2017 Google
Rossman Hill Rd
Imagery Date: 5/28/2015 42°33'46.51" N 74°2

WEST FULTON FIRE DEPARTMENT
SCHOHARIE COUNTY, NY
SCHEMATIC DESIGN
SEPTEMBER 8, 2017



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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

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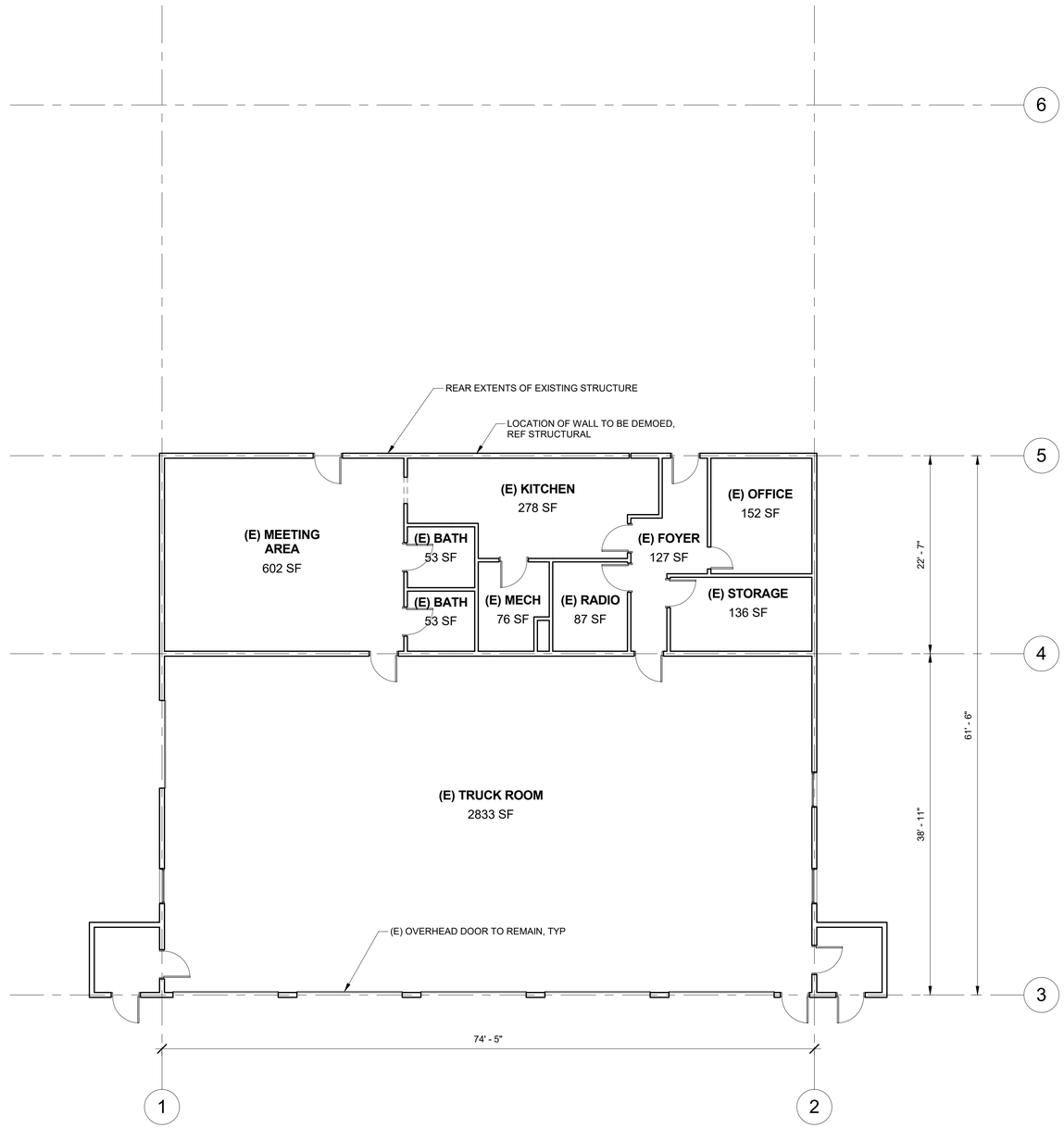
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

COVER

SHEET:
COVER



1 / A1 Existing Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
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West Fulton, NY 12194

Existing Floor Plan

SHEET:
A1

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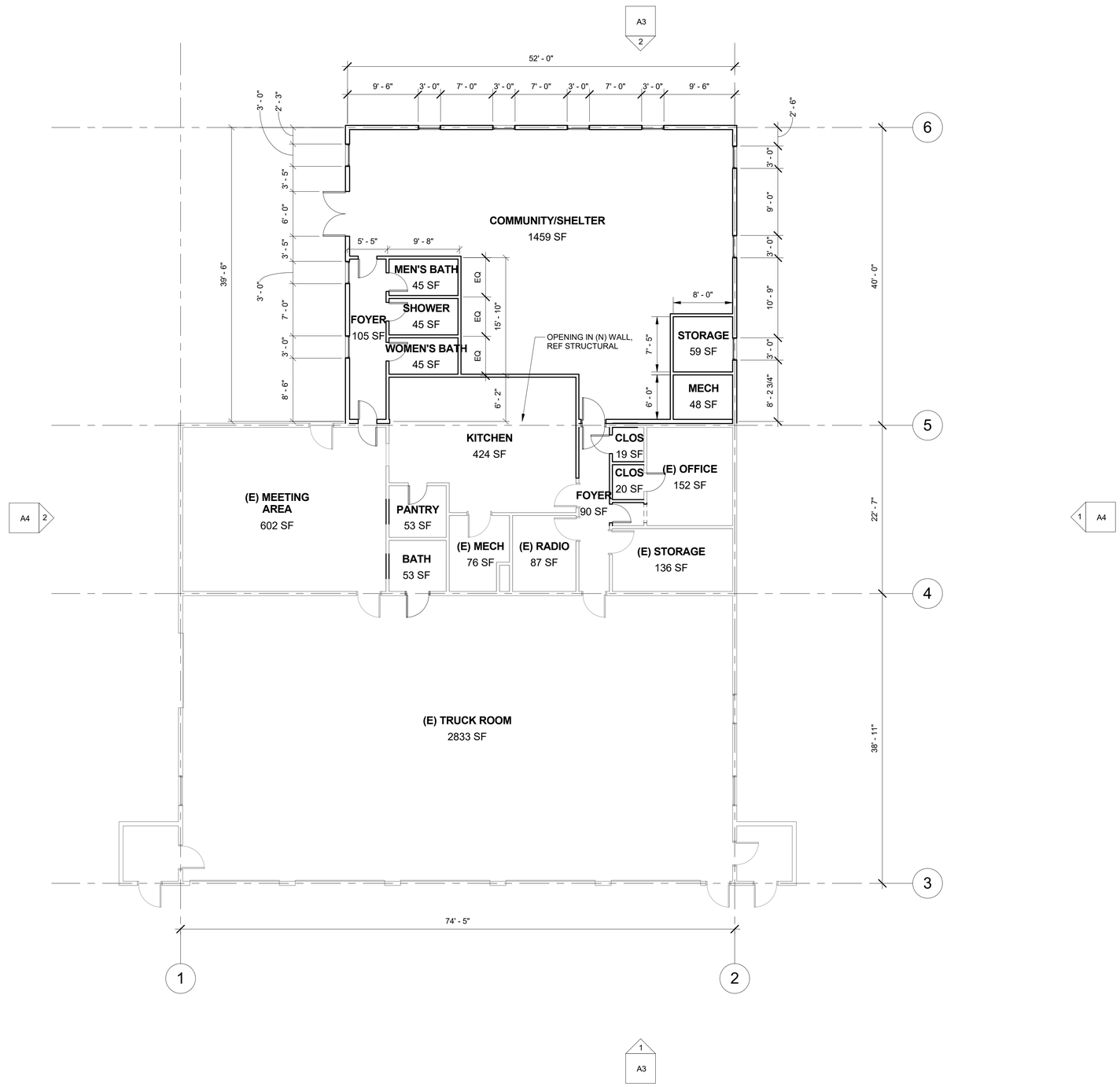

1 / A2 Proposed Floor Plan
1/8" = 1'-0"

DRAFT

DATE: 7/11/2017
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West Fulton Fire Department
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Proposed Floor Plan

SHEET: A2

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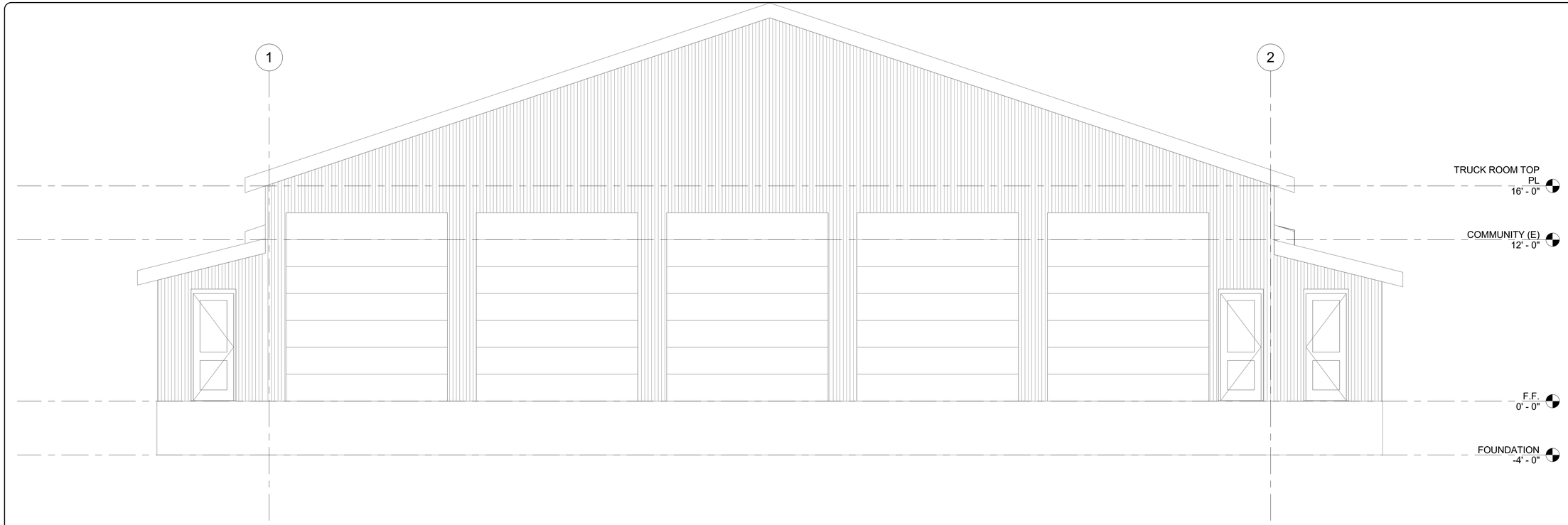
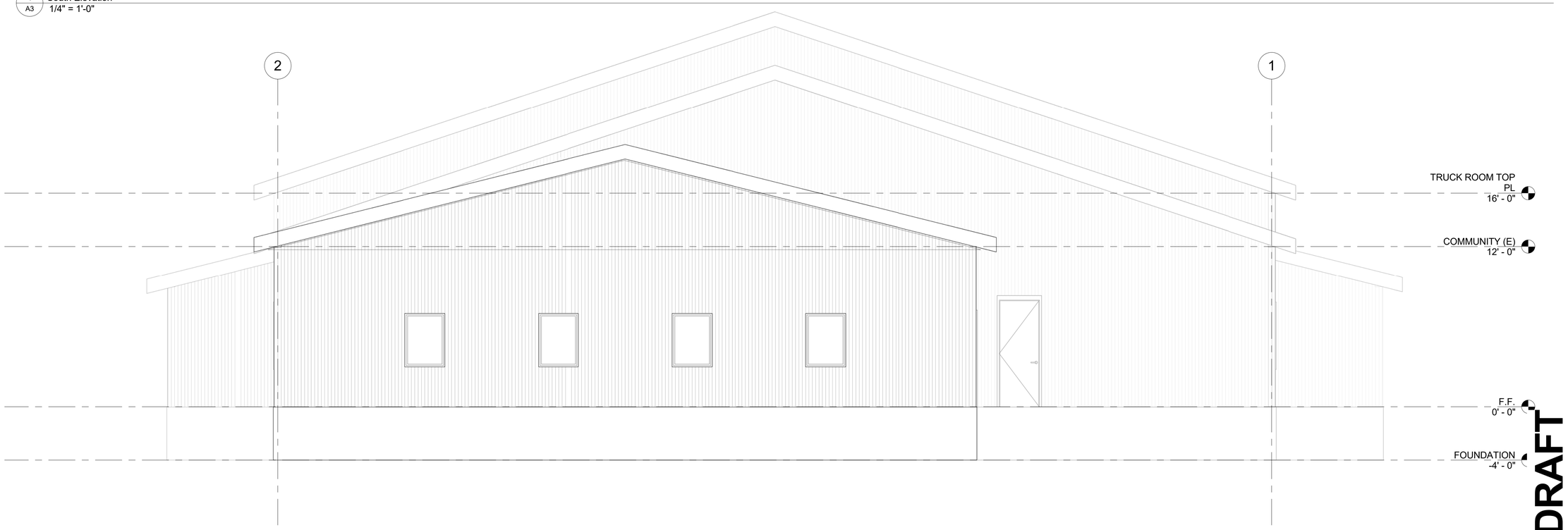


1 / A3 South Elevation
1/4" = 1'-0"



2 / A3 North Elevation
1/4" = 1'-0"

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW SECTION 7209.2.

