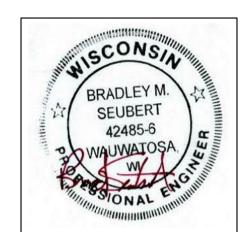
CITY PERMIT & BIDDING DOCUMENTS FOR:



MILWAUKEE BREWERY - CP 122612 **MILWAUKEE YARD EXPANSION 2017 PROJECT** 

# **PROJECT TEAM**

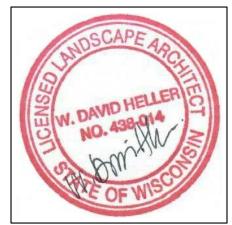


# CIVIL HARWOOD ENGINEERING CONSULTANTS

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David Heller, ASLA



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PROJECT CONTACT:

Thomas Hildebrant



# **ARCHITECTURAL JAKnetter ARCHITECTS**

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# GETTELMAN BUILDING (BLDG 56) RELOCATION & HISTORIC PRESERVATION

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GENERAL		
TS101	199-50-1154	MILWAUKEE BREWERY - TITLE SHEET
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A101	156-01-3003	ROOF PLAN AND SECTIONS

# **PROJECT DATA**

1. <u>DETACMENT:</u> FILE #171494 ("RESOLUTION RELATING TO A CERTIFICATE OF APPROPRIATENESS FOR THE DETACHMENT FROM THE ADJACENT 2-STORY MALTHOUSE BUILDING AND 1-STORY WEST ADDITION OF THE SCHWEICHART / GETTELMAN HOUSE, AN INDIVIDUALLY DESIGNATED HISTORIC PROPERTY AT 4400 WEST STATE STREET FOR MILLERCOORS USA, LLC.")

2. RELOCATION: FILE #171493 ("RESOLUTION RELATING TO A CERTIFICATE OF APPROPRIATENESS FOR THE RELOCATION AND REHABILITATION OF THE SCHWEICHART/GETTELMAN HOUSE, AN INDIVIDUALLY DESIGNATED HISTORIC PROPERTY AT 4400 WEST STATE STREET, FOR MILLERCOORS USA, LLC.")

CODES. MAINTAIN CODE REQUIRED FIRE RESISTANCE RATINGS AND ENCLOSURES. 3. ALL EGRESS DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF KEY OR SPECIAL KNOWLEDGE. NO FLUSH BOLTS, DEAD OR DRAW BOLTS, ETC. WILL BE

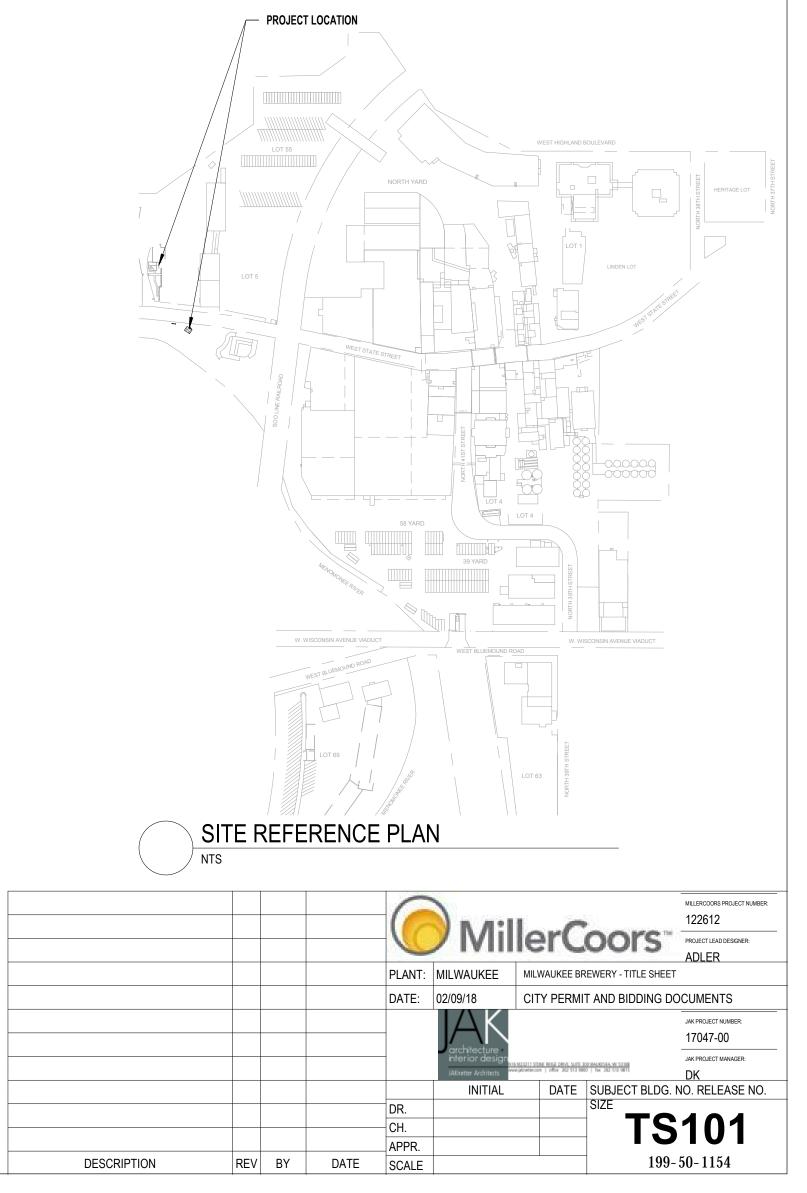
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL

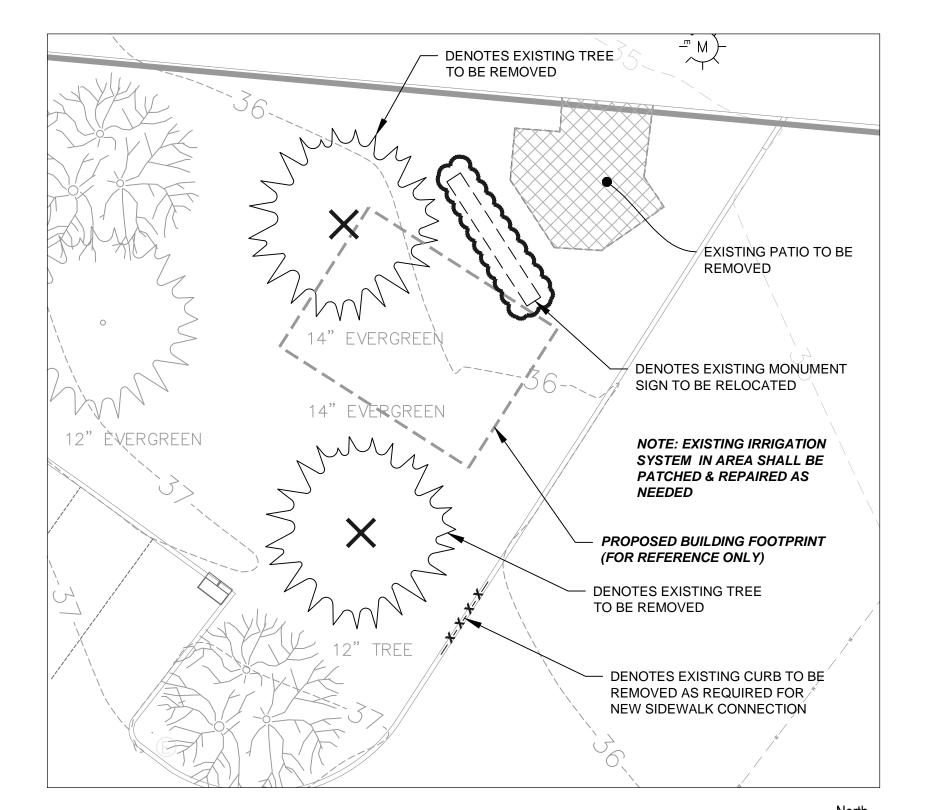
4. THIS BUILDING WILL NOT BE SPRINKLERED.

5. ALL CONTRACTORS AND TRADES TO REFER TO ALL SHEETS OF THE SET FOR INFORMATION TO COMPLETE THEIR WORK.

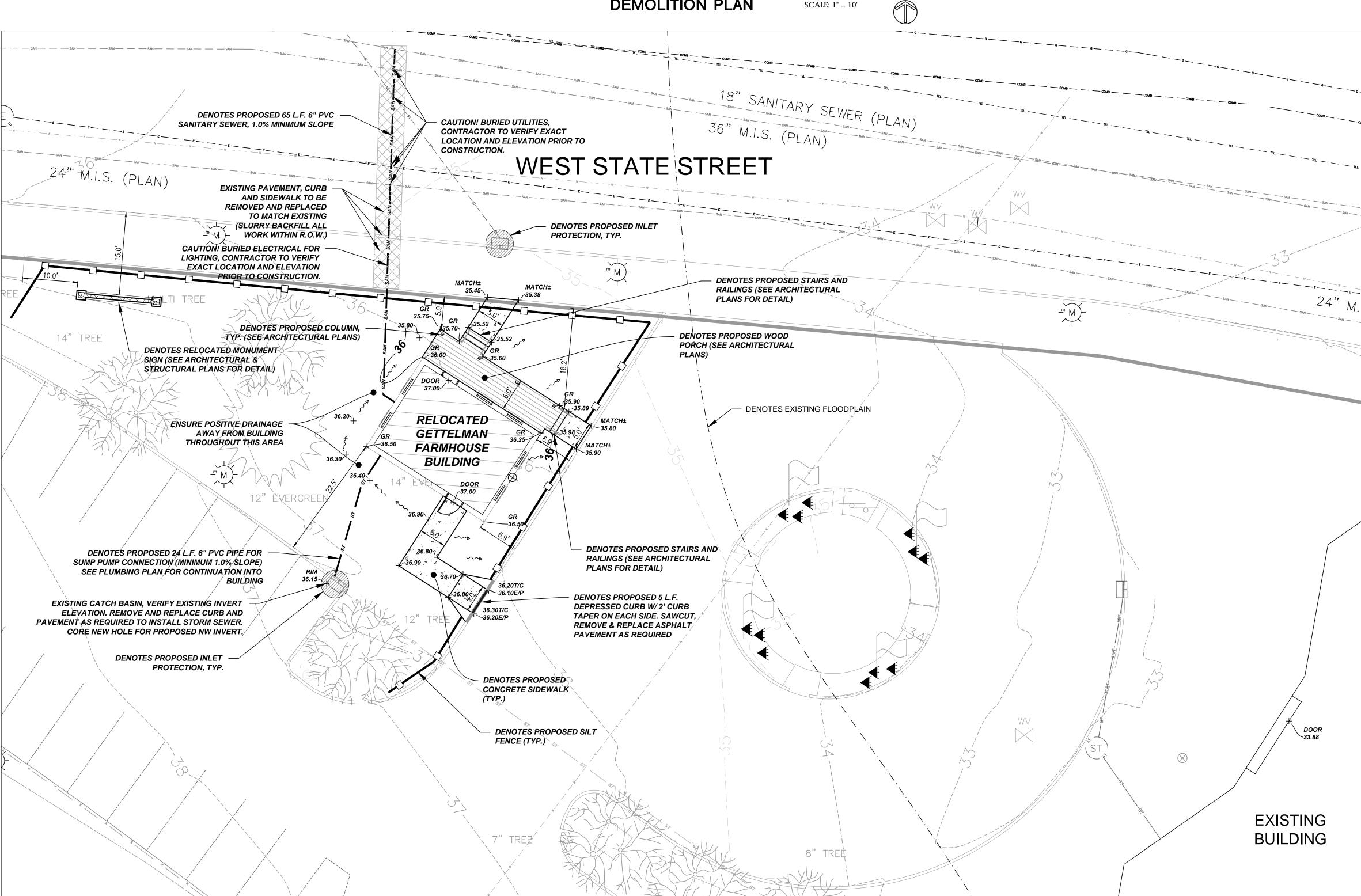
6. ALL CONTRACTORS AND/OR TRADES MUST COORDINATE THEIR WORK AND LOCATIONS WITH OTHER CONTRACTORS AND/OR TRADES.

7. ANY DISCREPANCIES OR UNUSUAL EXISTING CONDITIONS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF JAK ARCHITECTS FOR FURTHER DIRECTION. DO NOT SCALE DRAWINGS.





**DEMOLITION PLAN** 



**EROSION CONTROL NOTES AND PHASING** 

ESTIMATED CONSTRUCTION TIMEFRAMES: INSTALL EROSION CONTROL = MARCH, 2018 GRADING AND UTILITY INSTALLATION = MARCH, 2018 FINAL SITE GRADING AND RESTORATION = JULY, 2018

ALL CHANGES TO THE ABOVE SCHEDULE SHALL BE REVIEWED AND APPROVED BY THE MUNICIPALITY.

CONTRACTOR SHALL INSPECT ALL EROSION CONTROL PRACTICES WEEKLY AND AFTER ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER. THE CONTRACTOR SHALL PERFORM ALL INSPECTIONS AND DOCUMENTATION PER THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. ALL REQUIRED REPAIRS SHALL BE MADE WITHIN 24 HOURS.

- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR WILL HAVE IN PLACE, ALL APPLICABLE PLAN APPROVALS AND PERMITS.
- INSTALL INLET PROTECTION WHERE INDICATED ON PLANS.
- STRIP TOPSOIL FROM THE SITE (WHERE PROPOSED IMPROVEMENTS OR GRADING IS SHOWN ONLY). TOPSOIL STOCKPILE(S) REMAINING FOR MORE THAN SEVEN DAYS SHALL BE STABILIZED WITH VEGETATIVE COVER, MULCH, TARPS OR OTHER APPROVED PRACTICE. EROSION FROM TOPSOIL PILES LEFT FOR LESS THAN SEVEN DAYS SHALL BE CONTROLLED WITH SILT FENCE OR OTHER APPROVED METHOD. ANY TOPSOIL STOCKPILE WITHIN 25' OF A ROADWAY OR DRAINAGE DITCH SHALL BE COVERED WITH TARPS OR OTHER APPROVED METHOD. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS IS TO BE STABILIZED BY SEED, SOD, MULCH, OR OTHER APPROVED METHOD.
- INSTALL UTILITIES
- REDISTRIBUTE TOPSOIL FROM STOCKPILE(S) TO A DEPTH OF 6 INCHES. SURPLUS TOPSOIL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, COORDINATE W/ OWNER. FINAL GRADE, SEED AND MULCH SITE. PLACE EROSION CONTROL MATTING WHERE INDICATED ON PLANS. (SEEDING AND MULCHING TO CONFORM WITH APPROVED SEED MIXTURES AND APPLICATION RATES, SEE LANDSCAPE PLAN FOR FINAL SEED AND SOD SPECS. EROSION CONTROL MATTING TO BE INSTALLED PER MANUFACTURE'S SPECIFICATIONS.)
- INSTALL AGGREGATE BASE COURSE IN AREAS TO BE CONCRETE PAVED
- . INSTALL CONCRETE SECTIONS.
- UPON SITE STABILIZATION, REMOVE TEMPORARY EROSION CONTROL PRACTICES. CLEAN STRUCTURES OF ANY SEDIMENT AND/OR CONSTRUCTION DEBRIS.
- . CONSTRUCTION AND WASTE MATERIALS SHALL BE PROPERLY DISPOSED OF ON A ROUTINE BASIS. NO CONSTRUCTION OR WASTE MATERIALS SHALL BE TRACKED, BLOWN OR OTHERWISE LOCATED OR STORED ON ADJACENT PROPERTIES.
- 11. DUST CONTROL SHALL BE MAINTAINED ONSITE WITH USE OF A WATER TRUCK (IF NECESSARY).



#### **DEMOLITION LEGEND**

DENOTES ITEM TO BE REMOVED OR RELOCATED



DENOTES CONCRETE REMOVAL AREA

DENOTES TREE TO BE REMOVED

SILT FILTER FENCE

**HATCH LEGEND** 

PROPOSED CONCRETE SIDEWALK

	UTILITY LEGEND
SYMBOL	DESCRIPTION
w	EXISTING WATER MAIN
<u></u>	PROPOSED WATER SERVICE
E E	EXISTING ELECTRICAL LINE
E E	PROPOSED ELECTRICAL LINE
GAS — GAS —	EXISTING GAS MAIN
GAS GAS	PROPOSED GAS MAIN
— SAN — SAN — SAN —	EXISTING GARACT GENERAL
	PROPOSED SANITARY SEWER
— ST —— ST —— ST —	EXISTING STORM SEWER
	PROPOSED STORM SEWER
OHW—— OHW—	OVERHEAD WIRES
, (T)	EXISTING POWER POLES
-(M)-	EXISTING LIGHT POLES
S	SANITARY MANHOLE
$\bigcirc$	FIRE HYDRANT
$\bowtie$	EXISTING WATER VALVE
$\bowtie$	PROPOSED WATER VALVE
	EXISTING STORM STRUCTURE
	PROPOSED STORM STRUCTURE
	DENOTES EMERGENCY OVERFLOW ROUTE / DRAINAGE PATH
100.00	PROPOSED & EXISTING SPOT GRADE



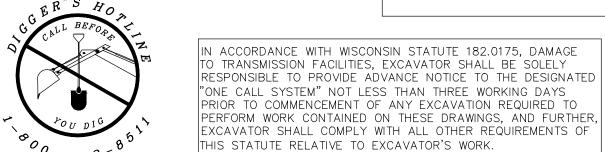


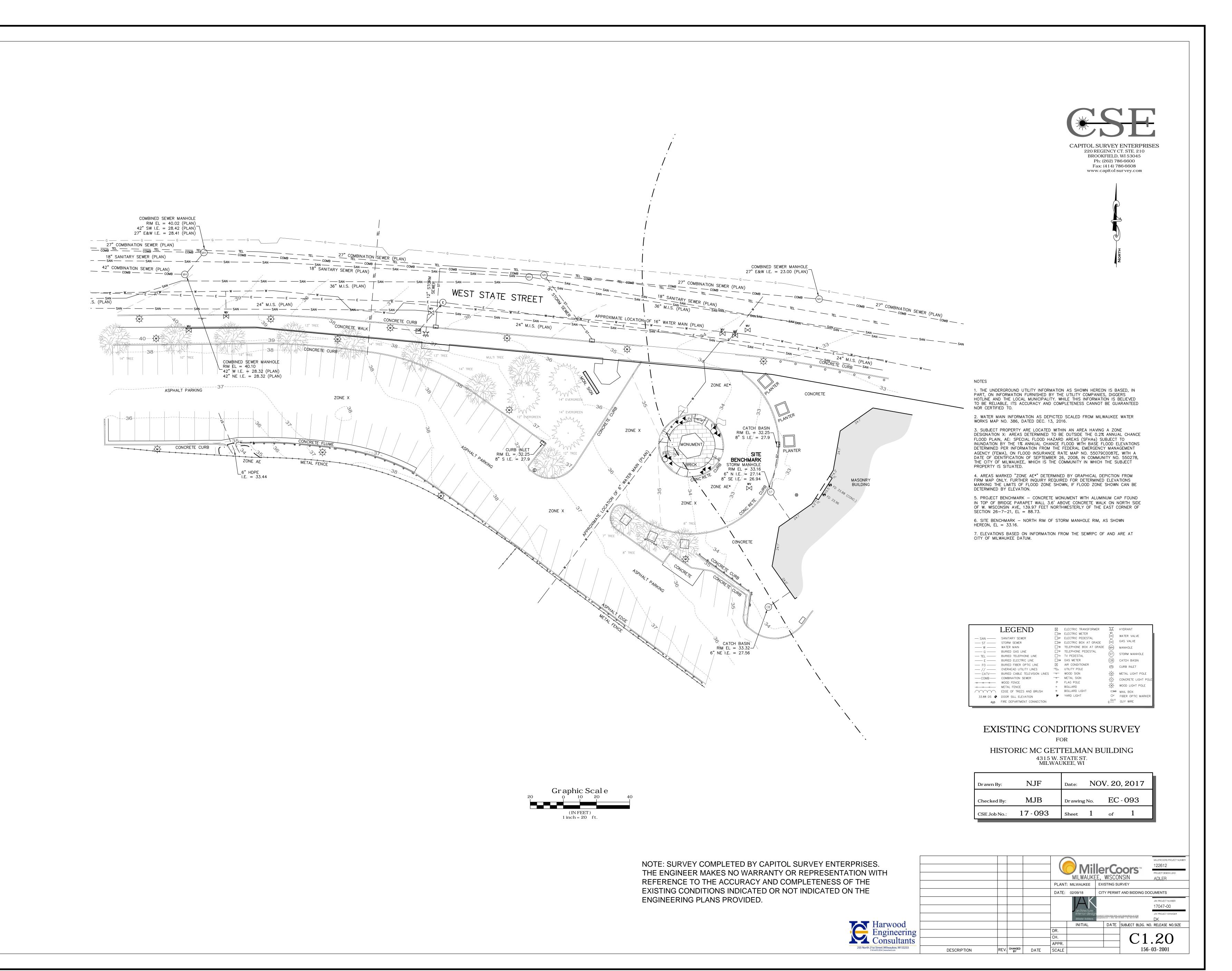
SITE GRADING & EROSION CONTROL PLAN



SCALE: 1'' = 10'







#### **GENERAL NOTES AND SPECIFICATIONS**

- THE EXISTING SITE INFORMATION ON THIS PLAN WAS TAKEN FROM A SITE SURVEY PROVIDED BY CAPITOL SURVEY ENTERPRISES. THE ENGINEER MAKES NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLETENESS OF THE EXISTING CONDITIONS INDICATED OR NOT INDICATED ON THE ENGINEERING PLANS PROVIDED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SITE CONDITIONS INCLUDING UNDERGROUND UTILITIES, UNDERGROUND UTILITY ELEVATIONS, BUILDING SETBACKS AND EXISTING BUILDING LOCATIONS. THE CONTRACTOR SHALL INFORM THE OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WITH WORK. QUESTIONS REGARDING THE EXISTING SURVEY SHALL BE DIRECTED TO THE PARTIES LISTED ABOVE.
- BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL TO BE CONNECTED TO (VERIFYING ELEVATION, LOCATION AND SIZE). SHOULD THE EXISTING UTILITY NOT BE AS INDICATED ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR EVALUATION.
- ALL UTILITY CONSTRUCTION SHALL ADHERE TO THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (2003), AS WELL AS, THE CITY OF WEST ALLIS CONSTRUCTION STANDARDS AND THE DEPT. OF SAFETY AND PROFESSIONAL SERVICED SEC. 382-387.
- ALL UTILITY PERMITS MUST BE RECEIVED FROM THE CITY OF WEST ALLIS PRIOR TO THE START OF CONSTRUCTION.
- NOTIFY THE PUBLIC WORKS INSPECTION DEPT. AT LEAST 48 HOURS BEFORE STARTING
- BACKFILL REQUIREMENTS AND ROADWAY/SIDEWALK RESTORATION SHALL ADHERE TO LOCAL STANDARDS (GRANULAR BACKFILL UNDER OR WITHIN 5' OF CURBS, SIDEWALK, OR PAVEMENT. SPOIL MAY BE USED ELSEWHERE. SLURRY BACKFILL WILL BE REQUIRED IN PUBLIC ROADWAYS.)
- ALL BUILDING UTILITIES SHALL BE VERIFIED WITH THE ARCHITECTURAL PLANS PRIOR
- PROPOSED STORM SEWER SHALL BE PVC, ASTM D-3034, SDR 35 WITH RUBBER ELASTOMERIC JOINTS CONFORMING TO ASTM D-3212 (UNLESS OTHERWISE NOTED).
- 9. UTILITY TRENCHES SHALL BE MECHANICALLY COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- 10. ALL EROSION CONTROL METHODS MUST BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALSO, CONTRACTOR IS RESPONSIBLE FOR REMOVING EROSION CONTROL METHODS ONCE THE SITE IS STABILIZED.
- 11. THE PROPOSED SITE LOCATION AND SURROUNDING STREETS MUST BE KEPT DEBRIS FREE. SWEEP STREETS AS NEEDED TO MAINTAIN CLEAN STREETS.
- 12. ALL EXCAVATED OR STRIPPED MATERIALS NOT BEING REPLACED IN UTILITY TRENCHES OR BEING USED FOR FILL SHALL BE REMOVED FROM THE SITE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
- 13. ALL DISTURBED GRASS AREAS SHALL BE STABILIZED (PER DNR TECHNICAL STANDARDS) WITHIN 7 DAYS OF COMPLETION. DISTURBED GRASS AREAS SHALL BE TOPSOILED (6"), RESEEDED AND STABILIZED. AREAS WITH A SLOPE OF 3H:1V OR STEEPER SHALL BE COVERED WITH A CLASS 1 - TYPE A EROSION FABRIC. (SEE
- 14. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING & FOUNDATION DETAILS AND ORIENTATION.
- 15. CONTRACTOR SHALL MATCH PROPOSED CONCRETE AND ASPHALT PAVEMENT TO EXISTING IN ELEVATION AND ALIGNMENT.
- 16. REMOVAL OF PAVEMENT SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE WISCONSIN D.O.T
- 17. ALL CONCRETE MUST CONFORM TO THE STANDARD SPECIFICATIONS FOR READY MIXED CONCRETE. MINIMUM 28 DAY COMPRESSIVE STRENGTH TEST MUST EQUAL 4000
- 18. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL PROPERTY CORNERS.
- 19. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING UTILITIES OR SITE IMPROVEMENTS. CONTRACTOR SHALL DOCUMENT ALL EXISTING DAMAGE PRIOR TO START OF CONSTRUCTION AND NOTIFY CONSTRUCTION MANAGER OF ANY
- 20. PROJECT SAFETY ON-SITE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 21. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SOIL CONDITIONS. CONSTRUCTION MANAGER MAY HAVE SOILS REPORT FOR MORE INFO.
- 22. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED UP PLANS (AS-BUILTS) SHOWING ANY CHANGES DURING CONSTRUCTION.

### DENSE GRADED BASE

- MATERIALS SHALL CONFORM TO SECTION 301.2 OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. MATERIAL GRADATIONS SHALL CONFORM TO SECTION 305.2.2 OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION UNLESS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.
- BASE COURSE MATERIAL SHALL BE CRUSHED STONE OR CRUSHED GRAVEL ONLY.
- PREPARE THE FOUNDATION, OR RESURFACE THE PREVIOUSLY PLACED BASE LAYER, AS SPECIFIED IN WISDOT SECTION 211 BEFORE PLACING BASE. DO NOT PLACE BASE FOUNDATIONS THAT ARE SOFT, SPONGY, OR COVERED BY ICE OR SNOW. WATER AND REWORK OR RE-COMPACT DRY FOUNDATIONS AS NECESSARY TO ENSURE PROPER COMPACTION, OR AS THE REPRESENTATIVE DESIGNATES.
- IN PROPOSED PAVEMENT AREAS, ALL ORGANIC SOLID SHALL BE REMOVED.
- IN AREAS OF EXISTING PAVEMENT TO BE MODIFIED OR ADJUSTED IN GRADE, THE EXISTING PAVEMENT SECTION SHALL BE REMOVED BY AN ACCEPTABLE METHOD. THE NEW PAVEMENT SECTION SHALL MATCH THE CONSTRUCTION DETAILS.
- PROOF-ROLL ALL SUBGRADE AREAS THAT ARE TO RECEIVE AGGREGATE BASE OR
- BUILD AND MAINTAIN STOCKPILES USING METHODS THAT MINIMIZE SEGREGATION AND PREVENT CONTAMINATION. IF THE CONTRACT SPECIFIES LOCATION, PLACE STOCKPILES WHERE SPECIFIED. CLEAR AND PREPARE STOCKPILE AREAS TO FACILITATE THE RECOVERY OF THE MAXIMUM AMOUNT OF STOCKPILED MATERIAL.
- PLACE AGGREGATE IN A MANNER THAT MINIMIZES HAULING ON THE SUBGRADE. DO NOT USE VEHICLES OR OPERATIONS THAT DAMAGE THE SUBGRADE OR IN-PLACE BASE. DEPOSIT MATERIAL IN A MANNER THAT MINIMIZES SEGREGATION.
- COMPACT THE BASE UNTIL THERE IS NO APPRECIABLE DISPLACEMENT, EITHER LATERALLY OR LONGITUDINALLY, UNDER THE COMPACTION EQUIPMENT.
- 10. COMPACT EACH BASE LAYER, INCLUDING SHOULDER FORESLOPES, WITH EQUIPMENT SPECIFIED IN WISDOT SECTION 301.3.1. USE STANDARD COMPACTION CONFORMING TO WISDOT SECTION 301.3.4.2, UNLESS THE SPECIAL PROVISIONS SPECIFY OTHER METHODS. FINAL SHAPING OF SHOULDER FORESLOPES DOES NOT REQUIRE COMPACTION.
- . AFTER THE PROJECT IS COMPLETED, THOROUGHLY CLEAN UP ALL DEBRIS WHICH MAY HAVE ACCUMULATED DURING THE PLACEMENT OF DENSE GRADED BASE. REPLACE OR REPAIR AS REQUIRED, ALL SURFACES AND/OR LANDSCAPE FEATURES DAMAGED OR DISTURBED UNDER THIS ITEM OF WORK.