DATE: 7/11/2017
DRAWN BY: Author
SCALE: 1/4" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

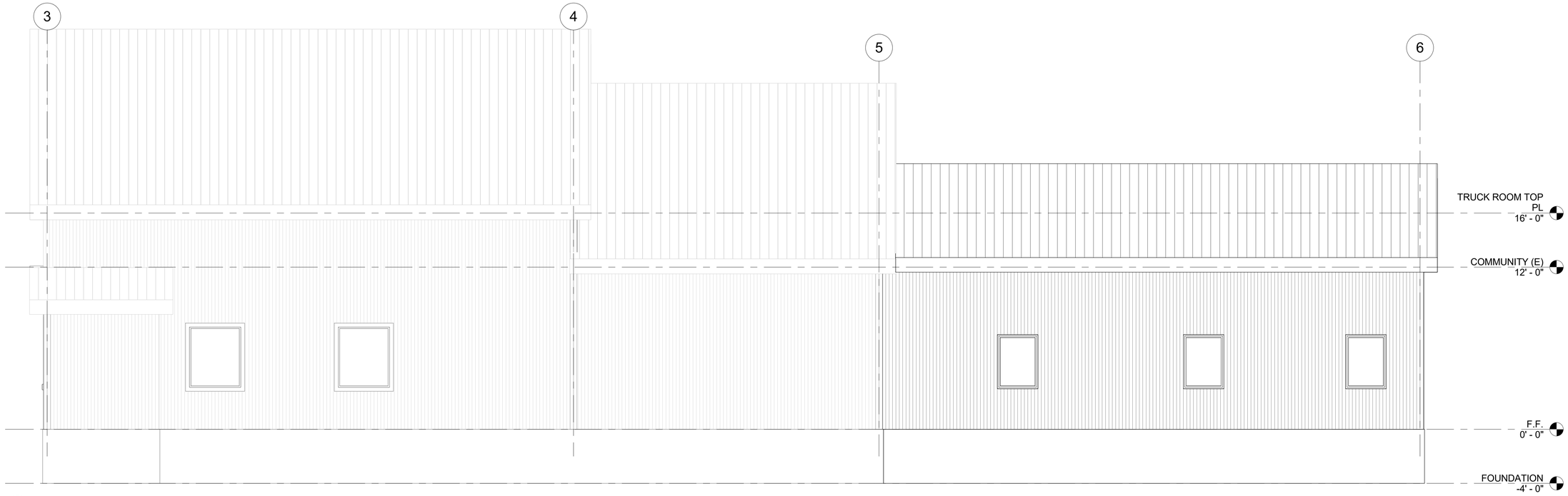
REVISIONS

NO.	DATE	DESCRIPTION

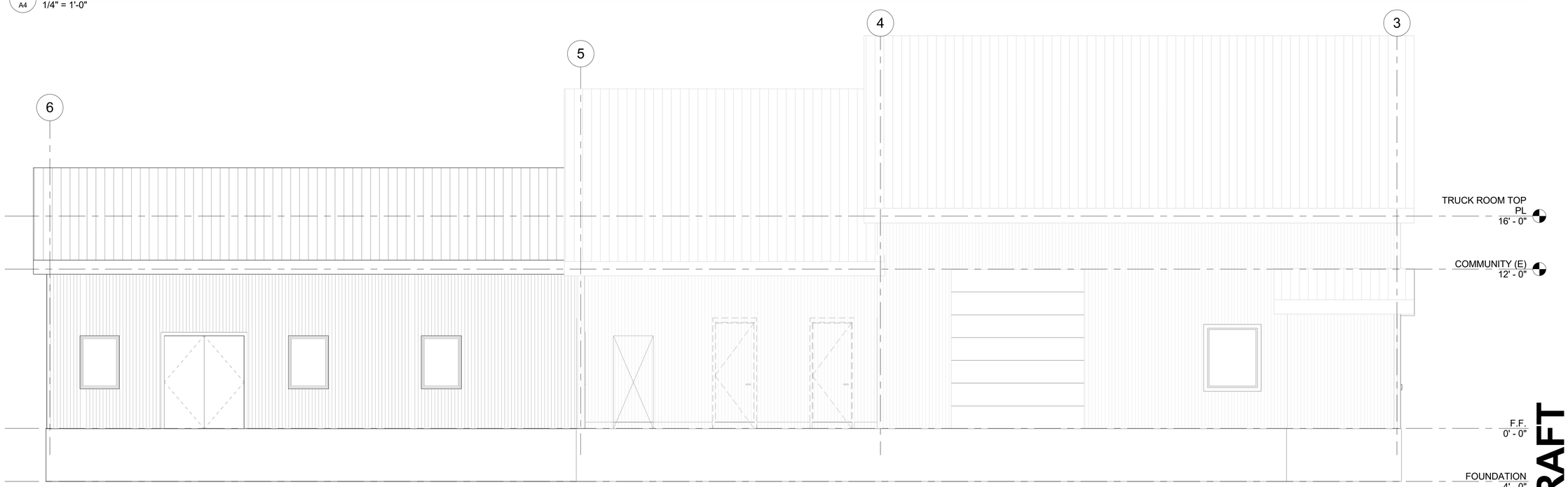
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A3



1 / A4 East Elevation
1/4" = 1'-0"



2 / A4 West Elevation
1/4" = 1'-0"

DRAFT

WARNING -- IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

DATE: 7/11/2017
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REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Elevations

SHEET:
A4

PROJECT DESCRIPTION:
1. ADDITION TO EXISTING SINGLE-STORY FIRE HOUSE
2. EXISTING BUILDING CONSISTS OF WOOD FRAMED CONSTRUCTION
3. ADDITION CONSISTS OF CONVENTIONAL WOOD FRAMED CONSTRUCTION
4. CONVENTIONAL SHALLOW FOUNDATIONS
5. CONCRETE SLAB-ON-GRADE
6. WOOD 2X STUD WALLS SHEATHED WITH PLYWOOD FOR LATERAL SYSTEM
7. PRE-ENGINEERED ROOF TRUSSES

GENERAL:
1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
4. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:
1. CONFORM TO 2015 INTERNATIONAL BUILDING CODE (IBC)
2. ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:
1. THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
2. CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:
1. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:
1. DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

DESIGN CRITERIA		
GEOTECHNICAL DESIGN CRITERIA		
DESIGN BASED ON GEOTECHNICAL REPORT BY:	XXXXXX, INC PROJECT NO.: XXXXXXX	
ALLOWABLE SOIL BEARING PRESSURE	2,500 PSF + 50% INCREASE FOR WIND OR SEISMIC LOADS	
SNOW DESIGN CRITERIA		
DESIGN ROOF SNOW LOAD	45 PSF MINIMUM	
SNOW DRIFT	AS SHOWN ON PLANS	
GROUND SNOW LOAD	P_g = 53 PSF	
FLAT ROOF SNOW LOAD	P_f = 45 PSF	
EXPOSURE FACTOR	C_e = 1.0 (PARTIAL EXPOSED)	
IMPORTANCE FACTOR	I_S = 1.20	
THERMAL FACTOR	C_t = 1.0	
WIND DESIGN CRITERIA		
MAIN WIND FORCE RESISTING SYSTEM	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDING	120 MPH BASIC WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	C	
GUST/INTERNAL PRESSURE	GC_{pi} = +/- 0.18	
SEISMIC DESIGN CRITERIA		
RISK CATEGORY	IV	
SITE CLASS	D (DEFAULT W/OUT GEOTECH REPORT)	
IMPORTANCE FACTOR	I_e = 1.25	
SEISMIC DESIGN CATEGORY	C	
MCE SPECTRAL ACCELERATIONS	S_S = 0.107	S_1 = 0.067
SITE COEFFICIENTS	F_a = 1.2	F_V = 1.7
DESIGN SPECTRAL ACCELERATIONS	S_{DS} = 0.181	S_{D1} = 0.107
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-10 SECTION 12.8	
	NORTH-SOUTH DIRECTION	EAST-WEST DIRECTION
SEISMIC LOAD RESISTING SYSTEM	LIGHT FRAMED WOOD SHEAR WALLS	LIGHT FRAMED WOOD SHEAR WALLS
RESPONSE MODIFICATION FACTOR	R = 6.5	R = 6.5
SEISMIC RESPONSE COEFFICIENT	C_S = 0.042	C_S = 0.042
REDUNDANCY FACTOR	ρ = 1.0	ρ = 1.0
DESIGN INELASTIC STORY DRIFT	Δ = XX INCHES	Δ = XX INCHES

STRUCTURAL OBSERVATION:
1. THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS		
CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
AT COMPLETION OF WOOD SHEAR WALLS	X	REF FOOTNOTE A, B
AT COMPLETION OF HORIZONTAL ROOF DIAPHRAGM	X	REF FOOTNOTE A, B
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

A. STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.
B. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.
C. STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

FOUNDATIONS:
1. FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL, AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
2. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW FINAL GRADES.
3. ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE PROJECT GEOTECHNICAL REPORT.
4. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITEWORK.
5. STRUCTURAL FILL MATERIALS, PLACEMENT, AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
6. BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS.
7. PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN UNDER THE GUIDANCE OF THE GEOTECHNICAL ENGINEER. MINIMUM TESTING FREQUENCY SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
9. ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
10. ALL FILL, BACKFILL AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL ENGINEER.

SPECIAL INSPECTION AND TESTING:
1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S0.03. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
HOLDOWN ANCHOR BOLT LAYOUT	X		
EMBEDDED STEEL ITEMS	X		
SLAB-ON-GRADE CONTROL JOINT LAYOUT	X		
STRUCTURAL STEEL MILL CERTS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL DECKING	X		
STEEL FASTENERS	X		
GLUED LAMINATED MEMBERS	X		
PREMANUFACTURED WOOD JOISTS	X	X	
PREMANUFACTURED WOOD TRUSSES	X	X	
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"

A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER "DESIGN CRITERIA."
C. THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
D. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:
1. ALL CONCRETE WORK SHALL CONFORM TO "ACI 318--BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
2. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS FOLLOWS:

CONCRETE STRENGTHS				
DESCRIPTION	f'c (PSI)	WATER - CEMENT RATIO BY WEIGHT	ENTRAINED AIR	OTHER
FOOTINGS, STEMWALLS	3,000	0.53	2% +/- 1.5%	
RETAINING WALLS	3,000	0.50	6% +/- 1.5%	
EXTERIOR SLAB-ON-GRADE	3,000	0.48	6% +/- 1.5%	
COLUMNS, BEAMS	4,000	0.45		
INTERIOR SLAB-ON-GRADE	4,000	0.48		

NOTES:
A. VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
B. CONCRETE MIXES SHALL BE NORMAL WEIGHT AND CONTAIN PORTLAND CEMENT CONFORMING TO ASTM C150 FOR TYPE I, OR TYPE II.
C. AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260.
D. COLUMNS THAT ARE AN INTEGRAL PART OF A WALL SHALL HAVE CONCRETE STRENGTH AS REQUIRED FOR COLUMNS.

3. MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:

MINIMUM CEMENT CONTENT	
f'c (PSI)	MINIMUM CEMENT CONTENT PER CUBIC YARD
3,000	470 LBS.
4,000	550 LBS.
5,000	630 LBS.

NOTES:
A. FLYASH CONFORMING TO ASTM C618 "TYPE F," OR "TYPE C" MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

4. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
5. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
6. A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 "TYPE F, OR TYPE "G" MAY BE USED IN CONCRETE MIXES PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
7. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
8. SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
9. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 10'-0" ON-CENTER EACH WAY FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
10. ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
11. ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET, OR WET SET.
12. ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
13. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
14. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
15. PREPARATION, CONSTRUCTION AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 5.12, 5.13 AND ACI 306R AND 305R.

SHORING AND RE-SHORING:
1. SHORING AND RE-SHORING IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.
2. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FARENHEIT SURROUNDING TEMPERATURE.	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

EPOXY REPAIR ADHESIVE:
1. EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.
2. ADHESIVE SHALL HAVE A MINIMUM SLANT SHEAR STRENGTH OF 5,000 PSI AND A MINIMUM TENSILE STRENGTH OF 4,000 PSI.
3. HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.
4. REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

REINFORCING STEEL:
1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO "ACI 318—BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND "ACI 315—MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
2. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
   A. SMOOTH WELDED WIRE FABRIC—ASTM A185
   B. CONCRETE COLUMN VERTICAL REINFORCEMENT—ASTM A706, GRADE 60
   C. ALL OTHER REINFORCEMENT—ASTM A615, GRADE 60
3. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.
4. REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE "CRSI MANUAL OF STANDARD PRACTICE," MSP-1.
5. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.
6. REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. "WET SETTING" OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.
8. ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.
9. THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

TYPICAL LAP SPLICE SCHEDULE (IN)						
BAR SIZE	3,000 PSI		4,000 PSI		5,000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17
#4	37	29	32	25	29	22
#5	47	36	40	31	36	28
#6	56	43	48	37	43	33
#7	81	63	70	54	63	49
#8	93	72	80	62	72	55
#9	105	81	91	70	81	63
#10	118	91	102	79	91	70
#11	131	101	113	87	101	78

NOTES:
A. FOR CENTER-TO-CENTER SPACING LESS THAN FOUR TIMES THE BAR DIAMETER, MULTIPLY THE ABOVE VALUES BY A FACTOR OF 1.4.
B. TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.
C. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
D. VALUES ARE FOR UNCOATED BARS.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)	
USE	COVER
COLUMN BARS	1-1/2" COVER TO TIES
SLAB-ON-GRADE BARS	1-1/2" COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

MINIMUM CONCRETE COVER (PRE-CAST)	
USE	COVER
COLUMN BARS	1" TO TIES

11. CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.
12. PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING WITH A MINIMUM 6" EMBEDMENT BELOW THE TOP OF FOOTING.
13. AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2'-0") PAST THE OPENING ON ALL SIDES.
14. PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4'-0" LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.
15. REFERENCE TYPICAL DETAILS FOR THE DISPOSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.
16. PROVIDE #5 CARRIER BAR AT 3'-0" MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.
17. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCMENT ON EACH LEG.

CONCRETE ACCESSORIES:
1. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON TYPE D2L (ICC ESR-2907) OR APPROVED EQUAL.
2. HEADED SHEAR STUDS SHALL BE NELSON HEADED ANCHORS WITH FLUXED ENDS (ICC ESR-2856) OR APPROVED EQUAL.
3. HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AUTOMATICALLY END-WELDED WITH THE MANUFACTURER'S STANDARD EQUIPMENT AND IN ACCORDANCE WITH THE ASSOCIATED ICC REPORTS.
4. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. EMBEDDED ITEMS SHALL NOT BE LOADED, NOR SHALL WELDS BE APPLIED, FOR A MINIMUM OF 7-DAYS AFTER CASTING OF CONCRETE.
5. APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

APPROVED POST-INSTALLED CONCRETE ANCHORS		
TYPE	ANCHOR	ICC REPORT
CONCRETE SCREW	SIMPSON TITEN HD	ICC ESR-2713
	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY ADHESIVE	SIMPSON AT-XP	ICC ESR-2508
	HILTI HIT-RE 500SD	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3037
	HILTI KWIK BOLT TZ	ICC ESR-1917

NOTES:
A. ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.
B. REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.
C. ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL, OR HOT-DIPPED GALVANIZED.

DRAFT

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SCALE: 12" = 1'-0"
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DELAWARE ENGINEERING, D.P.C.
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REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S1

SAWN FRAMING LUMBER:

1. SAWN LUMBER SHALL CONFORM TO THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR THE WESTERN WOODS PRODUCTS ASSOCIATION (WWPA) GRADING RULES.
2. ALL LUMBER SHALL BE THE SPECIES AND GRADES AS FOLLOWS:

SAWN LUMBER		
USE	SPECIES/GRADE	Fb (PSI)--BASE VALUE
LUMBER 2" TO 4" THICK	DOUGLAS FIR-LARCH NO.2	900
BEAMS 5"x5" AND GREATER	DOUGLAS FIR-LARCH NO.1	1350
POSTS	DOUGLAS FIR-LARCH NO.1	1200

3. ALL DIMENSIONAL LUMBER AND TIMBERS SHALL BE KILN DRIED AND CERTIFIED IN WRITING BY THE SUPPLIER TO BE LESS THAN 19% MOISTURE CONTENT.
4. ALL LUMBER IN CONTACT WITH CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED (PT) PER THE AMERICAN WOOD PRESERVERS BUREAU (AWPB) UNLESS AN APPROVED MOISTURE BARRIER IS PROVIDED. ALL PT LUMBER SHALL BEAR THE AWPB QUALITY MARK.
5. CUTTING AND NOTCHING OF JOISTS AND STUDS SHALL CONFORM TO IBC SECTIONS 2308.8.2, 2308.9.10, 2308.10.4.2 AND THE LIMITATIONS AS NOTED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE SOLID LINES OF BLOCKING, SAME DEPTH OF FRAMING MEMBER, AT ALL BEARING POINTS.
7. JOIST BRIDGING SHALL BE REQUIRED WHERE JOISTS HAVE A DEPTH-TO THICKNESS RATIO GREATER THAN 5-TO-1 AND WHERE ONE EDGE IS UNSUPPORTED. JOIST BRIDGING SHALL BE SPACED AT 8'-0" ON CENTER MAXIMUM.

WOOD STRUCTURAL PANEL SHEATHING:

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE "U.S. PRODUCT STANDARD PS 1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD," THE "U.S. PRODUCT STANDARD PS 2 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL USE PANELS," OR THE "APA PRP-108 PERFORMANCE STANDARDS."
2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING AS FOLLOWS:

WOOD STRUCTURAL PANEL SHEATHING	
USE	THICKNESS/RATING
ROOF SHEATHING	5/8"-INDEX 40/20
WALL SHEATHING	15/32"-INDEX 32/16

3. ALL ROOF SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS SHALL BE STAGGERED.
4. ROOF SHEATHING SHALL BE BLOCKED, OR HAVE EDGES SUPPORTED BY PLYCLIPS.
5. SHEAR WALL SHEATHING SHALL BE PLYWOOD OR ORIENTED STRAND BOARD (OSB) PANELS CONFORMING TO THE REQUIREMENTS FOR ITS TYPE SPECIFIED IN DOC PS1 OR PS2.
6. SHEAR WALL SHEATHING SHALL BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY AND BE BLOCKED AT ALL PANEL EDGES. SHEET SIZES SHALL BE 4'X8' UNLESS AT BOUNDARIES OR FRAMING CHANGES. REFERENCE PLANS FOR ADDITIONAL REQUIREMENTS.

NAILING AND FASTENERS:

1. ALL FRAMING NAILS SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS AND CONFORM TO THE "STANDARD SPECIFICATION OF DRIVEN FASTENERS: NAILS, SPIKES, AND STAPLES" (ASTM F1667) AND "POWER-DRIVEN STAPLES AND NAILS FOR USE
2. NAILING NOT SHOWN SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.9.1, OR NER-272.
3. NAILS SHALL BE IDENTIFIED BY LABELS ATTACHED TO THEIR CONTAINERS, THAT SHOW THE MANUFACTURER'S NAME, NAIL SHANK DIAMETER, AND LENGTH.
4. NAIL SIZES SHALL BE AS FOLLOWS:

FRAMING NAILS		
NAIL TYPE	SHANK DIAMETER (IN)	MINIMUM PENETRATION INTO FRAMING MEMBER (IN)
6d	0.113	1.25
8d	0.131	1.50
10d	0.148	1.625
12d	0.148	1.625
16d	0.148	1.625

5. UNLESS OTHERWISE NOTED ON PLANS, PLYWOOD SHEATHING SHALL BE ATTACHED TO THE FRAMING SUPPORTS AS FOLLOWS:

SHEATHING NAILING		
USE	PANEL EDGES	INTERMEDIATE FRAMING MEMBERS
ROOF SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC
WALL SHEATHING	0.148" DIA @ 6" OC	0.148" DIA @ 12" OC

NOTES:

A. ALL NAILS SHALL BE COMMON NAILS EXCEPT RING SHANKS SHALL BE USED FOR FASTENING ROOF SHEATHING.

6. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS. ALL A307 BOLTS SHALL HAVE CUT THREADS.
7. PRE-DRILL HOLES FOR LAG BOLTS. SOAP THREADS OF LAGS IMMEDIATELY PRIOR TO INSTALLATION.
8. JOIST HANGERS, HOLDOWNS, AND OTHER FRAMING ACESSORIES SHALL BE MANUFACTURED BY SIMPSON STRONG TIE (OR AN APPROVED EQUAL) AND BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HARDWARE FASTENERS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURER'S REQUIREMENTS. ANY PRODUCT SUBSTITUTIONS TO SIMPSON SHALL MEET OR EXCEED SIMPSON'S PUBLISHED DESIGN CAPACITIES AND MUST HAVE A CURRENT ICC EVALUATION REPORT FOR THE APPLICABLE CODES.
9. HANGERS NOT SHOWN SHALL BE SIMPSON U-TYPE, OR B-TYPE OF THE SIZE RECOMMENDED FOR THE SPECIFIC FRAMING MEMBER SHOWN ON PLAN.
10. FASTENERS IN CONTACT WITH PRESERVATIVE TREATED, OR FIRE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.
11. SILLS AT WALLS SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS DETAILED OTHERWISE. WASHERS TO BE MINIMUM 1/4"x3"x3" AS PER IBC 2305.3.11.
12. ALL SILL PLATES AND LEDGERS SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE.

GLUED LAMINATED MEMBERS:

1. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH THE "AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER" (ANSI A190.1), OR OTHER CODE-APPROVED DESIGN, MANUFACTURING AND QUALITY ASSURANCE PROCEEDURES.
2. ADHESIVE SHALL BE WET-USE EXTERIOR WATERPROOF GLUE.
3. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS INDENTIFICATION MARK OR BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE.
4. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER THE SHOP OR FIELD.
5. NOTCHING AND/OR BORING OF GLUED LAMINATED MEMBERS (EITHER IN THE SHOP, OR FIELD) IS STRICTLY PROHIBITED UNLESS AS SPECIFICALLY DETAILED IN THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
6. GLUED LAMINATED TIMBER BEAMS SHALL BE WESTERN SPECIES WITH THE FOLLOWING STRENGTH PROPERTIES:

GLUED LAMINATED TIMBER BEAMS				
COMBINATION SYMBOL (SPECIES)	USE	MODULUS OF ELASTICITY (PSI)	FLEXURAL STRESS (PSI)	HORIZONTAL SHEAR STRESS (PSI)
24F-V4 (DF/DF)	SIMPLE SPAN	1,800,000	2,400	265
24F-V8 (DF/DF)	CANTILEVERED OR CONTINUOUS	1,800,000	2,400	265

7. UNEXPOSED GLULAM MEMBERS SHALL BE FRAMING APPEARANCE GRADE. EXPOSED GLULAM MEMBERS SHALL BE ARCHITECTURAL APPEARANCE GRADE.
8. GLULAM MEMBERS NOTED AS "FRR" (FIRE RESISTANCE RATED) SHALL BE LAYED UP WITH ADDITIONAL TENSION LAMINATION(S) AS REQUIRED TO MEET 1 HOUR FIRE RESISTANCE RATING PER IBC 722.6.3.4. THE QUALITY STAMP ON "FRR" BEAMS SHALL INDICATE THAT THE MANUFACTURER HAS MADE THE REQUIRED LAYUP MODIFICATIONS.