### STORM DRAINAGE UTILITIES

- CONFORM ALL MATERIALS TO THE SIZE AND TYPE SHOWN ON THE PLANS OR AS CALLED FOR IN THE SPECIFICATIONS AND TO APPLICABLE LAWS, CODES, AND ORDINANCES.
- CONFORM TO ASTM D-3034 WITH SOLVENT WELD OR ELASTOMERIC JOINTS. PIPE SHALL BE SDR-35, UNLESS OTHERWISE NOTED. PIPE OVER 15 INCHES IN DIAMETER SHALL MEET THE REQUIREMENTS OF ASTM F679-03.
- THE WALL THICKNESS SHALL CONFORM TO REQUIREMENTS FOR A T-1 WALL. PVC MATERIAL SHALL HAVE CELL CLASSIFICATION 12434-B OR 12454-C AS DEFINED IN ASTM D1784 WITH MINIMUM MODULES OF ELASTICITY OF 400,00 PSI IN TENSION. THE PIPE WALL SHALL BE HOMOGENEOUS AND CONTAIN NO SEAMS. MINIMUM PIPE STIFFNESS PER ASTM D2412 SHALL BE 60 PSI FOR PIPE SIZES THROUGH 18-INCH AND 46 PSI FOR 21-INCH AND LARGER PIPE SIZES. PIPE SHALL WITHSTAND IMPACT OF 210 FOOT-POUNDS FOR PIPE SIZES THROUGH 8-INCH AND 220 FOOT-POUNDS ON
- 4. ALL EXPOSED END SECTIONS SHALL BE PROVIDED WITH STEEL APRON END WALLS.

#### CAST IN PLACE CONCRETE

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE MANUFACTURER'S AND SUPPLIER'S INSTRUCTIONS.
- 2. ALL CONCRETE WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND ACI 301, INCLUDING FUNCTION, DURABILITY, APPEARANCE, STRENGTH, CRACKING, TOLERANCES AND FINISHING, SHALL BE CORRECTED AS DIRECTED BY ARCHITECT AT CONTRACTOR'S EXPENSE. ADDITIONAL TESTING, ENGINEERING, REINFORCEMENT AND REMOVAL AND REPLACEMENT OF DEFECTIVE CONCRETE SHALL BE PAID FOR BY CONCRETE CONTRACTOR. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COST OF CORRECTIONS TO ANY OTHER WORK AFFECTED BY OR RESULTING FROM
- 3. CONCRETE SHALL CONFORM TO SECTIONS 501 AND 601 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

CORRECTIONS TO THE CONCRETE WORK.

- 4. ALL CONCRETE, UNLESS OTHERWISE SPECIFICALLY PERMITTED BY ARCHITECT, SHALL BE TRANSIT-MIXED IN ACCORDANCE WITH ASTM C 94.
- 5. IN GENERAL, COMPLY WITH ASTM C 33 FOR GRADING AND QUALITY OF FINE AND COARSE AGGREGATE FOR USE IN CONCRETE.
- 6. PORTLAND CEMENT SHALL CONFORM WITH ASTM C 150 AND SHALL ONLY CONTAIN THE FOLLOWING INGREDIENTS: PORTLAND CEMENT CLINKER; WATER OR CALCIUM SULFATE, OR BOTH; LIMESTONE; PROCESSING ADDITIONS; AND AIR-ENTRAINING ADDITION FOR AIR-ENTRAINING PORTLAND CEMENT.
- 7. ADMIXTURES SHALL NOT CONTAIN MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER.
- 8. WATER REDUCING ADMIXTURES SHALL CONFORM TO ASTM C 494.
- 9. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C 260
- 10. CALCIUM CHLORIDE, THIOCYANATES OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS BY WEIGHT OF ADMIXTURE ARE NOT PERMITTED FOR USE IN CONCRETE MIXES.
- 11. SYNTHETIC FIBERS SHALL BE USED IN CONCRETE MIX DESIGN IN LIEU OF WELDED WIRE FABRIC. SYNTHETIC FIBERS SHALL NOT REPLACE REINFORCING REBAR/DOWELS AS DEPICTED ON THE CONSTRUCTION DETAILS.
- 12. FOR CONCRETE PAVEMENTS: MATRIX HPS 950 MACRO/MICRO SYNTHETIC BLEND FIBER OR FORTA FERRO MACRO FIBER - FRC INDUSTRIES. APPLICATION DOSAGE SHALL BE 5 POUNDS PER CUBIC YARD.
- 13. CONCRETE MUST MEET ALL REQUIREMENTS OF THE ASTM C 94, ACI 211, ACI 318 CHAPTER 4 DURABILITY REQUIREMENTS, AND THOSE HEREIN SPECIFIED FOR MATERIALS, PROPORTIONING, MIXING AND OTHER DETAILS OF MANUFACTURER, QUALITY AND DELIVER.
- 14. AIR ENTRAINED CONCRETE: USE FOR ALL EXTERIOR SLABS, WALLS, WALKS, PLATFORMS, RAMPS, STEPS, ALL PORTIONS OF PARKING
- MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 4000 PSI.
- 16. MAXIMUM AGGREGATE SIZE SHALL NOT EXCEED ONE THIRD OF THE SLAB ON GRADE THICKNESS.
- 17. FLY ASH MAY BE USED AS A POUND FOR POUND REPLACEMENT OF CEMENT UP TO 20% OF THE TOTAL CEMENTITIOUS CONTENT, 25% FOR FOOTINGS, EXCEPT FOR FINISHED FLATWORK DURING WINTER CONSTRUCTION, SUBJECT TO ARCHITECT'S APPROVAL.
- 18. CONCRETE REQUIRING AIR ENTRAINMENT SHALL CONTAIN SIX (6) PERCENT PLUS OR MINUS ONE AND A HALF (1.5) PERCENT AIR BY VOLUME, FOR 3/4" DIA. AGGREGATE. CONFORM TO ACI 318. CHAPTER 4.
- 19. ALL CONCRETE MUST CONTAIN THE SPECIFIED WATER-REDUCING ADMIXTURE OR WATER-REDUCING -RETARDING ADMIXTURE AND/OR THE SPECIFIED HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER). SPECIFIED CEMENT CONTENTS SHALL BE INCREASED 10 PERCENT (10%) WHEN NO WATER-REDUCING ADMIXTURES ARE USED.
- 20. MEASURING MATERIALS: CEMENT, AGGREGATES, WATER AND ADMIXTURES SHALL BE MEASURED AND COMBINED STRICTLY IN ACCORDANCE WITH ASTM SPECIFICATION C 94.
- 21. MAKE ONE SLUMP TEST OF THE FIRST TRUCK OF EACH MIX, EACH DAY, ONE TEST FOR EACH COMPRESSION TEST AND OTHER TESTS AS OFTEN AS REQUIRED THEREAFTER, WHENEVER CONSISTENCY CHANGES.
- 22. AIR CONTENT TESTS SHALL BE MADE FROM THE FIRST TRUCK OF EACH MIX, EACH DAY AND WHEN-EVER TEST CYLINDERS ARE MADE, IN ACCORDANCE WITH ASTM C 173 OR ASTM C231. TEST MORE OFTEN WHEN REQUIRED AIR CONTENTS ARE NOT
- 23. CONCRETE TEMPERATURE: TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F (4 DEGREES C) AND BELOW, AND WHEN 80 DEGREES F (27 DEGREES C) AND ABOVE: AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS IS
- 24. IF MEASURED SLUMP, AIR CONTENT OR CONCRETE TEMPERATURE FALLS OUTSIDE LIMITS SPECIFIED, A CHECK TEST SHALL BE MADE IMMEDIATELY ON ANOTHER PORTION OF SAME SAMPLE. IN EVENT OF A SECOND FAILURE, CONCRETE SHALL BE CONSIDERED TO HAVE FAILED TO MEET REQUIREMENTS OF SPECIFICATIONS AND SHALL NOT BE USED IN STRUCTURE. NOTIFY ARCHITECT IMMEDIATELY.
- 25. STRENGTH TESTS SHALL BE MADE FOR EACH OF THE FOLLOWING CONDITIONS: EACH DAY'S POUR, EACH CLASS OF CONCRETE, EACH CHANGE OF SUPPLIES OR SOURCE, EACH 150 CUBIC YARDS OF CONCRETE OR FRACTION THEREOF, AND EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS.
- 26. TO CONFORM TO REQUIREMENTS OF THIS SPECIFICATION, THE STRENGTH LEVEL SHALL BE CONSIDERED SATISFACTORY SO LONG AS THE AVERAGE OF ALL SETS OF THREE (3) CONSECUTIVE STRENGTH TEST RESULTS EQUALS OR EXCEEDS THE SPECIFIED F'C AND NO INDIVIDUAL STRENGTH TEST RESULT FALLS BELOW THE SPECIFIED STRENGTH F'C BY MORE THAN 500 PSI. ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF NONCONFORMANCE.
- 27. BEFORE PLACING CONCRETE, VERIFY THAT INSTALLATION OF FORMWORK, REINFORCEMENT, AND EMBEDDED ITEMS IS COMPLETE AND THAT REQUIRED INSPECTIONS HAVE BEEN PERFORMED.
- 28. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES IN CONFORMANCE WITH ACI 301 AND
- PROVIDE CONCRETE PAVEMENT HAVING THE THICKNESS AND REINFORCEMENT AS SHOWN ON THE DRAWINGS, OR TO MATCH ADJACENT EXISTING PAVEMENT. TIE BARS SHOULD BE PLACED AT ALL CONSTRUCTION JOINTS PARALLEL TO TRAFFIC AND CONSIST OF NO. 4 REINFORCING BARS, 24 INCHES IN LENGTH AND 48 INCHES ON CENTER, UNLESS OTHERWISE NOTED ON THE STANDARD DETAILS.

### SEEDING AND RESTORATION

- GRASS SEED SHALL MEET THE REQUIREMENTS OF SECTION 630.2.1 OF STANDARDS SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- GRASS SEED: FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH AOSA'S "JOURNAL OF SEED TECHNOLOGY.
- 3. WATER FREE OF WASTEWATER EFFLUENT OR OTHER HAZARDOUS CHEMICALS.
- . CLEAN STRAW OR HAY THAT IS WELL-SEASONED, AND FREE OF ROT, MILDEW AND THE SEEDS OF NOXIOUS WEEDS.
- SPEED EXCEEDS 12 MPH. SOW SEED USING EITHER METHOD A OR METHOD B AS DEFINED IN SECTION 630.3.3 OF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. UNLESS OTHERWISE

32 DEGREES FAHRENHEIT. NO SEEDING SHALL OCCUR WHEN THE AVERAGE WIND

NO SEEDING SHALL OCCUR ON FROZEN GROUND OR AT TEMPERATURES LOWER THAN

NOTED, SOW SEED AT A RATE OF 5# (DRY SEED WEIGHT)/1000 SQUARE FEET. PLACE AND ANCHOR MULCH USING THE METHODS OUTLINED IN SECTION 627.3 OF

STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SEEDED AREAS ARE TO BE WATERED DAILY TO MAINTAIN ADEQUATE SURFACE SOIL MOISTURE FOR PROPER SEED GERMINATION. WATERING SHALL CONTINUE FOR NOT LESS THAN 30 DAYS FOLLOWING SEEDING. THEREAFTER, APPLY ½" OF WATER TWICE WEEKLY UNTIL FINAL ACCEPTANCE.

#### EARTHWORK AND EROSION CONTROL

- CONTACT THE PROJECT MANAGER TO DETERMINE THE TYPE, AND FREQUENCY OF QUALITY ASSURANCE GEOTECHNICAL TESTING REQUIRED ON EACH PROJECT. PROVIDE LISTING OF QUALITY ASSURANCE GEOTECHNICAL TESTING
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING ALL EARTHWORK QUANTITIES BASED ON THE EXISTING AND PROPOSED ELEVATIONS PROVIDED ON THE PLANS. ANY GEOTECHNICAL INVESTIGATIONS PROVIDED BY THE OWNER APPLY ONLY TO THOSE LOCATIONS THAT THE DATA WAS COLLECTED, AND MAY NOT BE INDICATIVE OF CONDITIONS ELSEWHERE ON THE SITE.
- EROSION CONTROL AND STORM WATER MANAGEMENT PRACTICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE WDNR APPROVED TECHNICAL STANDARDS (OR EQUIVALENT).

REQUIREMENTS IN THIS ITEM.

- EROSION MATS, SOIL STABILIZERS, AND TRACKIFIERS SHALL BE LISTED ON THE PRODUCT ACCEPTABILITY LIST FOR MULTI-MODAL APPLICATIONS ("PAL") AS PUBLISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
- SILT FENCE FABRIC SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 628.2.6, IN 3 FOOT TALL ROLLS, WITH 4' TALL 2" X 2" NOMINAL CROSS SECTION HARDWOOD POSTS SPACED A MAXIMUM OF 10' O.C.. SILT FENCE SHALL BE MIRAFI, TREVIRA, AMOCO, CFM, OR APPROVED EQUAL.
- EROSION MAT SHALL COMPLY WITH THE REQUIREMENTS OF CLASS I, TYPE A EROSION MAT AS DEFINED BY STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE PAL. EROSION MAT SHALL BE AMERICAN EXCELSIOR, SI GEOSOLUTIONS, EROSION CONTROL SYSTEMS, NORTH AMERICAN GREEN, OR APPROVED EQUAL.
- RIP RAP SHALL BE THE CLASS SPECIFIED AND SHALL CONFORM TO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 606.2.
- FIELDSTONE COBBLES STONE SHALL BE THE SIZE AND TYPE SPECIFIED ON PLANS. CONTRACTOR SHALL PROVIDE AN ON-SITE SAMPLE FOR APPROVAL PRIOR TO
- THE AGGREGATE FOR TRACKING PADS SHALL BE 3 TO 6 INCH CLEAR OF WASHED STONE. ALL MATERIALS SHALL BE RETAINED ON A 3-INCH SIEVE.
- 10. SOIL STABILIZERS SHALL BE NON-ASPHALT-BASED PRODUCTS OF THE TYPE SPECIFIED, AND MEETING THE REQUIREMENTS OF THE PAL.

11. POLYMERS USED TO SETTLE SUSPENDED SEDIMENT SHALL MEET THE

TECHNICAL STANDARDS.

OF THE SITE OR RECEIVING FACILITY.

ON THE PLAN.

EFFECTIVE.

COVER.

REQUIREMENTS OF THE WDNR TECHNICAL STANDARDS. 12. WATER SOLUBLE ANIONIC POLYACRYLAMIDE (PAM) USED AS TEMPORARY SOIL

BINDING AGENTS TO REDUCE EROSION SHALL MEET THE REQUIREMENTS OF WDNR

- 13. INSTALL EROSION CONTROL MEASURES AS REQUIRED BY THE EROSION CONTROL PLAN AND CONTRACT DOCUMENTS. PROVIDE ADDITIONAL EROSION CONTROL MEASURES AS DICTATED BY CONTRACTOR'S MEANS AND METHODS, OR BY **DIFFERING SITE CONDITIONS.** NOTIFY CONSTRUCTION REPRESENTATIVE OF ADDITIONAL EROSION CONTROL FEATURES THAT ARE PROVIDED, BUT NOT SHOWN
- 14. TEMPORARY STOCKPILES ARE TO BE LOCATED GREATER THAN 25 FEET FROM ANY ROADWAY, PARKING LOT, PAVED AREA, DRAINAGE STRUCTURE, OR CHANNEL.
- CONVEY DRAINAGE TO THE NEAREST ADEQUATE STORMWATER FACILITY. DO NOT DISCHARGE WATER IN A MANNER THAT WILL CAUSE EROSION OR SEDIMENTATION
- CONSTRUCT AND MAINTAIN TRACKING PADS IN ACCORDANCE WITH THE TECHNICAL STANDARDS. PROVIDE EACH ENTRANCE TO THE SITE WITH A STONE TRACKING PAD AT LEAST 50 FEET IN LENGTH WITH A MINIMUM THICKNESS OF 12 INCHES. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT. INSPECT TRACKING PADS ON A DAILY BASIS AND REPLACE AGGREGATE WHEN NO LONGER
- INSPECT ALL EROSION CONTROL MEASURES WITHIN 24 HOURS OF THE END OF EACH RAINFALL EVENT THAT EXCEEDS 0.25", OR DAILY DURING PERIOD OF PROLONGED RAINFALL, OR WEEKLY DURING PERIODS WITHOUT RAINFALL. IMMEDIATELY REPAIR AND/OR REPLACE ANY AND ALL DAMAGED, FAILED, OR INADEQUATE EROSION CONTROL MEASURES.

# SANITARY SEWERAGE UTILITIES

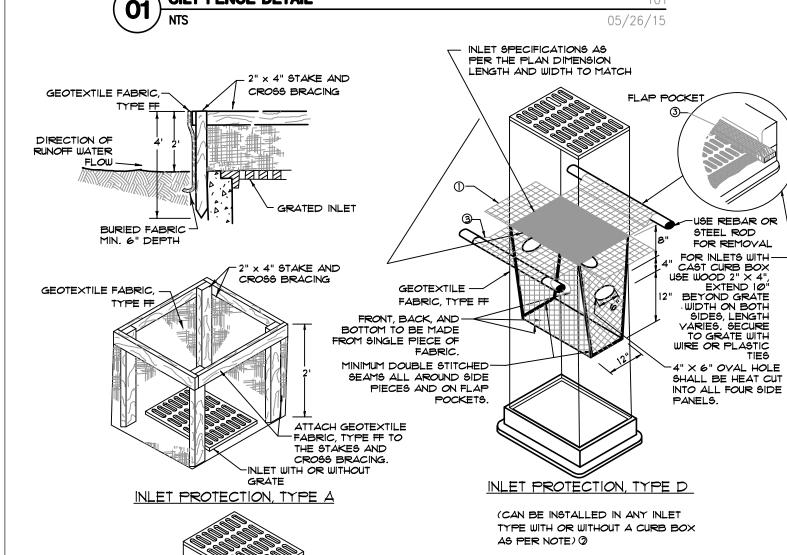
- CONFORM ALL MATERIALS TO THE SIZE AND TYPE SHOWN ON THE PLANS OR AS CALLED FOR IN THE SPECIFICATIONS AND TO APPLICABLE LAWS, CODES, AND ORDINANCES.
- PROVIDE THE SIZE, TYPE AND CLASS/SCHEDULE OF PIPE AS INDICATED ON THE DRAWINGS. USE ONLY PIPE SUPPLIED FROM THE SAME MANUFACTURER, AND OF THE SAME TYPE, UNLESS OTHERWISE SPECIFIED OR APPROVED IN ADVANCE BY THE ENGINEER.
- ONLY PIPE, JOINTS, MATERIAL AND INSTALLATION APPROVED BY WISCONSIN DEPARTMENT OF NATURAL RESOURCES AND/OR THE DEPARTMENT OF COMMERCE FOR THE INTENDED USE IN THE STATE OF WISCONSIN SHALL BE USED.
- POLYVINYL CHLORIDE PIPE (PVC) FITTINGS SHALL MEET THE REQUIREMENTS FOR TYPE PSM PVC SEWER PIPE AND FITTINGS OF ASTM D3034 FOR PIPE SIZES UP THROUGH 15 INCHES AND ASTM F679 FOR PIPE SIZES 18 INCHES THROUGH 36 INCHES. ALL PVC SANITARY SEWER PIPE SHALL HAVE A MAXIMUM STANDARD DIMENSION RATIO (SDR) OF 35. THE WALL THICKNESS SHALL CONFORM TO REQUIREMENTS FOR A T-1 WALL PER ASTM F69-01.
- CONFORM TO ASTM D-3350 FOR PE MATERIAL WITH A CELL CLASSIFICATION OF 335434C OR BETTER. PIPE SHALL BE SDR 11, UNLESS OTHERWISE NOTED. JOINTS SHALL BE THERMAL FUSION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. HDPE PIPE FITTINGS SHALL BE THERMAL FUSION WELD TYPE OF THE SAME OR GREATER SDR AS THE PIPE THAT THE FITTING IS CONNECTED TO. PROVIDE TRANSITION FITTINGS WHEN CONNECTING TO EXISTING PIPING, OR WHERE SHOWN ON THE DRAWINGS.
- PROVIDE PRECAST CONCRETE MANHOLES. CONCRETE BLOCK OR CAST-IN-PLACE MANHOLES MAY ONLY BE USED AFTER RECEIVING WRITTEN APPROVAL BY THE CONSTRUCTION REPRESENTATIVE AND THE ENGINEER FOR CUSTOMIZED MANHOLE SIZES AND SHAPES. PRECAST CONCRETE MANHOLE SECTIONS, INCLUDING BOTTOM AND TOP SHALL MEET THE REQUIREMENTS OF ASTM C478.
- UNLESS OTHERWISE NOTED, PROVIDE FOUR 4' DIAMETER MANHOLES. MANHOLE WALL THICKNESS SHALL BE MINIMUM OF 5" FOR 4' DIAMETER MANHOLES, 6" FOR 5' DIAMETER MANHOLES AND 7" FOR 6' AND 7' DIAMETER MANHOLES.
- MINIMUM THICKNESS OF 8" UNLESS OTHERWISE NOTED. SANITARY SEWER AND SEWER SERVICES SHALL BE PROVIDED WITH 4" OF BEDDING MATERIAL AND 12" OF INITIAL COVER MATERIAL (BOTH MEASURED AT THE BELL OF THE PIPE). CRUSHED STONE BEDDING SHALL BE USED FOR BEDDING AND INITIAL

MANHOLE BOTTOM SECTION SHALL BE PRE-CAST WITH INTEGRAL BASE HAVING A

#### DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORT TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS. TIEBACK BETWEEN FENCE -POST AND ANCHOR WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS. ① CROSS BRACE WITH 2" x 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER. FLOW DIRECTION-MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C-C. 3 EXCAVATE A TRENCH A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC, FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL. TRENCH DETAIL SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER) WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C-C. B GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLY-PROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 3/4" OR EQUIA. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED. STEEL POSTS SHALL BE STUDDED "TEE" OR "U TYPE" WITH A MINIMUM (E) WEIGHT OF 1.28 IDS/I(n. PL. (WITHOUT ANCHOR). FIN ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIA. OR 1-1/2" x 3-1/2" EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1-1/8" x 1-1/8" OAK OR HICKORY. ALTERNATIVES A AND B ARE EQUAL AND EITHER MAY BE USED.

WITH ALTERNATE SUPPORT COMPONENTS

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



GEOTEXTILE FABRIC, GENERAL NOTES: INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE JHEN REMOVING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DIES NOT FALL INTO INLET ANY MATERIAL FALLING INTO THE INLET SHALL BE

FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10"

AROUND THE PERIMETER TO FACILITATE FOR INLET PROTECTION, TYPE C WITH CURB BOX, AND ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT

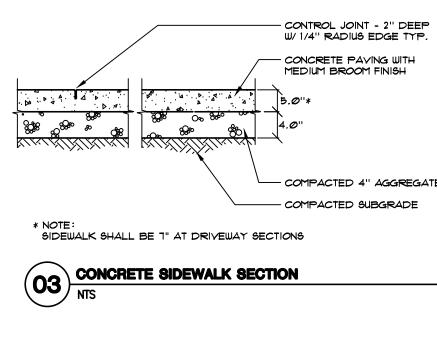
INLET PROTECTION, TYPE B

\ INLET PROTECTION

GEOTEXTILE FABRIC

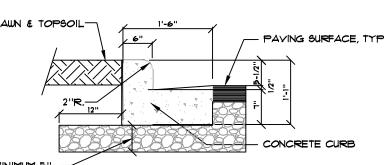
(WITHOUT CURB BOX) (CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4. INSTALLATION NOTES: TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3"
OF THE GRATE. THE CONTRACTOR SHALL
DEMONSTRATE A METHOD OF MAINTENANCE, USING A DEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING

DO NOT INSTALL INLET PROTECTION TYPE D IN WOOD 2" x 4" EXTENDS INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3 OF THE GRATE SECURE TO GRATE WITH THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE WIRE OR PLASTIC TIES INLET PROTECTION, TYPE C (WITH CURB BOX) BAG MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG USING PLASTIC ZIP TIES TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACES AT A MAXIMUM IF 4" FROM THE BOTTOM OF

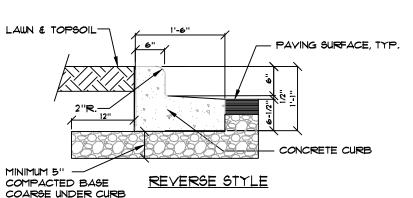


CONTROL JOINT SPACING SHALL BE A MAXIMUM OF 5' AND CONSTRUCTED IN CONFORMANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) RECOMMENDATIONS. EXPANSION JOINTS SHOULD BE PROVIDED WHERE PAVEMENT ABUTS FIXED OBJECTS. • MATRIX BI BLEND MICRO FIBER TO BE ADDED AT A RATE OF 1.5 POUNDS PER CUBIC YARD.

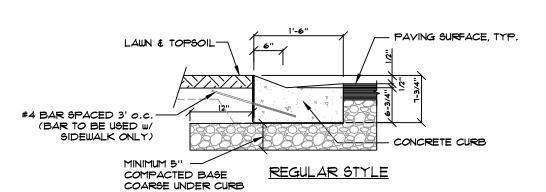
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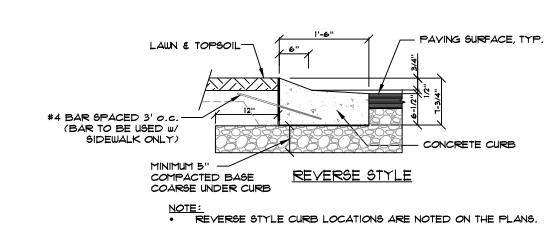


REGULAR STYLE COMPACTED BASE



REVERSE STYLE CURB LOCATIONS ARE NOTED ON THE PLANS.