ENGINEERED COMPOSITE LUMBER:

1. ENGINEERED COMPOSITE WOOD PRODUCTS SUCH AS LAMINATED VENEER LUMBER (LVL), PARALLEL STRAND LUMBER (PSL), AND LAMINATED STRAND LUMBER (LSL) SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS, MANUFACTURED BY TRUS-JOIST OR AN APPROVED EQUAL.
2. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM DESIGN PROPERTIES:

ENGINEERED COMPOSITE LUMBER		
COMPOSITE LUMBER TYPE	MODULUS OF ELASTICITY (PSI)	ALLOWABLE FLEXURAL STRESS (PSI)
LSL	1,500,000	2,350
LVL	1,900,000	2,600

NOTE:
FLEXURAL STRESSES NOTED ABOVE ARE FOR 12" DEEP MEMBERS. DEEPER MEMBERS SHALL BE DESIGNED FOR REDUCED STRESSES PER THE MANUFACTURER'S REQUIREMENTS.

ANCHOR BOLTS:

1. ANCHOR BOLTS FROM SILL PLATES TO FOUNDATION SHALL BE GALVANIZED.
2. ALL ANCHOR BOLTS SHALL HAVE A GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND NUT.
3. ANCHOR BOLTS SHALL BE PLACED SO THAT PLATE WASHER IS NO MORE THAN 1/2" FROM THE SHEATHED FACE OF THE SHEARWALL. FOR THE CONDITION WHERE SHEATHING IS APPLIED TO BOTH SIDES OF SHEARWALL, ALTERNATE ANCHOR BOLTS.
4. ANCHOR BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION (SIMILAR IF ALTERNATE ANCHORAGE IS SELECTED):
   A. ANCHOR BOLT MATERIAL TYPE
   B. ANCHOR BOLT SIZE
   C. OVERALL ANCHOR BOLT LENGTH
   D. ANCHOR BOLT EMBEDMENT
   E. ANCHOR BOLT PROJECTION (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR FIELD TOLERANCES)
   F. ANCHOR BOLT SPACING
   G. DIMENSIONS ANCHOR BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL ANCHOR BOLTS
   H. PLATE WASHER TYPE AND LOCATIONS
   I. SILL PLATE LENGTHS AND SPLICE LOCATIONS
6. SILLS AT WALL SHALL BE BOLTED TO CONCRETE WITH 5/8" DIAMETER x 7" EMBED ANCHOR BOLTS AT 4'-0" OC MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
7. ALL SILL PLATES SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE. HOLDOWN BOLTS DO NOT TAKE THE PLACE OF ANCHOR BOLT AT THE END OF THE SHEARWALL.
8. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL.

HOLDOWN ANCHOR BOLTS:

1. ALL HOLDOWN BOLTS AT SHEAR WALLS TO FOUNDATION SHALL NOT BE IN CONTACT W/ PRESERVATIVE TREATED (PT) WOOD. PT WOOD PLATES SHALL HAVE OVERSIZED HOLES 1/4" MIN & 3/8" MAX LARGER THAN BOLT SIZE. AS AN ALTERNATIVE, THE ANCHOR MAY BE SLEEVED WITH AN INSULATOR BUSHING OR GALVANIZED IN ACCORDANCE W/ ASTM A653.
2. HOLDOWN BOLTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
3. HOLDOWN BOLTS SHALL BE PLACED A MINIMUM OF 5" FROM THE END OF CONCRETE STEMWALLS. ADD ADDITIONAL 2x STUD AS REQUIRED.
4. SEE HOLDOWN SCHEDULE AND DETAILS ON SHEET S8.00 FOR TYPICAL HOLDOWN INSTALLATION REQUIREMENTS.
5. HOLDOWN BOLTS SHALL BE LOCATED IN THE FORMS AND TIED SUFFICIENTLY TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT HAND SET OR WET SET.
6. HOLDOWN BOLTS SHALL BE ASTM F1554 GRADE 36 STEEL, THREADED ON BOTH ENDS UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD INCLUDING THE FOLLOWING INFORMATION:
   A. HOLDOWN BOLT MATERIAL TYPE
   B. HOLDOWN BOLT SIZE
   C. OVERALL HOLDOWN BOLT LENGTH
   D. HOLDOWN BOLT EMBEDMENT INTO FOOTING
   E. HOLDOWN BOLT PROJECTION FOR HOLDOWN TYPE (INCLUDING SUFFICIENT PROJECTION AND THREADS TO ALLOW FOR A MINIMUM OF 2" FIELD TOLERANCE)
   F. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION OF ALL HOLDOWN BOLTS
   G. DIMENSIONED HOLDOWN BOLT LAYOUT DRAWINGS SHOWING LOCATION, SIZE, TYPE, AND QUANTITY OF HOLDOWN POST OR BUILT-UP MEMBER
   H. HOLDOWN TYPE
   I. ALL ACCESSORIES (INCLUDING PLATE WASHERS, DOUBLE NUTS, ETC.) AND LOCATIONS

PREMANUFACTURED WOOD TRUSSES:

1. DESIGN OF THE PREMANUFACTURED WOOD ROOF TRUSS SYSTEM SHALL BE THE CONTRACTORS RESPONSIBILITY.
2. DESIGN SHALL CONFORM TO THE PROFILES SHOWN ON THE DRAWINGS AND THE REQUIREMENTS OF IBC SECTION 2303.4 AND THE "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES", TPI-24 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE.
3. THE DESIGNER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS TO THE STRUCTURE REQUIRED TO TRANSFER DESIGN LOADS INTO THE STRUCTURAL SYSTEM OF THE BUILDING.
4. MANUFACTURER SHALL DESIGN AND FURNISH ALL WOOD FRAMING CONNECTIONS NECESSARY TO TRANSMIT DESIGN LOADS, INCLUDING SEISMIC AND WIND LOADS, TO THE BEARING AND SHEAR WALL SUPPORTS.
5. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS SHOWING LAYOUT AND ANY DETAILING NECESSARY FOR DETERMINING FIT AND PLACEMENT IN THE STRUCTURE.
6. METAL PLATE CONNECTED TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS AND ANY SNOW DRIFTING/SLIDING SNOW INDICATED ON DRAWINGS:

PREMANUFACTURED WOOD TRUSS LOADING	
LOADING TYPE	UNIFORMLY DISTRIBUTED LOAD (PSF)
ROOF LIVE LOAD	20
ROOF SNOW LOAD	25
ROOF DEAD LOAD	TOP CHORD: 14
	BOTTOM CHORD: 9.5

WIND UPLIFT (PSF)	
FIELD	57
PERIMETER	89
CORNER	121

NOTES:

1. WIND UPLIFT PRESSURES SHOWN ABOVE DO NOT INCLUDE ROOF DEAD LOAD.
2. WIND UPLIFT PRESSURES SHOWN ABOVE ARE UNFACTORED.

7. CONTRACTOR TO VERIFY ALL WEIGHTS AND LOCATIONS OF CONCENTRATED LOADS DUE TO ROOF TOP MECHANICAL UNITS, MECHANICAL PIPING, ELECTRICAL UNITS, FOLDING PARTITIONS AND OTHER CONCENTRATED LOADS PRIOR TO TRUSS FABRICATION.
8. TRUSS MANUFACTURER SHALL DESIGN ALL DRAG TRUSSES AND DRAG STRUTS FOR THE FOLLOWING:
   A. SHEAR LOADS AS INDICATED ON THE PLANS AND NOTES.
   B. DRAG TRUSSES TO COLLECT LOAD ALONG THE TOP CHORD AND TRANSFER TO THE BOTTOM CHORD THROUGH WEB MEMBERS.
   C. ALL TOP AND BOTTOM CHORDS TO HAVE CAPACITY OF TRANSFERING SHEAR LOADS THROUGH SPLICES.
9. THE TRUSS MANUFACTURER SHALL SUBMIT DESIGNS, SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED FOR REVIEW AND APPROVAL.
10. DEFLECTION OF MEMBERS DUE TO DESIGN LOADS SHALL NOT EXCEED THE FOLLOWING (UNLESS NOTED OTHERWISE):
    ROOFS: LIVE LOAD - 1/360 OF SPAN, TOTAL LOAD - 1/240 OF SPAN
11. DESIGN, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE THE FOLLOWING INFORMATION:
    A. DEFLECTION DESIGN CRITERIA
    B. LIVE, SNOW, DEAD, WIND, SEISMIC AND MECHANICAL DESIGN LOADS
    C. ERECTION AND PLACEMENT CRITERIA
    D. DETAILS OF ALL BRIDGING, BRACING, STIFFENERS, BLOCKING AND CONNECTIONS
    E. LOCATION AND FRAMING FOR ALL EQUIPMENT LOADS OVER 500 LBS
    F. LOCATION AND FRAMING FOR ALL SUSPENDED WALLS AND EQUIPMENT
12. LOWER CHORDS SHALL BE CAMBERED TO PROVIDE FOR LONG-TERM DEAD LOAD DEFLECTION AT GYPSUM BOARD CEILINGS.
13. DO NOT NOTCH OR DRILL TRUSS MEMBERS WITH OUT APPROVAL OF THE TRUSS MANUFACTURER AND THEIR ENGINEER.

DRAFT

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REVISIONS

NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

General Structural Notes

SHEET: S2

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER

TABLE 5

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6			X (a)	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X (a)	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

TABLE 6

REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SEISMIC CATEGORIES C, D, E, F)

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
STRUCTURAL WOOD					
CONNECTIONS FOR DIAPHRAGM CHORDS, COLLECTORS, BRACING, AND SHEAR WALL ANCHORAGE AND HOLDOWNS				X	ALL CONNECTIONS VISUALLY INSPECTED
FASTENING OF DIAPHRAGM AND SHEAR WALL SHEATHING WITH EDGE NAILING ≤4"				X	SPECIAL INSPECTION IS NOT REQUIRED WHEN FASTENER SPACING IS GREATER THAN 4" ON CENTER FOR WOOD SHEAR WALLS, DIAPHRAGMS, NAILING, BUILDING AND OTHER COMPONENTS IN THE SEISMIC FORCE-RESISTING SYSTEM.
ARCHITECTURAL COMPONENTS					
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.11	ASCE 7-10 Section 13.5.6		X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.11.5			X (a)	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.11.6			X (a)	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	
PROCESS MECHANICAL COMPONENTS					
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.11.6			X (a)	

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1909.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
WOOD					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
PREFABRICATED WOOD SHEAR PANELS	1705.5 1704.2.5	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO HOLDOWN ANCHOR SIZE AND PLACEMENT, INCLUDING EMBEDMENT LENGTH, SPACING, AND EDGE DISTANCE

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: 12" = 1'-0"
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