18" DEPRESSED CURB

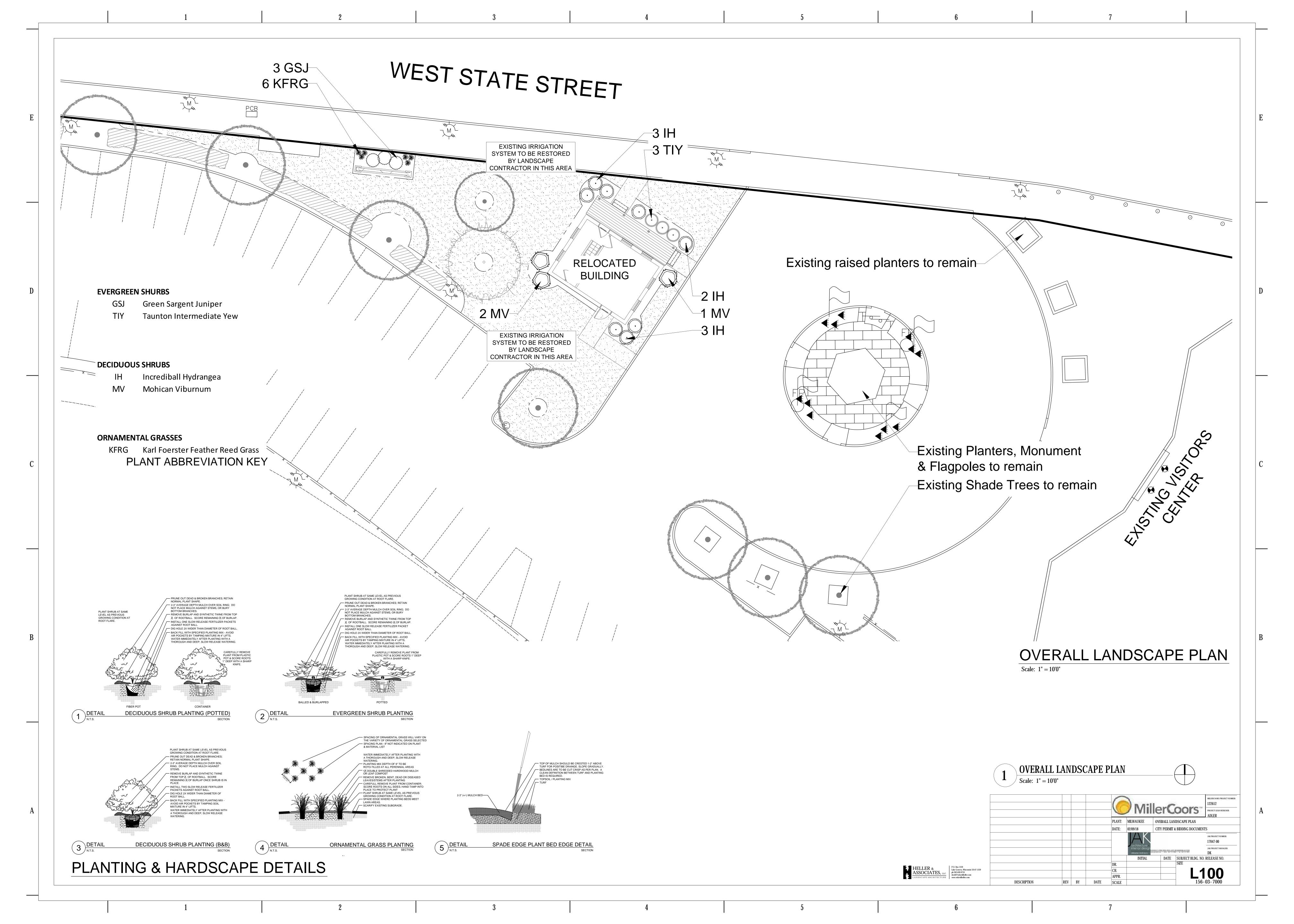
MILWAUKEE, WISCONSIN PLANT: MILWAUKEE | CONSTRUCTION DETAILS & SPECIFICATIONS DATE: 02/06/18 FRONT END LOADING 4 17047-00 DATE SUBJECT BLDG. NO. RELEASE NO.SIZE C5.00

REV. CHANGED DATE

156-02-5001

Harwood Engineering

DESCRIPTION



1. Contractor responsible for contacting Diggers Hotline (811 or 800-242-8511) to have site marked prior to excavation or planting.

2. Contractor to verify all plant quantities shown on Plant & Material List and landscape planting symbols and report any discrepancies to Landscape Architect or General Contractor.

3. All plantings shall comply with standards as described in American Standard of Nursery Stock - Z60.1 ANSI (latest version). Landscape Architect reserves the right to inspect, and potentially reject any plants that are inferior, compromised, undersized, diseased, improperly transported, installed incorrectly or damaged. No sub-standard "B Grade" or "Park Grade" plant material shall be accepted. Plant material shall originate from nursery(ies) with a similar climate as the planting site.

4. Any potential plant substitutions must be approved by Landscape Architect or Owner. All plants must be installed as per sizes indicated on Plant & Material Schedule, unless approved by Landscape Architect. Any changes to sizes shown on plan must be submitted in writing to the Landscape Architect prior to installation.

5. Topspoil in Parking Lot Islands (if applicable): All parking lot islands to be backfilled with topsoil to a minimum depth of 18" to insure long-term plant health. Topsoil should be placed within 3" of finish grade by General Contractor / Excavation Contractor during rough grading operations/activity. The landscape contractor shall be responsible for the fine grading of all disturbed areas, planting bed areas, and lawn areas. Crown all parking lot islands a minimum of 6" to provide proper drainage, unless otherwise specified.

6. Tree Planting: Plant all trees slightly higher than finished grade at the root flare. Remove excess soil from the top of the root ball, if needed. Remove and discard non-biodegradable ball wrapping and support wire. Removed biodegradable burlap and wire cage (if present) from the top  $\frac{1}{3}$  of the rootball and carefully bend remaining wire down to the bottom of the hole. Once the tree has been placed into the hole and will no longer be moved, score the remaining  $\frac{2}{3}$  of the burlap and remove the twine. Provide one slow release fertilizer packets (per 1" caliper) for each tree planted.

7. Tree Planting: Backfill tree planting holes 80% existing soils removed from excavation and 20% Soil Amendments (see Note 11). Avoid air pockets and do not tamp soil down. Discard any gravel, rocks, heavy clay, or concrete pieces. When hole is  $\frac{2}{3}$  full, trees shall be watered thoroughly, and water left to soak in before proceeding to fill the remainder of the hole. Water again to full soak in the new planting. Each tree shall receive a 3" deep, 4-5' diameter (see planting details or planting plan) shredded hardwood bark mulch ring / saucer around all trees. Do not build up any mulch onto the trunk of any tree. Trees that are installed incorrectly will be replaced at the time and expense of the Landscape Contractor.

8. Shrub Planting: All shrubs to be planted in groupings as indicated on the Landscape Plan. Install with the planting of shrubs a  $^{50}_{50}$  mix of Soil Amendments with blended, pulverized topsoil. Install topsoil into all plant beds as needed to achieve proper grade and displace undesirable soils (see planting detail). Remove all excessive gravel, clay and stones from plant beds prior to planting. When hole(s) are  $\frac{2}{3}$  full, shrubs shall be watered thoroughly, and water left to soak in before proceeding. Provide slow-release fertilizer packets at the rater of 1 per 24" height/diamter of shrub at planting.

9. Mulching: All tree rings to receive a 3" deep layer of high quality shredded hardwood bark mulch (not pigment dyed or enviro-mulch). All shrub planting and perennial planting bed areas (groupings) shall receive a 2-3" layer of shredded hardwood bark mulch, and groundcover areas a 1-2" layer of the same mulch. Do not mulch annual flower beds (if applicable). Do not allow mulch to contact plant stems and tree trunks.

10. Edging: All planting beds shall be edged with a 4" deep spade edge using a flat landscape spade or a mechanical edger. Bedlines are to be cut crisp, smooth as per plan. A clean definition between landscape beds and lawn is required. Pack mulch against lawn edge to hold in place.

11. Plant bed preparation/Soil Amendment composition: All perennial, groundcover and annual areas (if applicable) are required to receive a blend of organic soil (Soil Amendments) amendments prior to installation. Roto-till the following materials at the following ratio, into existing soil beds or installed topsoil beds to a depth of approximately 8"-10". Containerized and balled & burlapped plant material should be back-filled with amended soil:

Per 100 SF of bed area (Soil Amendment composition):

<sup>3</sup>/<sub>4</sub> CY Peat Moss or Mushroom Compost

3/4 CY blended/pulverized Topsoil
 1/4 CY composted manure

74 CT composica manare

In roto-tilled beds only, also include in above mixture:

2 lbs Starter Fertilizer

12. Installation preparation for all seeded areas: remove/kill off any existing unwanted vegetation prior to seeding. Prepare the topsoil (if adequate or provide as in item #6 above) and seed bed by removing all surface stones 1" or larger. Apply a starter fertilizer (20-10-5, or approved comparable) and specified seed uniformly at the specified rate, and provide mulch covering suitable to germinate and establish turf. Provide seed and fertilizer specifications to Landscape Architect and Owner prior to installation. Erosion control measures are to be used in swales and on slopes in excess of 1:3 and where applicable (see Civil Engineering Drawings). Methods of installation may vary are the discretion of the Landscape Contractor on his/her responsibility to establish and guarantee a smooth, uniform, quality turf. A minimum of 2" of blended, prepared and non-compacted topsoil is required for all lawn areas. If straw mulch is used as a mulch covering, a tackifier may be necessary to avoid wind dispersal of mulch covering. Marsh hay containing reed canary grass is NOT acceptable as a mulch

An acceptable quality seed installation is defined as having:

No bare spots larger than one (1) square foot

No more than 10% of the total area with bare areas larger than one (1) square foot A uniform coverage through all turf areas

13. Warranty and Replacements: All plantings are to be watered thoroughly at the time of planting, through construction and upon completion of project as required. Trees, Evergreens, and Shrubs (deciduous and evergreen) shall be guaranteed (100% replacement) for a minimum of one (1) year from the date of project completion. Perennials, groundcovers, and ornamental grasses shall be guaranteed for a minimum of one (1) growing season. Perennials, groundcovers, and ornamental grasses planted after September 15th shall be guaranteed through May 31st of the following year. Only one replacement per plant will be required during the warranty period, except for losses or replacements due to failure to comply with specified requirements. Watering and general ongoing maintenance instructions are to be supplied by the Landscape Contractor to the Owner upon completion of the project.

14. The Landscape Contractor is responsible for the watering and maintenance of all landscape areas for a period of 45 days after the substantial completion of the landscape installation. This shall include all trees, shrubs, evergreens, perennials, ornamental grasses, turf grass, no-mow grass, and native prairie seed mix / stormwater seed mix. Work also includes weeding, edging, mulching (only if required), fertilizing, trimming, sweeping up grass clippings, pruning and deadheading.

15. Project Completion: Landscape Contractor is responsible to conduct a final review of the project, upon completion, with the Landscape Architect, Client or Owner / Client Representative, and the General Contractor to answer questions, provide written care instructions for new plantings and turf, and insure that all specifications have been met.

# LANDSCAPE GENERAL NOTES

PLANT		PLANT MATERIAL PROPOSED		SHRUB	ROOT/		PLANT
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE (HEIGHT)	CONT.	SPECIFICATION / NOTES	SPACINO
EVERGREE	N SHURBS						
GSJ	3	Juniperis chinensis sargenti 'Viridis'	Green Sargent Juniper	24"w	Cont.	Full rounded well branched shrub	42"
TIY	3	Taxus xmedia 'Tautoni'	Taunton Intermediate Yew	24" w	B&B	Full rounded well branched shrub	42"
PLANT		PLANT MATERIAL PROPOSED		SHRUB	ROOT/		PLANT
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE (HEIGHT)	CONT.	SPECIFICATION / NOTES	SPACINO
DECIDUOL	JS SHRUBS						
IH	8	Hydrangea arborescens 'Abetwo'	Incrediball Hydrangea	24"	Cont.	Full, well rooted plant, evenly shaped	48"
MV	3	Viburnum lantana 'Mohican'	Mohican Viburnum	48"	B&B	Full, well rounded plant with moist rootball and healthy appearance	60"
PLANT		PLANT MATERIAL PROPOSED		CONTAINER			PLANT
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE		SPECIFICATION / NOTES	SPACING
ORNAMEN	NTAL GRASSES						
KFRG	6	Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	#1	Cont.	Full, well rooted plant	15-18"
LAWN / SE	EDING / SOD						
LAWN	380	Lawn Establishment Area / Grading Area			SY	Cedar Creek Premium Blue Tag Seed Mix (Ph: 888-313-6807)	
	3405	Erosion Matting for sloped seeded areas	see plan for area delineation		SF	EroTex DS75 Erosion Control Blanket (or approved equal)	
Hardscape	Materials						
	8	Shredded Hardwood Mulch (3" depth)	850 SF		CY	Bark Mulch; apply Preemergent after installation of mulch	
	5	Soil Amendments (2" depth)	850 SF		CY		
	10	Pulverized Topsoil (Lawn Area)	3,400 SF		CY		
	5	Pulverized Topsoil (2" over bed areas)	850 SF		CY		

\*Landscape counts & quantities are provided as a service to the Landscape Contractor; Landscape Contractor is responsible for verifying these counts and quantities in order to provide a complete landscape installation as outlined on this Landscape Master Plan. In the event that a discrepancy occurs between this schedule and the Landscape Master Plan, the Landscape Master Plan- including the graphics and notations depicted therein- shall govern.