NO.	DATE	DESCRIPTION

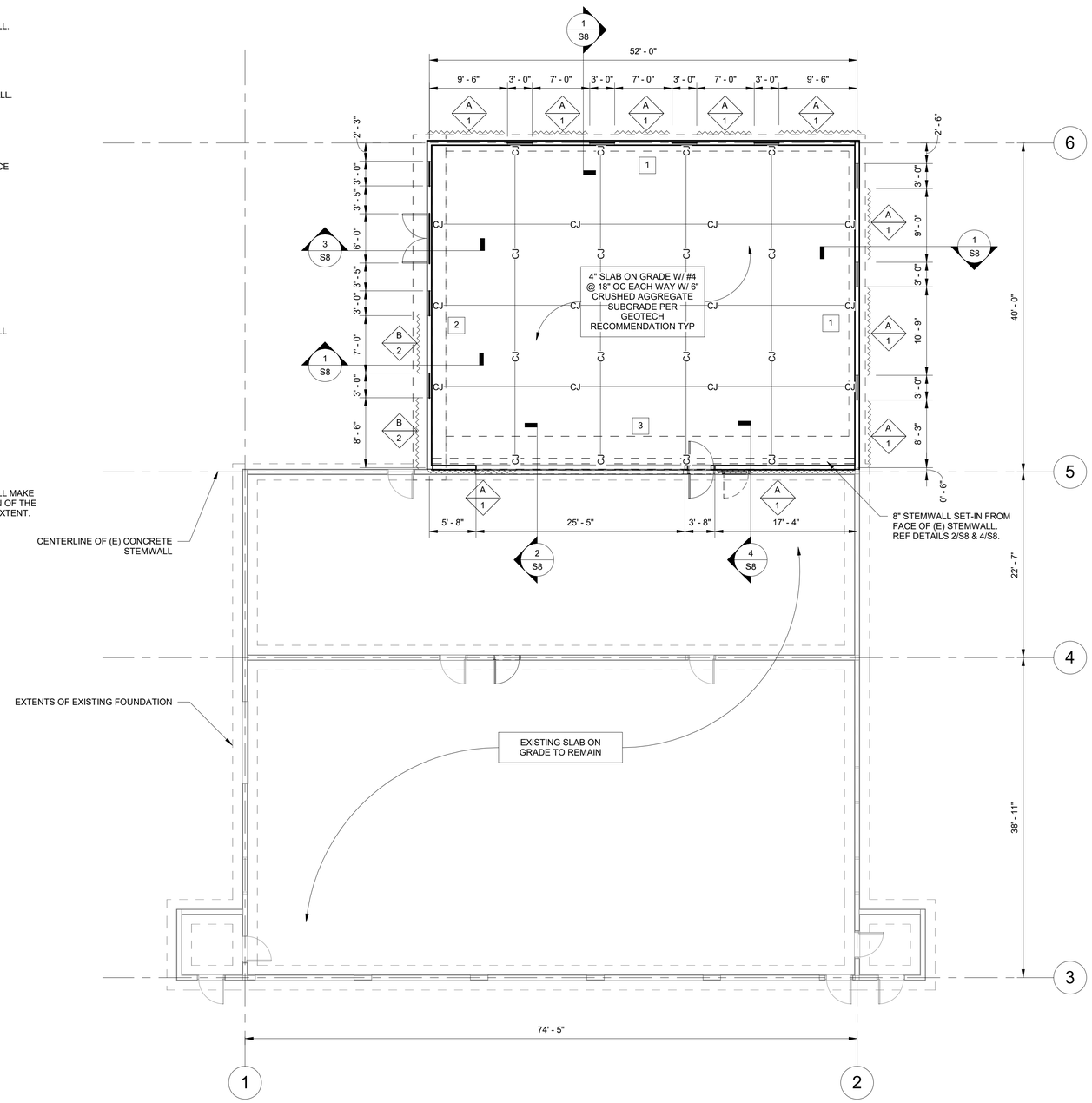
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Special Inspection

SHEET: S3

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S4 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

B. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOILS UNLESS SPECIFIED OTHERWISE IN THE STRUCTURAL DETAIL OR SPECIFIED IN THE GEOTECHNICAL REPORT.

C. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION FOR NEW FOUNDATION SYSTEM.

D. UNDER-SLAB VAPOR BARRIER AND FOUNDATION DRAINAGE SHALL BE PROVIDED AS SPECIFIED IN THE GEOTECHNICAL REPORT AS WELL AS THE GOVERNING BUILDING CODE (IBC).

E. CONTROL JOINTS SHALL BE PROVIDED AS INDICATED ON THE FOUNDATION PLAN. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT MAXIMUM SPACING AS SPECIFIED ON SHEET S1 IF THE PROVIDED LAYOUT INDICATES LARGER SPACING.

F. ALL ELEVATIONS TO FINISHED FLOORS (TOP OF SLAB) SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

G. ALL BOTTOM OF (N) FOOTING ELEVATIONS SHALL BE 4'-0" BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED.

Structural Foundation Schedule				
Type Mark	Width	Foundation Thickness	Longitudinal Reinforcement	Transverse Reinforcement
1	2' - 0"	1' - 0"	(3) #4, BOTTOM	#4@18" OC, BOTTOM
2	4' - 0"	2' - 0"	(5) #4, TOP & BOTTOM	#4@18" OC, TOP & BOTTOM
3	4' - 0"	1' - 0"	(5) #4, BOTTOM	#4@18" OC, TOP & BOTTOM

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS					
MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
2	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 2 / S7 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTICAL ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

WOOD SHEAR WALL SCHEDULE					
WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

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28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

REVISIONS

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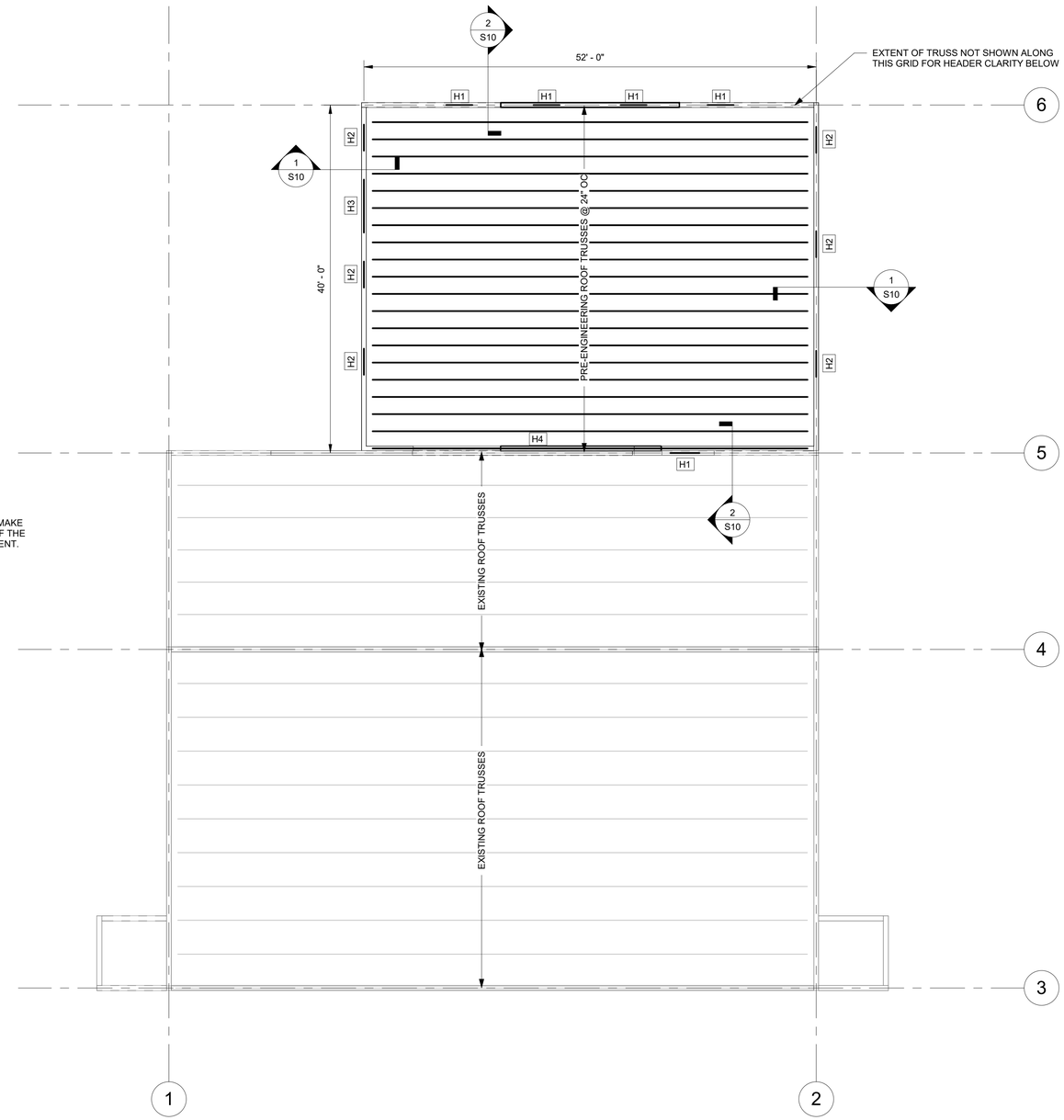
West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Foundation Plan

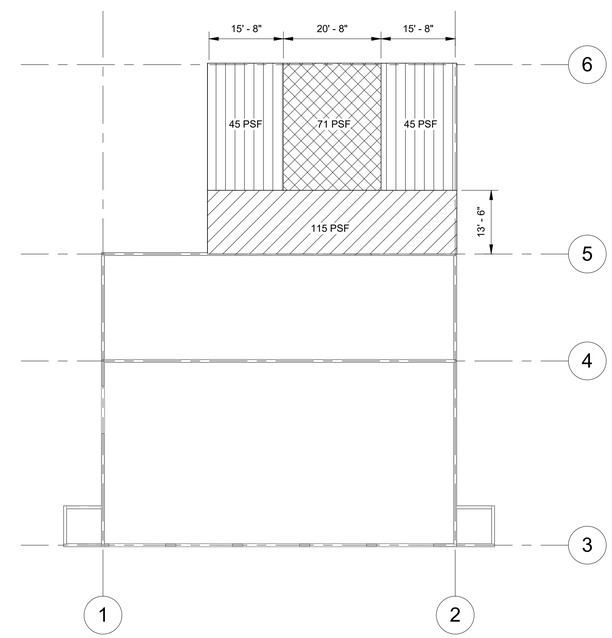
SHEET: S4

STRUCTURAL LEGEND

- INDICATES FOOTING TYPE, REFERENCE THE FOOTING SCHEDULE.
- INDICATES EXISTING STRUCTURAL WALL.
- INDICATES NEW STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES NEW NON-STRUCTURAL WALL. FRAMING TO BE 2x STUDS @ 1'-4" OC, TYPICAL UNLESS NOTED OTHERWISE.
- INDICATES WOOD SHEAR WALL TYPE, REFERENCE SHEAR WALL SCHEDULE.
- INDICATES HOLDOWN TYPE, REFERENCE HOLDOWN SCHEDULE.
- H- INDICATES NEW HEADER BELOW, REF HEADER SCHEDULE.
- INDICATES KEYED NOTE.
- DX INDICATES SPAN DIRECTION OF NEW ROOF DECK. REFERENCE GENERAL NOTES FOR DECK REQUIREMENTS.
- INDICATES EXISTING STRUCTURAL WALL BELOW.
- INDICATES NEW STRUCTURAL WALL BELOW.
- INDICATES NEW NON-STRUCTURAL WALL BELOW.
- XX PSF / XX'-XX" INDICATES SNOW DRIFT. TRUSS MANUFACTURER AND DESIGNER SHALL MAKE PROVISION FOR THESE IN THE DESIGN OF THE TRUSSES. REF PLAN FOR LOAD AND EXTENT.



1 / S6 ROOF FRAMING PLAN
1/8" = 1'-0"



2 / S6 SNOW DRIFT PLAN
1/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

A. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

B. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION OF ROOF STRUCTURE.

C. ROOF SHEATHING SHALL BE PROVIDED AS SPECIFIED ON SHEET S1, TYPICAL UNLESS NOTED OTHERWISE.

D. ROOF SHEATHING SHALL BE NAILED TO ROOF FRAMING AND BLOCKING WITH 0.148" DIA x 3" NAILS AT 6" OC AT PANEL EDGES, 6" OC AT DIAPHRAGM BOUNDARIES, 12" OC FIELD, TYPICAL UNLESS NOTED OTHERWISE.