Seed Compositions:

Cedar Creek Premium Blue Tag (Ph: 888-313-6807):

20% Merit Kentucky Bluegrass 20% Boreal Red Fescue

20% Pennant Fine Perennial Ryegrass

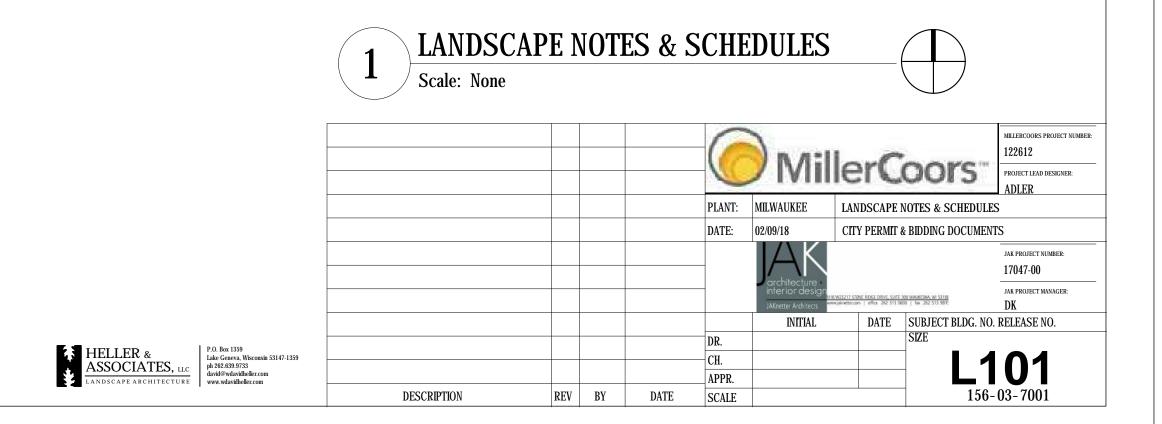
10% Mid Atlantic Kentucky Bluegrass

10% Dragon Kentucky Bluegrass 10% Palmer III Fine Perennial Ryegrass

10% Atlantis Kentucky Bluegrass

Seed at rate of 3# per 1000 SF

# PLANT & MATERIAL SCHEDULE



2 6

1. ALL MATERIALS, CONSTRUCTION, AND DETAILS SHALL CONFORM WITH THE FOLLOWING: PLANS AND SPECIFICATIONS CODE AS SPECIFIED IN DESIGN DATA OSHA REGULATIONS THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE FAMILIAR WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS (ARCHITECTURAL, CIVIL, ELECTRICAL, PLUMBING, STRUCTURAL, ETC.) IN ORDER TO PROVIDE ALL CONSTRUCTION AND MATERIALS FOR THIS PROJECT. 3. THE CONTRACTOR SHALL REFER TO OTHER DRAWINGS CONTAINED IN THE CONSTRUCTION DOCUMENTS FOR ADDITIONAL SPECIFIED MEMBERS, DIMENSIONS, ELEVATIONS, DETAILS, OPENINGS, INSERTS, SLEEVES, DEPRESSIONS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS REQUIRED TO CONSTRUCT THIS PROJECT. 4. DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PORTIONS OF THE CONTRACT DOCUMENTS UNLESS NOTED 5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. DO NOT SCALE PLANS. 7. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE UNLESS APPROVED BY THE STRUCTURAL 8. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE IN ORDER TO ENSURE THE SAFETY OF THE BUILDING AND WORKMEN DURING CONSTRUCTION (MEANS & METHODS OF CONSTRUCTION). THIS INCLUDES, BUT IS NOT LIMITED TO: SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. 9. CONSTRUCTION DOCUMENTS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS (COLUMN CENTERLINES, OUTSIDE FACE OF WALLS, TOP OF FRAMING MEMBERS, ETC.) MATERIAL SUPPLIERS AND DESIGNERS ARE RESPONSIBLE FOR ALL OTHER INFORMATION IN ORDER TO DETAIL/FABRICATE THEIR WORK. CONTACT THE ARCHITECT WITH ANY DISCREPANCIES. 10. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PLANS CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL BRING THE DISCREPANCY TO THE ARCHITECTS ATTENTION IN WRITING IMMEDIATELY. 11. NO PROVISIONS HAVE BEEN MADE IN THE DESIGN OF THIS STRUCTURE FOR FUTURE EXPANSION. UNLESS NOTED ON PLAN 1. ALL EXISTING FRAMING SHOWN ON THESE DRAWINGS IS BASED ON AVAILABLE DOCUMENTATION & FIELD OBSERVATION TO DATE. CONTRACTOR SHALL FIELD VERIFY ALL SIZES, DIMENSIONS, ELEVATIONS, AND CONFIGURATIONS OF EXISTING STRUCTURAL ELEMENTS (COLUMNS, BEAMS, WALLS, ETC.) AS NECESSARY TO PROPERLY INSTALL ALL NEW STRUCTURAL ELEMENTS AS SHOWN. COORDINATE DIFFERENCES BETWEEN FIELD CONDITIONS AND STRUCTURAL DRAWINGS WITH STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH WORK, AND PROCUREMENT/FABRICATION OF MATERIALS. 2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY CONFLICTS WITH CONSTRUCTION DOCUMENTS. 3. REMOVE AND REPLACE AND/OR MODIFY ALL EXISTING CONSTRUCTION (ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND MECHANICAL) AS REQUIRED IN ORDER TO PLACE NEW STRUCTURAL WORK SHOWN ON THE CONSTRUCTION DOCUMENTS. DO NOT MODIFY STRUCTURAL COMPONENTS UNLESS DETAILED ON THE CONSTRUCTION DOCUMENTS. 4. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE IN ORDER TO ENSURE THE SAFETY OF THE BUILDING AND WORKMEN DURING CONSTRUCTION (MEANS & METHODS OF CONSTRUCTION). THIS INCLUDES, BUT IS NOT LIMITED TO: SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. CONTRACTOR SHALL DESIGN AND PROVIDE ALL SHORING REQUIRED TO SUPPORT EXISTING CONSTRUCTION AND NEW CONSTRUCTION AS REQUIRED TO BUILD THIS PROJECT. 1. ALL EXTERIOR FOOTINGS MUST BEAR BELOW LOCAL FROST LINE RELATIVE TO ADJACENT FINISH EXTERIOR GRADE. 2. DO NOT PLACE ANY FOOTINGS ON FROZEN SUBGRADE. 3. BACK FILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDES OF FOUNDATION WALLS. 4. DO NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE TOP AND BOTTOM OF THE WALL ARE ADEQUATELY BRACED BY THE SLAB ON GRADE AND THE FLOOR FRAMING AT THE TOP OF THE WALL. 5. REMOVE ANY EXISTING CONCRETE 2'-0" BELOW NEW CONCRETE FOOTINGS AND SLABS ON GRADE, UNLESS NOTED OTHERWISE. 6. SHORING/OR UNDERPINNING SHALL BE DESIGNED TO LIMIT HORIZONTAL AND VERTICAL MOVEMENT OF EXISTING CONSTRUCTION TO 1/4" MAXIMUM 7. CENTER PIER AND COLUMN FOOTINGS ON COLUMN CENTERLINES AND WALL FOOTINGS ON WALL CENTERLINES UNLESS SPECIFICALLY NOTED 8. ALL BACK FILL WITHIN 3'-0" OF RETAINING WALLS AND BASEMENT WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL APPROVED BY A SOILS ENGINEER AND COMPACTED TO 90% STANDARD PROCTOR. 9. TOP OF FOOTING ELEVATIONS SHOWN ON THESE CONSTRUCTION DOCUMENTS REPRESENT MINIMUM FOOTING DEPTHS FOR FROST PROTECTION AND BEST JUDGMENT OF A SUITABLE BEARING STRATUM. ACTUAL GRADE CONDITIONS AND SUITABLE BEARING STRATUM MUST BE VERIFIED BY THE CONTRACTOR AND A SOILS ENGINEER AT THE TIME OF EXCAVATION. 10. FOOTING EXCAVATIONS MUST EXTEND TO COMPETENT BEARING MATERIAL. CONTRACTOR SHALL HIRE A SOILS ENGINEER TO FIELD VERIFY NET ALLOWABLE SOIL BEARING CAPACITY STATED ON THESE CONSTRUCTION DOCUMENTS AND IN GEOTECHNICAL REPORT FOR THIS PROJECT. IF SUITABLE BEARING STRATUM DOES NOT EXIST AT FOOTING ELEVATIONS STATED ON CONSTRUCTION DOCUMENTS, EXCAVATIONS SHALL BE EXTENDED UNTIL SOIL WITH STATED BEARING CAPACITY IS REACHED. PLACE COMPACTED FILL BELOW FOOTINGS OR EXTEND FOOTINGS DOWN TO SUITABLE BEARING STRATUM. ENGINEERED FILL BELOW SLABS ON GRADE AND FOOTINGS SHALL BE FREE DRAINING GRANULAR MATERIAL COMPACTED TO 95% MODIFIED PROCTOR AND PLACED PER THE SOIL ENGINEERS RECOMMENDATIONS. ALL FIELD CONDITIONS THAT WILL AFFECT DESIGN AS PRESENTED MUST BE COORDINATED WITH STRUCTURAL ENGINEER. 11. REFER TO DESIGN DATA FOR DESCRIPTION OF SOIL CONDITIONS, GEOTECHNICAL RECOMMENDATIONS, AND DESIGN VALUES. 12. WHERE NEW FOOTINGS ABUT EXISTING FOOTINGS, STEP OR THICKEN THE NEW FOOTING AS REQUIRED TO HAVE NEW BOTT/FTG ELEVATION MATCH EXISTING BOTT/FTG ELEVATION. CONTRACTOR SHALL FIELD VERIFY EXISTING BOTT/FTG ELEVATION. CAST-IN-PLACE REINFORCED CONCRETE: CONCRETE WORK SHALL CONFORM TO REFERENCED EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". 2. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT. 3. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615 (GRADE 60). PLAIN WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. 4. CONTRACTOR SHALL PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION 5. PROVIDE 1/2" EXPANSION JOINT MATERIAL AT INTERIOR LOCATIONS WHERE SLABS ABUT WALLS, COLUMNS, AND OTHER VERTICAL SURFACES UNLESS NOTED OTHERWISE. 6. PROVIDE A 1" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE. TOP SURFACE OF WALLS SHALL FINISHED SMOOTH, UNLESS NOTED OTHERWISE. 7. DO NOT PLACE CONDUITS, PIPES, DUCTS, OR FIXTURES IN STRUCTURAL CONCRETE UNLESS NOTED OTHERWISE. 8. SLEEVES, CONDUITS, OR PIPING PASSING THROUGH CONCRETE SLABS AND WALLS SHALL BE PLACED SO THAT THEY ARE NOT CLOSER THAN THREE DIAMETERS ON CENTER OR 4" MIN AND SO THAT THEY DO NOT DISPLACE REINFORCING. BANKS OF OPENINGS GREATER THAN 18" TOTAL WIDTH OF ALL OPENINGS EDGE-TO-EDGE MUS BE COORDINATED WITH STRUCTURAL ENGINEER. 9. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY IRREGULARITIES OR DEFECTS IN CONCRETE SLABS (CRACKS, BUMPS, FLOOR CURLING, ETC.) BEFORE ANY FLOOR FINISHES ARE APPLIED. 10. REFER TO REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE FOR LAP SPLICES IN REINFORCING STEEL. 11. STEEL REINFORCING SPLICES OF ADJACENT BARS SHALL BE STAGGERED SUCH THAT SPLICES ARE 4 FEET APART, MINIMUM. 12. ALL LAPS IN REINFORCING STEEL SHALL BE CLASS "B" LAP SPLICES UNLESS OTHERWISE NOTED. 13. CONTRACTOR SHALL HIRE A MATERIALS TESTING LABORATORY TO CAST AND TEST CONCRETE CYLINDERS. ALL TESTING SHALL BE IN ACCORDANCE WITH ACI 318. RESULTS OF CYLINDER TESTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER. CONCRETE TEST REPORTS SHALL STATE THE FOLLOWING INFORMATION: LOCATION ON PROJECT WHERE THE CONCRETE IS USED 7 DAY COMPRESSIVE STRENGTH 28 DAY COMPRESSIVE STRENGTH AIR CONTENT AMOUNT OF WATER ADDED ON JOB SITE 14. CONCRETE TEST REPORTS SHALL DIRECTLY STATE WHETHER OR NOT THE TEST RESULT COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. 15. ADDITION OF JOBSITE WATER TO CONCRETE SHALL BE PER ASTM C94. 16. TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94. 17. CLASS C FLY ASH OR SLAG MAY BE SUBSTITUTED FOR CEMENT ON A POUND TO POUND BASIS. SUBMITTED MIX DESIGNS SHALL INDICATE SUBSTITUTION ARE AND IS SUBJECT TO ENGINEER APPROVAL. 18. ALL CONCRETE SLABS SHALL BE CURED PER ACI RECOMMENDATIONS FOR NO LESS THAN SEVEN DAYS OR AN APPROPRIATE CURING COMPOUND May be applied. 19. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED IN ANY CONCRETE MIX. 20. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCEMENT IN CONCRETE: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BARS NO. 5 BAR AND SMALLER CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO. 11 BAR AND SMALLER BEAMS AND COLUMNS 21. CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. ANY CONCRETE SURFACE REPAIRS SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED. REPAIR AND PATCH DEFECTIVE AREAS WITH PROPRIETARY PATCHING COMPOUND IMMEDIATELY AFTER REMOVAL OF FORMS.