E. TRUSS MANUFACTURER SHALL REVIEW ALL PLANS AND DETAILS TO ACCOUNT FOR ALL LOADINGS AND TYPICAL CONNECTION CONDITIONS.

F. NON-BEARING WALLS ARE NOT SHOWN ON STRUCTURAL PLANS. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.

Structural Header Schedule	
Mark	Section
H1	4x6 SPF #2
H2	(2)1 3/4 x 11 7/8 LVL
H3	(3) 1 3/4 x 11 7/8 LVL
H4	(3)1 3/4 x 22 LVL

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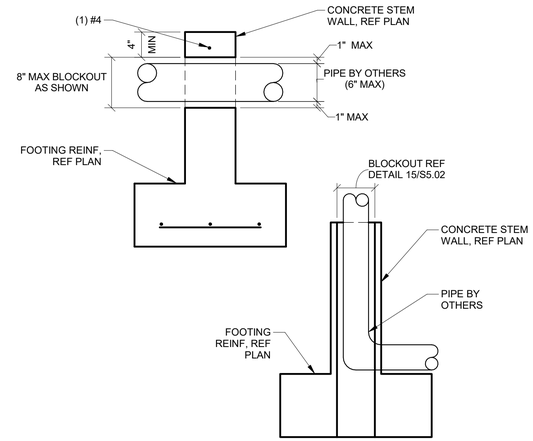
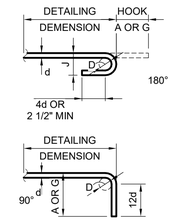
Roof Framing Plan

SHEET:
S6



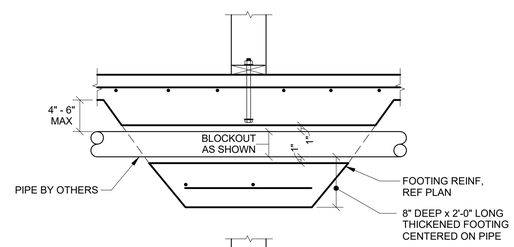
5 / S7 PIPE PENETRATION AT STEMWALL
1" = 1'-0"

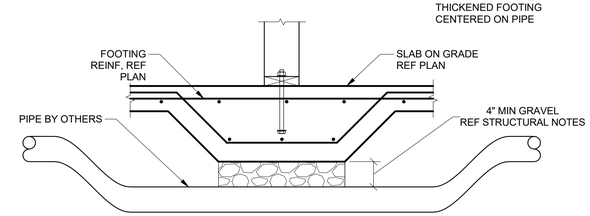
RECOMMENDED END HOOKS
ALL GRADES OF STEEL
D = FINISHED BEND DIAMETER



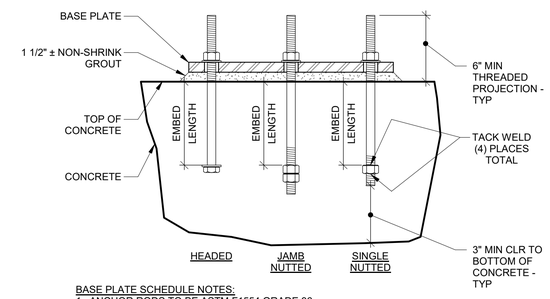
BAR SIZE	D, IN.	180° HOOKS, FT - IN.		90° HOOKS FT - IN.
		A OR G	J	A OR G
#3	2 1/4	0-5	0-3	0-6
#4	3	0-6	0-4	0-8
#5	3 3/4	0-7	0-5	0-10
#6	4 1/2	0-8	0-6	1-0
#7	5 1/4	0-10	0-7	1-2
#8	6	0-11	0-8	1-4
#9	9 1/2	1-3	0-11 3/4	1-7
#10	10 3/4	1-5	1-1 1/4	1-10
#11	12	1-7	1-2 3/4	2-0
#12	18 1/4	2-3	1-9 3/4	2-7

1 / S7 REBAR END HOOK DETAIL
1/2" = 1'-0"



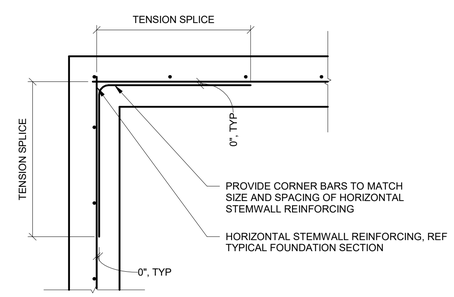


4 / S7 PIPE PENETRATION AT FOOTING
1" = 1'-0"

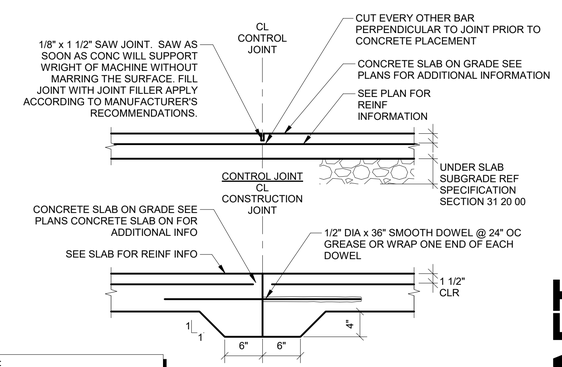


BASE PLATE SCHEDULE NOTES:
1. ANCHOR RODS TO BE ASTM F1554 GRADE 36.
2. NUTS FOR ANCHOR RODS SHALL BE STANDARD HEX NUTS TYPE ASTM A563-A.
3. WASHER FOR ANCHOR RODS SHALL BE ASTM F436. PROVIDE WASHER BETWEEN ALL NUTS AND BASE PL's
4. ALL ANCHOR ROD EMBEDED ENDS SHALL BE ONE OF THE FOLLOWING (SEE ANCHOR ROD EMBEDMENT DETAIL):
   a. HEADED
   b. JAMB NUTTED (DOUBLE NUTTED)
   c. SINGLE NUTTED (TACK WELD IN (4) LOCATIONS TO SECURE NUT IN PLACE)
5. ALL HOLES IN BASE PLATES SHALL BE ANCHOR ROD DIAMETER + 3/16" MAXIMUM.
6. ANCHOR RODS, NUTS AND WASHERS PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

2 / S7 ANCHOR ROD EMBEDMENT DETAIL
1" = 1'-0"



6 / S7 Typical Wall Corner Reinforcement
1" = 1'-0"



NOTES:
CONTRACTOR MAY USE EITHER CONTROL JOINTS OR CONSTRUCTION JOINTS AT LOCATIONS INDICATED ON PLANS.

3 / S7 SLAB JOINTS
1" = 1'-0"

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REVISIONS

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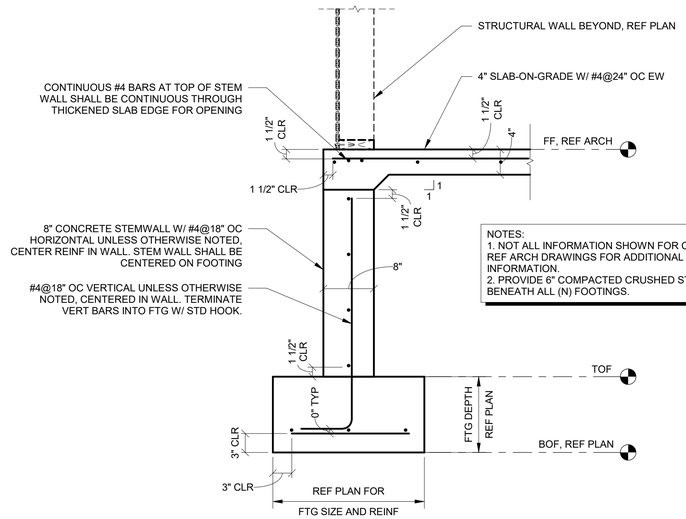
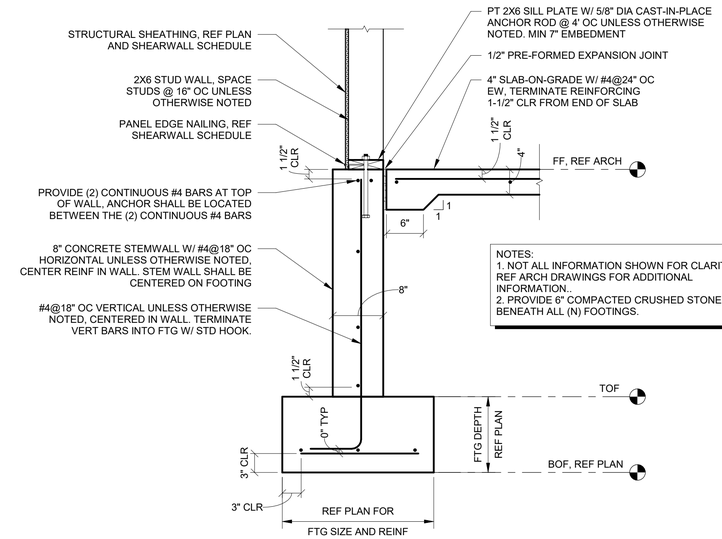
Typical Foundation Details

SHEET: S7



NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

3 / S8 Typical Foundation at Opening (N)
1" = 1'-0"



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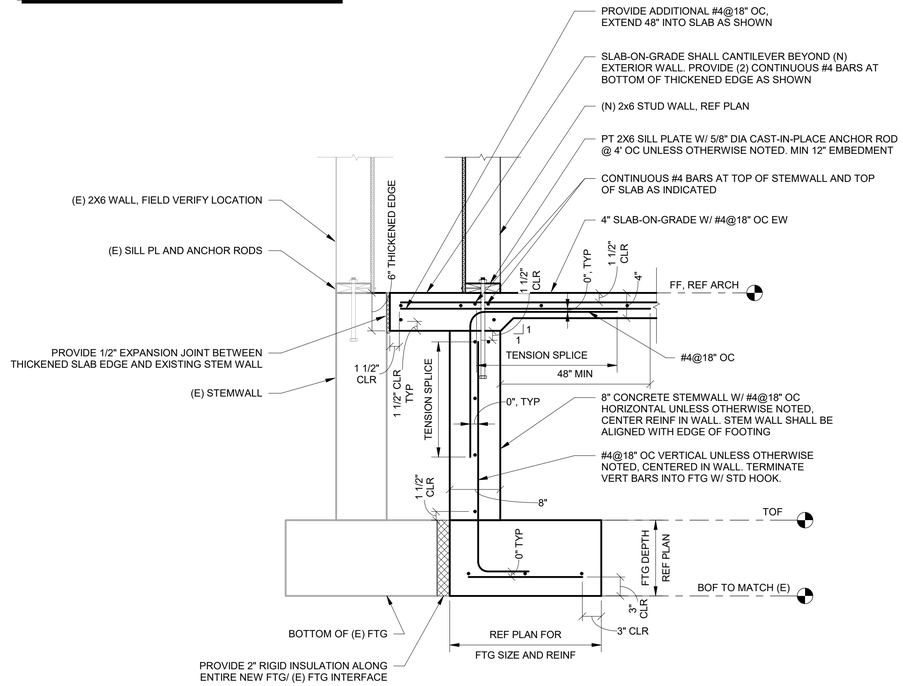
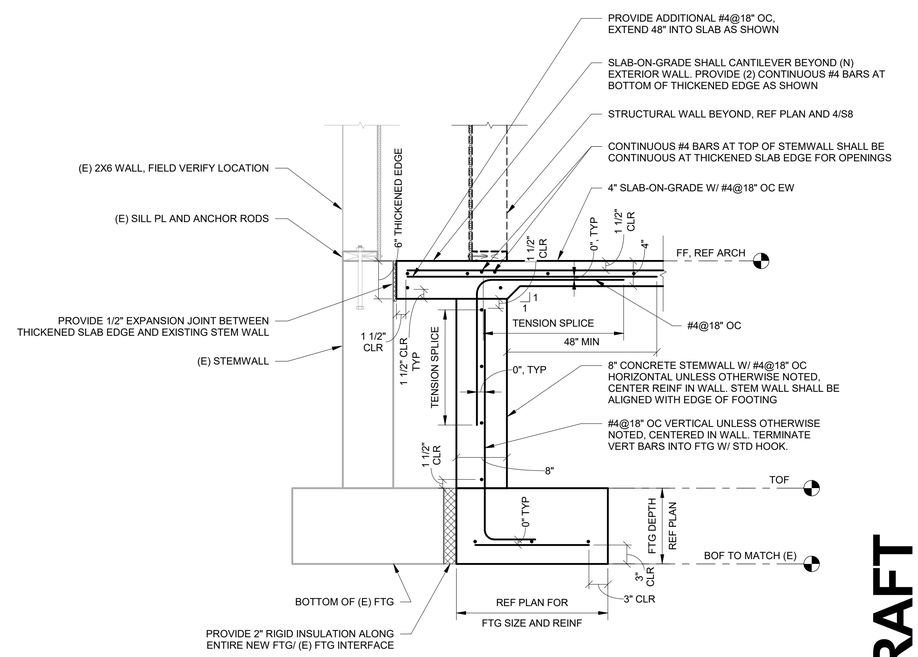
2. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.

1 / S8 Typical Foundation Section
1" = 1'-0"

NOTES:
1. NOT ALL INFORMATION SHOWN FOR CLARITY. REF ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
2. BOTTOM OF (N) FTG TO MATCH BOTTOM OF (E) FTG.
3. PROVIDE 6" COMPACTED CRUSHED STONE BENEATH ALL (N) FOOTINGS.