1. DESIGN, FABRICATION, AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", AMERICAN FOREST AND PAPER ASSOCIATION. 2. DESIGN, FABRICATION, AND CONSTRUCTION OF ALL PLYWOOD FRAMING SHALL CONFORM TO THE CURRENT EDITION OF "PLYWOOD DESIGN SPECIFICATIONS", AMERICAN PLYWOOD ASSOCIATION. 3. PLYWOOD SHEATHING SHALL CONFORM TO THE CURRENT EDITION OF "U.S. PRODUCT STANDARD PS-1" FOR SOFTWOOD PLYWOOD AND BEAR THE APA GRADE-TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. 4. PLYWOOD SHEATHING SHALL BE ATTACHED TO WOOD FRAMING WITH THE LONG DIMENSION OF THE SHEATHING LAID PERPENDICULAR TO THE SUPPORTS. STAGGER ALL JOINTS. 5. PLYWOOD SHEATHING SHALL BE FASTENED TO SUPPORTS w/ 10d NAILS SPACED AT 6" o/c AT PANEL EDGES AND 12" o/c AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE. 6. ANY PLYWOOD SHEATHING THAT IS EXPOSED TO MOISTURE SHALL BE PRESSURE TREATED. 7. PLYWOOD PANEL EDGES SHALL BEAR ON THE FRAMING SUPPORT MEMBERS AND BUTT ALONG THEIR CENTER LINES. NAILS SHALL BE PLACED NOT LESS THAN 3/8" IN FROM THE PANEL EDGE. 8. WOOD MEMBERS DIRECTLY EXPOSED TO MOISTURE OR IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED. 9. MAXIMUM MOISTURE CONTENT IN ANY WOOD MEMBER SHALL NOT EXCEED 19%. 10. 2x WOOD JOISTS SHALL HAVE 1x3 SPF NO.2 CROSS BRIDGING AT 8'-0" o/c MAXIMUM. 11. DO NOT EMBED WOOD MEMBERS IN CONCRETE. 12. ALL BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE. USE STEEL WASHERS BETWEEN HEAD OF BOLT OR LAG SCREW AND WOOD. USE STEEL WASHERS BETWEEN NUT AND WOOD. 13. ALL FASTENERS ATTACHING PRESSURE TREATED WOOD MEMBERS TO CONCRETE OR MASONRY SHALL BE HOT DIPPED GALVANIZED OR STAINLESS 14. MAKE NO SUBSTITUTIONS OF ANY PRODUCTS SPECIFIED ON ANY FRAMING PLANS WITHOUT THE DIRECT WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER AND ARCHITECT. 15. TEMPORARY BRACING SHALL BE PROVIDED AND REMAIN IN PLACE UNTIL THE STRUCTURE IS COMPLETELY STABLIIZED. TO RESIST BUCKLING OF LOAD BEARING STUDS, USE A CONTINUOUS 2x FRAMING MEMBER ATTACHED TO THE STUD WALL AT MID-HEIGHT. USE TEMPORARY X-BRACING TO RESIST LATERAL WIND AND SEISMIC LOADS. PROVIDE ANY OTHER TEMPORARY BRACING DEEMED NECESSARY DURING CONSTRUCTION. BRACING MAY BE REMOVED ONCE THE SHEATHING IS APPLIED TO AT LEAST ONE SIDE OF THE STUDS. TEMPORARY BRACING IS THE RESPONSIBILITY OF THE 16. ARCHITECT AND CONTRACTOR SHALL DETAIL AND CONSTRUCT BUILDING FINISHES TO ACCOMMODATE AN EXPECTED BUILDING SHRINKAGE OF APPROXIMATELY 3/16" TO 3/8" PER FLOOR OF WOOD CONSTRUCTION. PROPER CARE SHALL BE TAKEN TO PREVENT STORED AND INSTALLED LUMBER FROM THE ELEMENTS. DO NOT ALLOW LUMBER TO REST IN STANDING WATER. .....SUBGRADE MODULUS

**DESIGN DATA** APPLICABLE CODES/STANDARDS: ....INTERNATIONAL BUILDING CODE - 2009 WITH SEPTEMBER 1, 2011 WISCONSIN AMENDED I-CODE INSERTS .....INTERNATIONAL EXISTING BUILDING CODE - 2009 ....ASCE 7-05 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE) ....ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY ....ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES) ...ANSI/AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS ...AWS D1.1/D1.1M STRUCTURAL WELDING CODE-STEEL ....NDS-NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION ASD/LRFD ....NDS-NATIONAL DESIGN SPECIFICATION SUPPLEMENT, DESIGN VALUES FOR WOOD CONSTRUCTION ....AISI S100 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS ....AISI S213 NORTH AMERICAN SPECIFICATION FOR COLD-FORMED STEEL FRAMING-LATERAL DESIGN BUILDING DESIGN LOADS/CRITERIA DESIGN DEAD LOADS: .....FIRST FLOOR DEAD LOAD (ASSUMED) ....UPPER FLOOR DEAD LOAD (ASSUMED) 20 psf ....ROOF DEAD LOAD (ASSUMED) DESIGN LIVE LOADS: .....FLOOR FRAMING (RETAIL, OFFICE, RESTAURANT, RECREATIONAL) ....STAIRWAYS, CORRIDORS, LOBBIES (OTHER AREAS) 100 psf .....DECKS 100 psf HANDRAIL ASSEMBLIES & GUARDS .....200LB LOAD OR 50 PLF LOAD APPLIED IN ANY DIRECTION AT TOP OF HANDRAIL ASSEMBLY OR GUARD ...MAXIMUM AGGREGATE SIZE .....& TO TRANSFER THIS LOAD THROUGH SUPPORTS TO THE STRUCTURE ....SLUMP LIMIT ....AIR CONTENT SONOTUBES ROOF SNOW LOADS & DESIGN DATA: ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS fc = 4,000 PSI ....DESIGN ROOF SNOW LOAD 25 psf (BALANCED SNOW LOAD) ....MAXIMUM WATER-CEMENTITIOUS RATIO .....FLAT ROOF SNOW LOAD (Pf) = (0.7\*Ce\*Ct\*Is\*Pg) ...MAXIMUM AGGREGATE SIZE ....SNOW EXPOSURE FACTOR (Ce) ....SLUMP LIMIT .....SNOW LOAD IMPORTANCE FACTOR (Is) ...AIR CONTENT ....ROOF THERMAL FACTOR (Ct) ....GROUND SNOW (Pg) 35 psf ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS fc = 1,000 PSI ...RAIN ON SNOW SURCHARGE ...MAXIMUM WATER-CEMENTITIOUS RATIO .....SLOPED ROOF FACTOR (Cs) ...MAXIMUM AGGREGATE SIZE ...SLUMP LIMIT WIND DESIGN DATA: ...AIR CONTENT ....WIND IMPORTANCE FACTOR (Iw) ....BASIC WIND SPEED (3-SECOND GUST) 90 MPH ....WIND DIRECTIONALITY FACTOR (Kd) 21 FT ....MEAN ROOF HEIGHT ....WIND EXPOSURE CATEGORY ....WIND EXPOSURE CLASSIFICATION **ENCLOSED** ....INTERNAL PRESSURE COEFFICIENT ....BUILDING LENGTH (L) ...LEAST WIDTH (B) ....VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 1) 0.701 ....VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 2) ....TOPOGRAPHIC FACTOR (Kzt) 1.0 ....EDGE STRIP (a) 3.0 FT ....END ZONE (2a) .....DESIGN PROCEDURE METHOD 1 (SIMPLIFIED PROCEDURE) WIND LOADS COMPONENTS & CLADDING ROOF SURFACE PRESSURE 10 SF 50 SF 100 SF NEGATIVE ZONE 1 -13.3 psf | -12.5 psf | -12.1 psf NEGATIVE ZONE 2 -23.2 psf | -18.9 psf | -17.0 psf NEGATIVE ZONE 3 -34.3 psf | -29.1 psf | -26.9 psf POSITIVE ALL ZONES 10.0 psf | 10.0 psf | 10.0 psf OVERHANG ZONE 1&2 | -27.2 psf | -27.2 psf | -27.2 psf OVERHANG ZONE 3 -45.7 psf | -35.3 psf | -30.9 psf WALL SURFACE PRESSURE 10 SF | 100 SF | 500 SF -15.8 psf | -13.6 psf | -12.1 psf NEGATIVE ZONE 4 NEGATIVE ZONE 5 -19.5 psf | -15.1 psf | -12.1 psf WELDED CONNECTIONS: POSITIVE ZONE 4&5 14.6 psf | 12.4 psf | 10.9 psf EARTHQUAKE DESIGN DATA: ....OCCUPANCY CATEGORY MASONRY: ....SEISMIC IMPORTANCE FACTOR (Ie) ....MAPPED SPECTRAL ACCELERATIONS AT SHORT PERIODS (Ss) ....MAPPED SPECTRAL ACCELERATIONS AT (1) SECOND PERIODS (S1) 0.044 ....SITE CLASSIFICATIONS ...DESIGN SPECTRAL RESPONSE COEFFICIENT AT SHORT PERIODS (Sds) 0.114 ...DESIGN SPECTRAL RESPONSE COEFFICIENT AT (1) SECOND PERIODS (Sd1) ....SEISMIC DESIGN CATEGORY STRUCTURE NOT SPECIFICALLY ....BASIC SEISMIC-FORCE-RESISTING SYSTEM DETAILED FOR SEISMIC RESTANCE 0.038W KIPS ...DESIGN BASE SHEAR 0.038 ....SEISMIC RESPONSE COEFFICIENT (Cs) ....RESPONCE MODIFICATION COEFFICIENT ....ANALYSIS PROCEDURE FOR SEISMIC DESIGN EQUIVALENT LATERAL FORCE ANALYSIS ...BUILDING IS IN MILWAUKEE COUNTY SOIL DESIGN VALUES: ....SOIL UNIT WEIGHT 110 PCF (ASSUMED) ....LATERAL EARTH PRESSURE 40 PSF/FT OF DEPTH (ASSUMED) ......ACTIVE (RETAINING WALLS) .....AT-REST (BASEMENT WALLS) 60 PSF/FT OF DEPTH (ASSUMED)

ALLOWABLE SOIL BEARING PRESSURE		1,5	500 PSF (ASSUME
DEFLECTION	LIMITS		
MEMBERS	LIVE	SNOW or WIND	DEAD + LIVE or S
ROOF MEMBERS			
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240
NOT SUPPORTING CEILING	L/240	L/240	L/180
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
FLOOR MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	N/A	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	N/A	L/240
LINTEL/HEADER/BEAM MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	L/360	L/240
EXTERIOR WALLS			
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/600	N/A
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A

.....PASSIVE

....COEFFICIENT OF SLIDING FRICTION

MATERIAL STRENGTHS CAST-IN-PLACE CONCRETE: ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS f'c = 3,000 PSI ...MAXIMUM WATER-CEMENTITIOUS RATIO 0.59 ...MAXIMUM AGGREGATE SIZE 1 1/2" ...SLUMP LIMIT 5" +/-1" ...AIR CONTENT FOUNDATION FROST WALLS ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS fc = 4,000 PSI ...MAXIMUM WATER-CEMENTITIOUS RATIO 0.48 ...MAXIMUM AGGREGATE SIZE ...SLUMP LIMIT 4" +/-1" ....AIR CONTENT YES 4% to 6% EXTERIOR PIERS, WALLS, AND COLUMNS f'c = 4,000 PSI ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS ...MAXIMUM WATER-CEMENTITIOUS RATIO 0.48 ....MAXIMUM AGGREGATE SIZE ...SLUMP LIMIT 4" +/-1" ....AIR CONTENT YES 4% to 6% INTERIOR SLABS ON GRADE ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS fc = 4,000 PSI ...MAXIMUM WATER-CEMENTITIOUS RATIO ...MAXIMUM AGGREGATE SIZE ....SLUMP LIMIT 4" +/-1" ....AIR CONTENT EXTERIOR SLABS ON GRADE f'c = 4,000 PSI ...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS ...MAXIMUM WATER-CEMENTITIOUS RATIO 0.48

4" +/-1"

0.50

4" +/-1"

0.55

1 1/2"

6" +/-1"

YES 4% to 6%

FIBER REINFORCEMENT: MACROSYNTHETIC FIBERS ENGINEERED & DESIGNED FOR USE IN CONCRETE SLABS COMPLYING WITH ASTM C 1116, TYPE III, 1 1/2" TO 2 1/2" LONG

STEEL/METAL: REINFORCING STEEL: ....ALL ASTM A615, GRADE 60, DEFORMED ...STEEL WELDED WIRE REINFORCEMENT, FLAT SHEETS Fy = 60,000 PSI STRUCTURAL STEEL: ....ROLLED WIDE FLANGE SHAPES, ASTM A992 GRADE 50 Fy = 50,000 PSI ...CHANNELS, ANGLES, AND S SHAPES, ASTM A36 ....PLATE AND BAR, ASTM A36 Fy = 36,000 PSI ...TUBE SHAPES, ASTM A500 GRADE B Fy = 46,000 PSI ....PIPE ASTM A53, TYPE E or S, GRADE B  $F_{y} = 46,000 PSI$ ....ALL OTHER ROLLED SHAPES, ASTM A36 Fy = 36,000 PSI STRUCTURAL BOLTS: .....HIGH STRENGTH BOLTS, NUTS, & WASHERS ASTM A325 ....ZINC-COATED HIGH STRENGTH BOLTS. NUTS. & ASTM A325 WASHERS ASTM F593 ...STAINLESS STEEL BOLTS, NUTS, & WASHERS ASTM A108 ...SHEAR CONNECTORS (GRADES 1015 THRU 1020) ...THREADED RODS ASTM A36 ...CLEVIS & TURNBUCKLES (GRADE 1035) ASTM A108 ASTM A108 ...EYE BOLTS & NUTS (GRADE 1030) ...ANCHOR BOLTS (GRADE 36) ASTM F1554

...WELDING ELECTRODES E70XX E80XX FOR WELDING REINF fm = 2,500 PSI

MASONRY MOTAR: ...TYPE "M" MORTAR BELOW GRADE ...TYPE "M" or "S" ABOVE GRADE

300 PSF (ASSUMED)

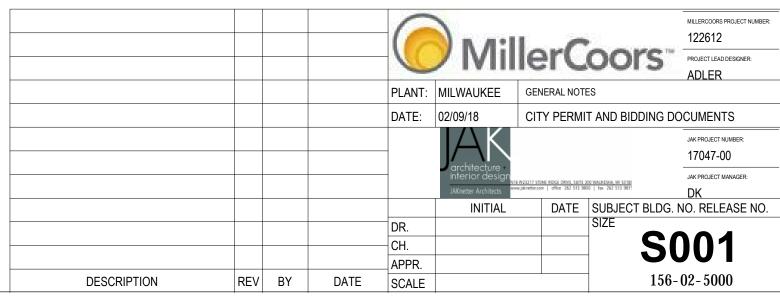
150 PCI (ASSUMED)