4 / S8 Typical Foundation at Existing Structure
1" = 1'-0"



2 / S8 Foundation at Doorway
1" = 1'-0"

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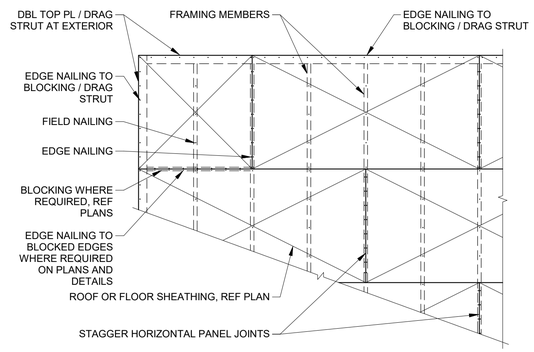
West Fulton, NY 12194

Foundation Details

SHEET:
S8

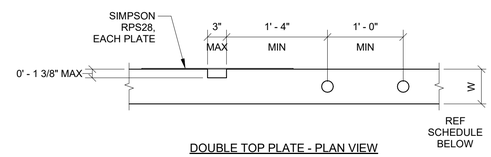
NOTE: USE EDGE NAILING AT ALL INTERIOR SHEAR WALLS AND DRAG STRUTS, UNO



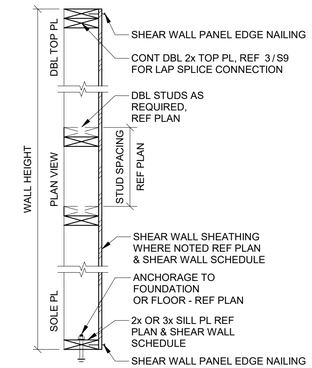
6 / S9 PLYWOOD FLOOR OR ROOF DIAPHRAGM
3/8" = 1'-0"

NOTES:
1. 'W' INDICATES WIDTH OR DEPTH OF MEMBER
2. ALL HOLES SHALL BE DRILLED, NOT SAWN
3. ALL NOTCHES TO HAVVE CORNERS PRE-DRILLED. OVERCUTS WILL NOT BE ALLOWED

SILL OR SOLE PLATE - PLAN VIEW



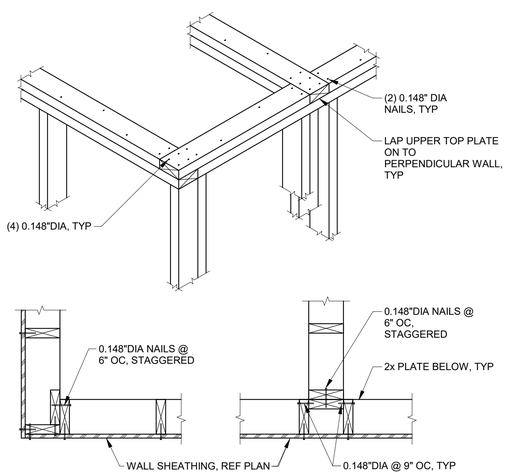
DOUBLE TOP PLATE - PLAN VIEW



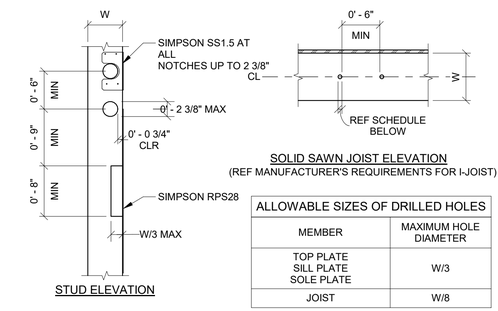
NOTE:
1. REF ARCH FOR WALL FINISHES, FURRING, ETC.
2. REF ARCH FOR ADDITIONAL REQ'D TO MAINTAIN FIRE RATING.

TYPICAL WALL CONSTRUCTION

1 / S9 BEARING WALL DETAIL
12" = 1'-0"



7 / S9 WALL FRAMING AT CORNERS AND INTERSECTIONS
1" = 1'-0"

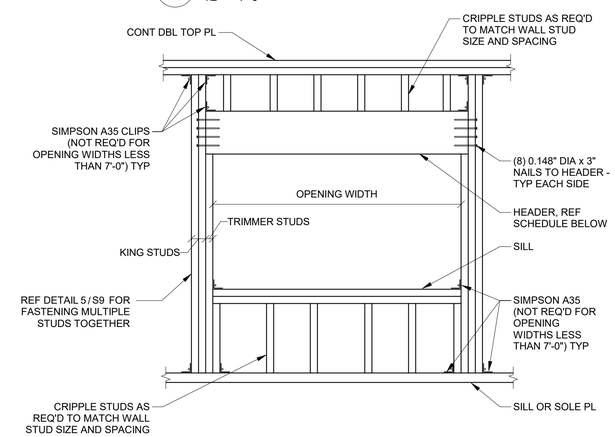


STUD ELEVATION

SOLID SAWN JOIST ELEVATION
(REF MANUFACTURER'S REQUIREMENTS FOR I-JOIST)

ALLOWABLE SIZES OF DRILLED HOLES	
MEMBER	MAXIMUM HOLE DIAMETER
TOP PLATE SILL PLATE SOLE PLATE	W/3
JOIST	W/8

4 / S9 ALLOWABLE HOLES AND NOTCHES IN WOOD FRAMING
1" = 1'-0"

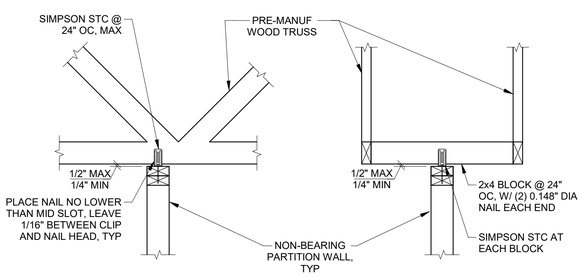


LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	REF PLAN	(2) 2x	(1) 2x	(3) 2x
6'-1" TO 12'-0"	REF PLAN	(3) 2x	(2) 2x	(4) 2x
12'-1" TO 30'-0"	REF PLAN	(3) 2x	(3) 2x	(4) 2x

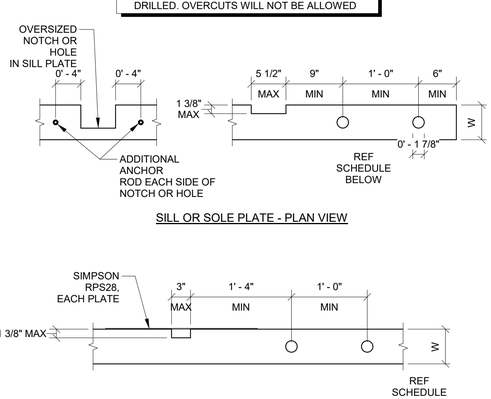
NON-LOAD BEARING WALLS				
OPENING WIDTH	HEADER	SILL	TRIMMER	KING STUD
0'-0" TO 6'-0"	4x6	(1) 2x	(1) 2x	(1) 2x
6'-1" TO 10'-6"	4x8	(2) 2x	(1) 2x	(2) 2x
10'-7" TO 14'-0"	4x10	(3) 2x	(1) 2x	(3) 2x

NOTES:
1. HEADER SIZES ARE INDICATED ON THE PLANS FOR LOAD BEARING WALLS
2. THE DEPTH OF 2x SILLS, TRIMMERS AND KING STUDS SHALL MATCH THE WALL THICKNESS
3. DETAIL APPLICABLE FOR BOTH SEMI AND FULL HEIGHT OPENINGS IN WALLS.

2 / S9 WINDOW / DOOR HEADER DETAIL AND SCHEDULE
1" = 1'-0"



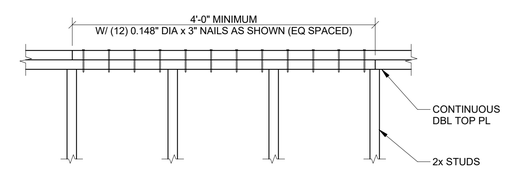
8 / S9 NON-BEARING PARTITION WALLS AT ROOF
1" = 1'-0"



BUILT-UP MEMBER	FASTENER SIZE	FASTENER SPACING	FASTENER END DIST	FASTENER EDGE DIST	ROWS OF FASTENERS
(2) 2x4	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(3) 2x4	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	1 - STAGGER
(4) OR MORE 2x4	1/2" DIA BOLT	9"	4"	1.5"	1 - STAGGER
(2) 2x6	0.148" x 3" NAIL	8"	2.5"	1" - 1.5"	2
(3) 2x6	0.148" x 4 1/2" NAIL	8"	2.5"	1" - 1.5"	2
(4) OR MORE 2x6	1/2" DIA BOLT	9"	4"	1.25"	2

NOTES:
1. PLYWOOD SHEATHING OR GYP BOARD FASTENERS SHALL BE STAGGERED TO EA STUD IN BUILT-UP MEMBER.
2. NAILS & SCREWS SHALL STAGGERED EACH SIDE OF BUITL-UP MEMBER.
3. BOLTS SHALL HAVE STANDARD PLATE WASHERS BETWEEN WOOD AND BOLT HEAD AND NUT HEAD.
4. NUTS TO BE TIGHTENED TO INSURE ALL WOOD LAMS ARE IN CONTACT.
5. 1/4" DIA SDS SCREWS OF SAME LENGTH MAY BE SUBSTITUTED FOR NAILS W/ 9" SPACING & 4" END DIST.

5 / S9 BUILT-UP WOOD POSTS
1" = 1'-0"



3 / S9 DOUBLE TOP PLATE SPLICE CONNECTION
1" = 1'-0"

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DATE: 7/11/2017
DRAWN BY: Author
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 1000
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073

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NO.	DATE	DESCRIPTION

West Fulton Fire Department
807 W Fulton Road
West Fulton, NY 12194

Framing Details

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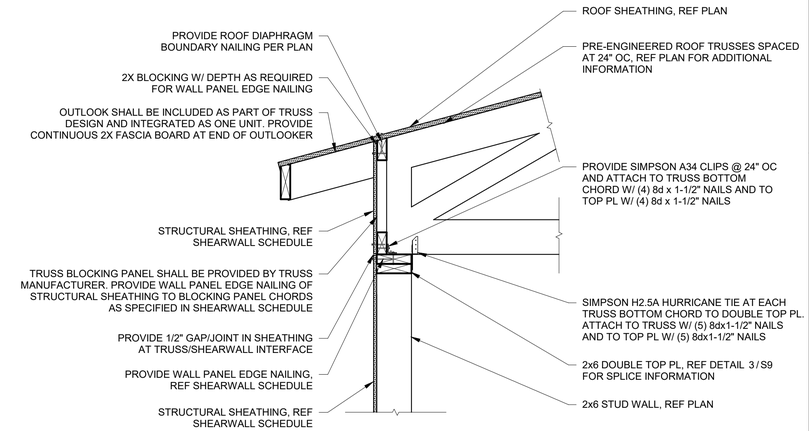
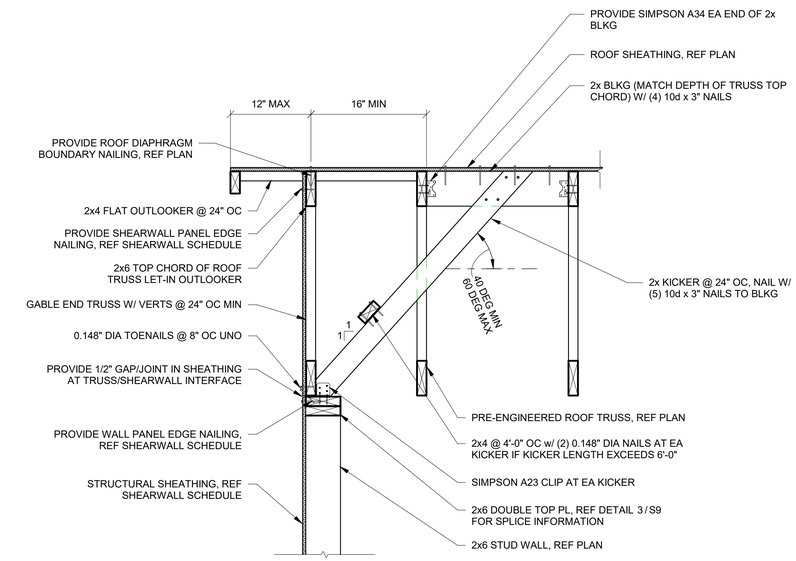
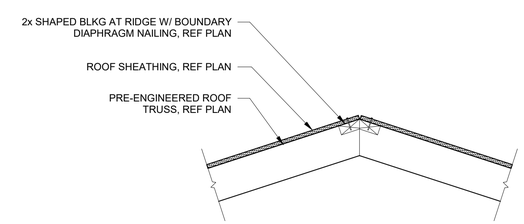


1 / S10 Typical Wall Detail - Truss Perpendicular
1" = 1'-0"



NOTES:
1. SIMPSON A34 CLIPS AND H2.5A HURRICANE TIES FOR TRUSS ARE NOT SHOWN FOR CLARITY. REF 1 / S10 FOR ADDITIONAL INFORMATION ON TYPICAL CONNECTION.