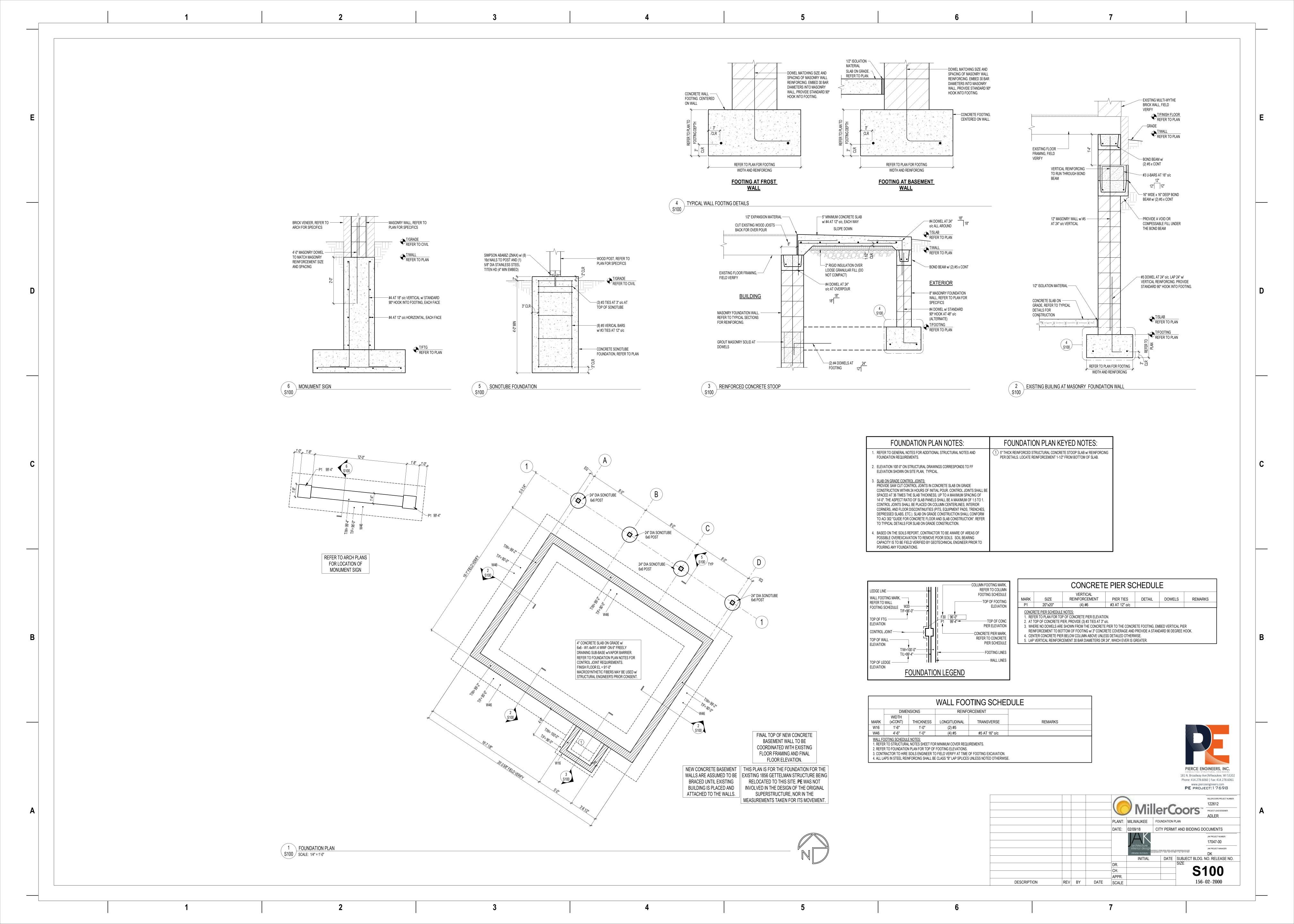
0.30 (ASSUMED)

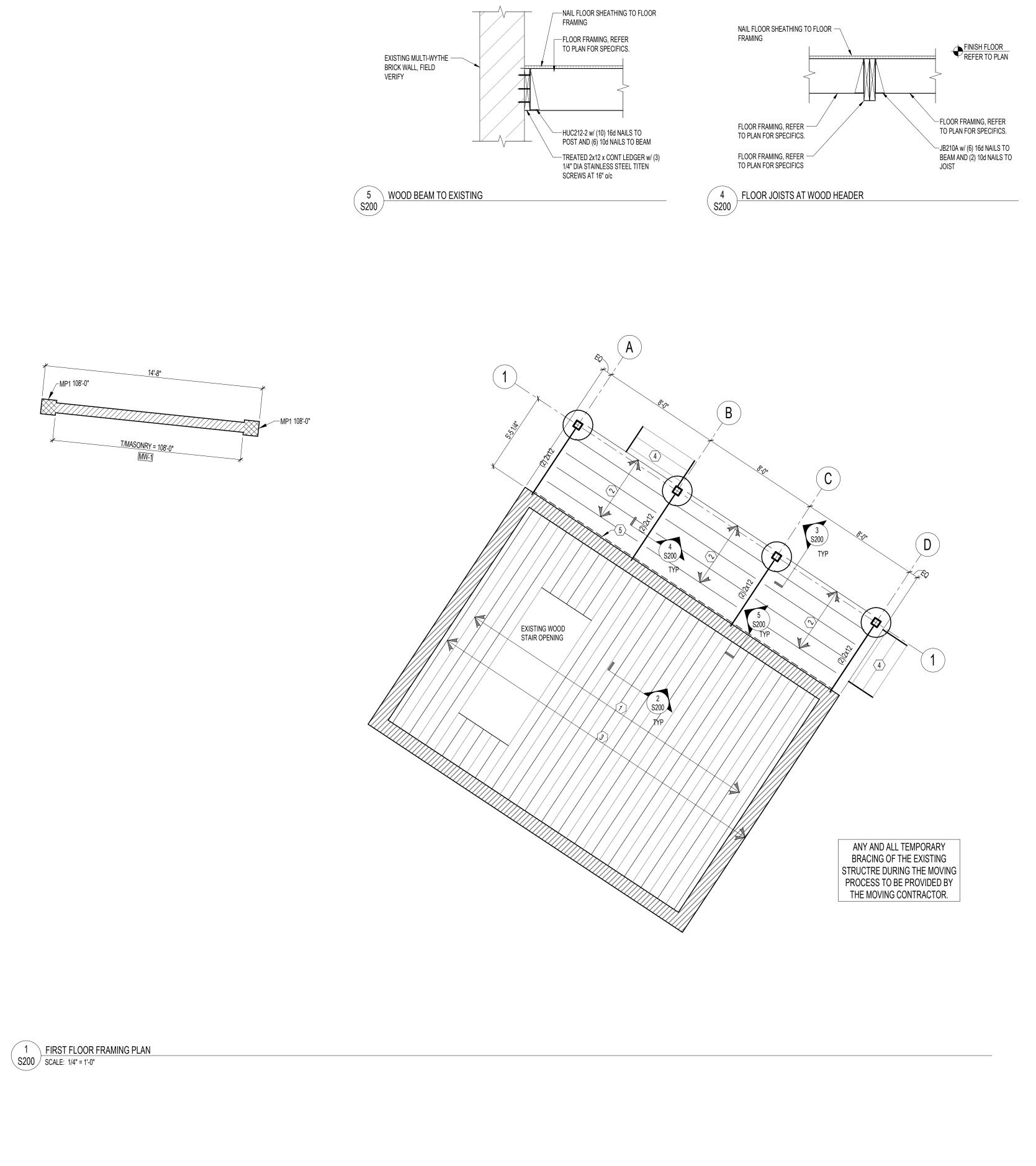
WOOD FRAMING (UNO ON PLANS/DETAILS DIMENSIONAL LUMBER: ....JOISTS/BEAMS/HEADERS SPRUCE-PINE-FIR No. 2 or BETTER ....EXTERIOR LUMBER TREATED SOUTHERN PINE No 2 or BETTER .....POSTS/COLUMNS CEDAR No. 2 or BETTER LAMINATED VENEER LUMBER (LVL): ....JOISTS/BEAMS/HEADERS .....E = 2,000 ksi Fc (PARALLEL) = 2,510 psi .....Fb = 2,600 psi Fc (PERPENDICULAR) = 750 psi .....Fv = 285 psi PARALLEL STRAND LUMBER (PSL): ....JOISTS/BEAMS/HEADERS ..... E = 2,000 ksi Fc (PARALLEL) = 2,900 psi .....Fb = 2,900 psi Fc (PERPENDICULAR) = 625 psi .....Fv = 290 psi

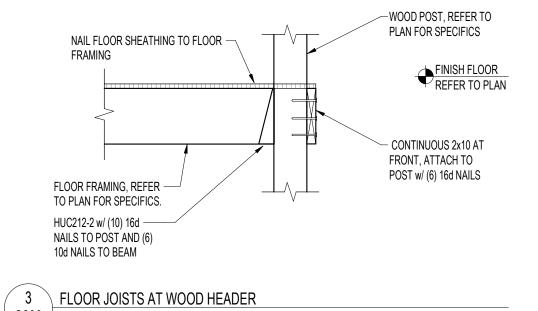
LAMINATED STRAND LUMBER (LSL): ....JOISTS/BEAMS/HEADERS Fc (PARALLEL) = 2,170 psi .....E = 1,550 ksi .....Fb = 2,325 psi Fc (PERPENDICULAR) = 900 psi .....Fv = 310 psi

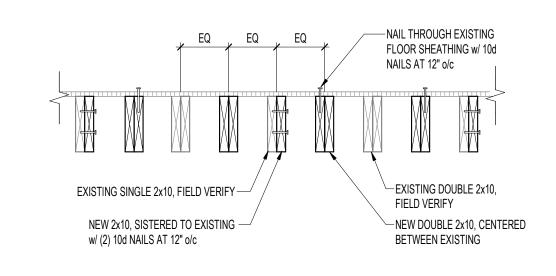












2 NEW FLOOR FRAMING DETAIL

WOOD FLOOR FRAMING PLAN KEYED NOTES: WOOD FLOOR FRAMING PLAN NOTES: 1. PORCH FLOOR CONSTRUCTION: CENTER MATCH OR TONGUE & GROOVE APA RATED WOOD PORCH FLOORING NAIL FLOOR SHEATHING TO WOOD FLOOR (1) EXISTING 2x FLOOR FRAMING, FIELD VERIFY MEMBERS AND BEARING CONDITIONS w/ STRUCTURAL ENGINEER. STRUCTURE. SHEATHING TO BE ATTACHED TO FLOOR MEMBERS w/ 10d COMMON NAILS ON A 6"/12" o/c PATTERN (EDGE/FIELD). NAILS TO HAVE A 2 PRESSURE TREATED 2x10 DECK JOISTS AT 16" o/c. MINIMUM PENETRATION INTO FRAMING MEMBER OF 1-1/2". (2) 2x10 JOISTS BETWEEN EACH EXISTING JOIST. 2. REFER TO ARCHITECTURAL DRAWINGS FOR STAIR FRAMING AND CONFIGURATION.  $\langle 4 \rangle$  PRESSURE TREATED 2x12 STAIR STRINGERS w/ (2) SIMPSON A35 CLIP AT BEARING

3. AT A MINIMUM, ALL ATTACHMENTS SHALL FOLLOW IBC TABLE 2304.9.1 AS SHOWN ON STRUCTURAL NOTES SHEET. DETAILS SHALL GOVERN ONLY IF THEIR CAPACITIES ARE LARGER THAN WHAT IS SHOWN ON TABLE 2304.9.1. 4. "MW-1" INDICAT

SCHEDULE FOR 5. FASTENERS INT

(5) PRESSURE TREATED 2x12 x CONT LEDGER w/ (3) 1/4" DIA TITEN SCREWS AT 16" o/c

			MASONRY WALL REIN	FORCING SCHEDULE	
	MARK	WALL THICKNESS	VERTICAL REINFORCEMENT & SPACING	REINFORCEMENT LOCATION IN CELL	REMARKS
ı	MW-1	8"	#5 AT 24" o/c MAX	CENTER	
	1. GF 2. UN	NLESS NOTED OTHERWISE,	CHEDULE NOTES:  UNITS SOLID FULL HEIGHT OF BUILDING AT PROVIDE DOWELS INTO FOOTING TO MATC RY UNIT WALL REINFORCING ABOVE AND BE	H VERTICAL WALL REINFORCEMENT.	ARGE OF 24" OR 40 BAR DIA. PAST

EDGE OF OPENING. USE CLASS "B" LAP SPLICES FOR ALL VERTICAL REINFORCEMENT UNLESS NOTED OTHERWISE.
PROVIDE STANDARD (W1.7) HORIZONTAL JOINT REINFORCING AT 16" ON CENTER VERTICALLY (8" ON CENTER IN PARAPET WALLS) UNO. REINFORCING TO BE HOT-DIPPED GÀLVAŃIZED IN EXTERIOR WALLS AND MILL-GALVANIZED FOR INTERIOR WÀLLS.

MARK	SIZE	VERTICAL REINFORCEMENT	PIER TIES	DOWELS
MP1	12"x12"	(4) #5	#3 AT 16" o/c	

REFER TO PLAN FOR TOP OF MASONRY PIER ELEVATION .
AT TOP OF MASONRY PIER SUPPORTING STEEL COLUMN, PROVIDE (3)-#3 TIES AT 3" ON CENTER. WHERE NO DOWELS ARE SHOWN FROM THE MASONRY PIER TO THE CONCRETE FOOTING, EMBED VERTICAL PIER REINFORCEMENT TO BOTTOM OF FOOTING WITH 3" CONCRETE COVERAGE AND PROVIDE A STANDARD 90 DEGREE HOOK. GROUT CORES SOLID AT ALL VERTICAL REINFORCEMENT LOCATIONS.

PROVIDE DOWELS INTO CONCRETE FOOTING TO MATCH VERTICAL MASONRY WALL REINFORCEMENT. UNLESS NOTED OTHERWISE, PROVIDE (1)-#5 VERTICAL FULL HEIGHT AT THE JAMB OF ALL MASONRY OPENINGS. CENTER MASONRY PIER BELOW COLUMN ABOVE UNLESS DETAILED OTHERWISE. USE CLASS "B" LAP SPLICES FOR ALL VERTICAL MASONRY REINFORCEMENT.

MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.