2 / S10 Typical Wall Detail - Truss Parallel
1" = 1'-0"



3 Ridge Blocking
1" = 1'-0"

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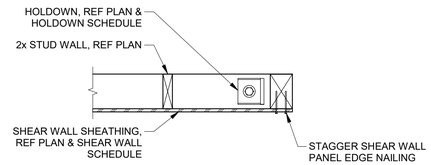
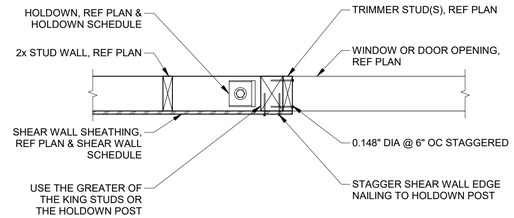
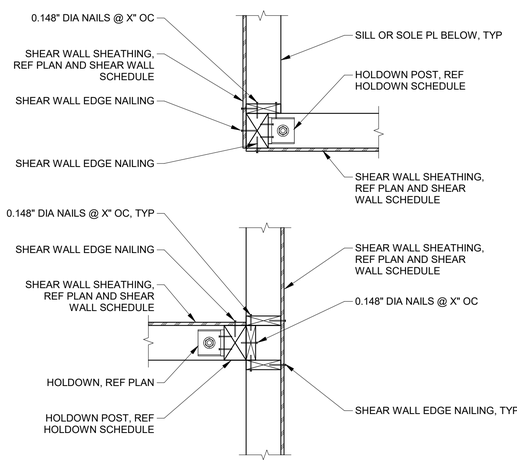
S10

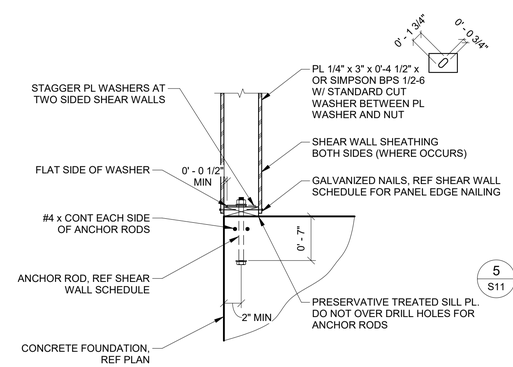




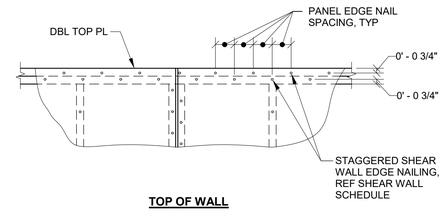
6 S11 HOLDOWN AT END OF WALL OR OPENING
1" = 1'-0"



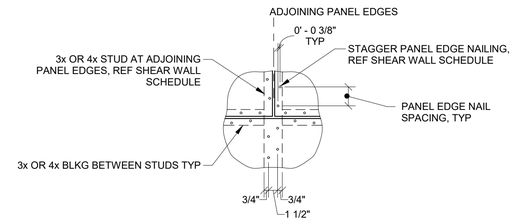
7 S11 HOLDOWN AT WALL CORNERS AND INTERSECTIONS
1" = 1'-0"



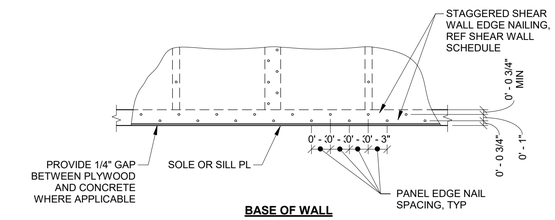
8 S11 SHEAR WALL SILL PLATE CONNECTION TO FOUNDATION
1" = 1'-0"



TOP OF WALL

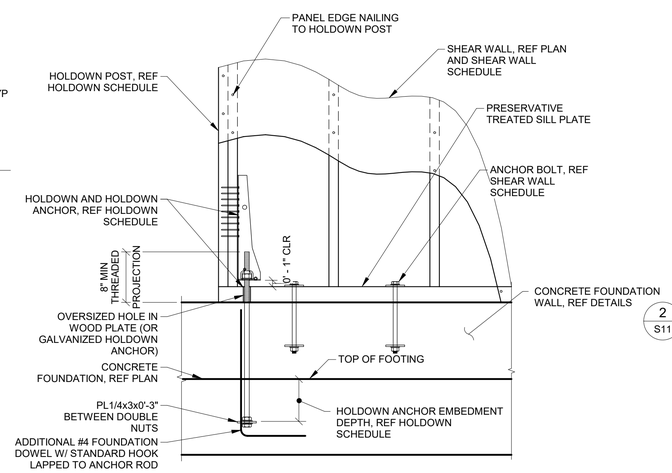


VERTICAL AND HORIZONTAL PANEL JOINTS OF WALL

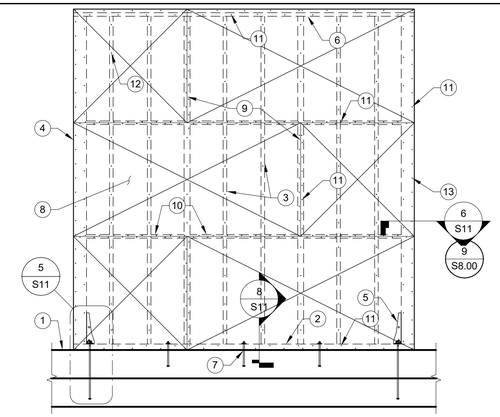


BASE OF WALL

4 S11 SHEAR WALL PANEL EDGE NAILING
1" = 1'-0"



5 S11 TYPICAL SHEAR WALL HOLDOWN AT FOUNDATION
1" = 1'-0"



SHEAR WALL ELEVATION NOTES:
1. FOUNDATION REF PLAN.
2. PRESERVATIVE TREATED SILL PLATE REF SHEAR WALL SCHEDULE.
3. WALL STUDS.
4. HOLDOWN POST REF HOLDOWN SCHEDULE.
5. HOLDOWN ANCHOR. REFERENCE PLANS & HOLDOWN SCHEDULE FOR HOLDOWN ATTACHMENT & ANCHORAGE TO FOUNDATION.
6. DOUBLE TOP PLATE. REFERENCE 3/S9 FOR DOUBLE TOP PLATE SPLICE DETAIL.
7. ANCHOR BOLTS W/ STEEL PLATE WASHERS. THERE SHALL BE A MINIMUM OF TWO ANCHORS FOR EACH SILL PIECE (ANY MODIFICATION TO SILL REMOVING MORE THAN 25% CROSS-SECTION SHALL BE CONSIDERED BREAKING PLATE) W/ ONE ANCHOR LOCATED NOT LESS THAN 4-1/2" NOR MORE THAN 12" FROM THE END OF EACH PIECE.
8. WOOD STRUCTURAL PANEL SHEATHING. ORIENTATION MAY BE EITHER HORIZONTAL OR VERTICAL AT CONTRACTORS OPTION. MINIMUM DIMENSION OF AN INDIVIDUAL PANEL SHALL BE 24" IN EITHER DIRECTION.
9. STAGGER ALL VERTICAL PANEL JOINTS WHERE POSSIBLE.
10. ALL PANEL EDGES ARE TO BE BLOCKED. REFERENCE SHEAR WALL SCHEDULE FOR FRAMING THICKNESS AT ADJOINING PANEL EDGES.
11. PANEL EDGE NAILING, REFERENCE SHEAR WALL SCHEDULE.
12. PANEL FIELD NAILING TO INTERMEDIATE SUPPORT MEMBERS AT 12" OC.
13. PROVIDE EDGE NAILING TO EACH HOLDOWN POST. WHERE HOLDOWN POST CONSISTS OF BUILT-UP MEMBERS, PROVIDE STAGGERED NAILING TO EACH PIECE AND LAMINATE IN ACCORDANCE W/ SHEAR WALL SCHEDULE.
14. REFERENCE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS & FOR INFORMATION NOT SHOWN.

1 S11 TYPICAL SHEAR WALL ELEVATION
3/8" = 1'-0"

WOOD SHEAR WALL SCHEDULE

WALL TYPE	APA RATED WOOD STRUCTURAL PANEL SHEATHING	PANEL EDGE NAILING	PT SILL PLATE CONNECTION TO FOUNDATION	FRAMING THICKNESS AT ADJOINING PANEL EDGES	SIMPSON SHEAR CLIPS WHERE NOTED IN DETAILS
A	15/32"	0.148" DIA @ 6" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 48" OC	2x	SIMPSON A35 @ 24" OC (MIN (1) PER BAY)
B	15/32"	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 32" OC	3x	SIMPSON A35 @ 16" OC (MIN (1) PER BAY)
C	15/32"	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
D	15/32" (2) SIDES	0.148" DIA @ 4" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC
E	15/32" (2) SIDES	0.148" DIA @ 3" OC	2x SILL PLATE WITH 5/8" DIA ANCHOR ROD @ 24" OC	3x	SIMPSON A35 @ 12" OC

NOTES:
1. ANCHOR RODS SHALL BE GALVANIZED ASTM F1554 GRADE 36 AND SHALL HAVE A ¼"x3"x3" GALVANIZED PLATE WASHER BETWEEN THE SILL PLATE AND THE NUT.
2. PROVIDE GALVANIZED NAILS INTO ALL PRESERVATIVE TREATED MEMBERS.
3. ALL SHEAR WALL PANEL NAILS SHALL HAVE A MINIMUM 1-1/2" PENETRATION INTO EACH CONNECTING FRAMING MEMBER.
4. NAIL HEADS SHALL BE DRIVEN FLUSH WITH THE FACE OF PANEL. OVERDRIVEN OR UNDERDRIVEN NAILS ARE NOT ACCEPTABLE.
5. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES.
6. PENETRATIONS IN THE WALL SHEATHING GREATER THAN 4" IN DIMENSION (ANY DIRECTION) ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. PENETRATIONS LESS THAN 4" IN DIMENSION SHALL BE BLOCKED ABOVE AND BELOW (STUD-TO-STUD) AND EDGE NAILED.

2 S11 WOOD SHEAR WALL SCHEDULE
12" = 1'-0"

HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS

MARK	HOLDOWN	MINIMUM HOLDOWN POST SIZE	ATTACHMENT TO HOLDOWN POST	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT DEPTH, Le
1	HDU2-SDS2.5	(2) 2x STUDS	(6) SDS 1/4" x 2-1/2"	5/8"	0'-8"
2	HDU4-SDS2.5	(2) 2x STUDS	(10) SDS 1/4" x 2-1/2"	5/8"	0'-9"
3	HDU5-SDS2.5	(2) 2x STUDS	(14) SDS 1/4" x 2-1/2"	5/8"	0'-9"
4	HDU8-SDS2.5	(3) 2x STUDS	(20) SDS 1/4" x 2-1/2"	7/8"	0'-9"
5	HD19	6X6 DF#1 POST	(5) 1" DIA BOLTS	1-1/4"	1'-0"

NOTES:
1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36. REF 4/S500 FOR ANCHOR ROD EMBEDMENT DEPTH, Le.
2. ALL HOLDOWNS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
3. BUILT-UP POSTS COMPRISED OF MULTIPLE 2x STUDS SHALL BE LAMINATED TOGETHER WITH TWO VERTIC ROWS SPACED AT 4" OC, OF 0.148" DIA x 3" NAILS SPACED AT 6" OC FULL HEIGHT.

3 S11 HOLDOWN SCHEDULE FOR WOOD SHEAR WALLS
12" = 1'-0"

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Shearwall Details

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