

Civil Engineering Construction Documents

Van Buren Flatts

306 West Van Buren Street, Columbia City, Indiana 46725

PROJECT OWNER/DEVELOPER:
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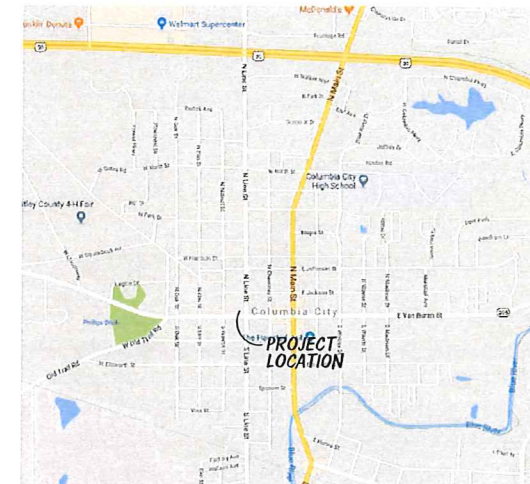
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SITE STATISTICS

SITE AREA = 27,355 SQ. FT.
BUILDING COVERAGE % = 11,007 SQ. FT. - 40%
IMPERVIOUS AREA % = 24,314 SQ. FT. - 89%
OFF STREET PARKING = 30 STANDARD
2 HANDICAP ACCESSIBLE
32 TOTAL

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Real Estate Description

THE EAST FORTY (40) FEET OF LOT NO. EIGHT (8) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, INDIANA, BLOCK NO. ONE (1) OF SAID ADDITION AND DESCRIBED AS FOLLOWS, TO-WIT:

COMMENCING AT THE SOUTHEAST CORNER OF SAID ABOVE DESCRIBED LOT EIGHT (8) IN BLOCK NO. ONE (1) IN SHINNEMAN'S FIRST ADDITION TO THE TOWN OF COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, INDIANA, RUNNING THENCE NORTH ON THE EAST LINE OF SAID LOT TO THE NORTH LINE OF SAID LOT, THENCE WEST ON THE NORTH LINE OF SAID LOT FORTY (40) FEET; THENCE SOUTH PARALLEL TO THE EAST LINE OF SAID LOT TO THE SOUTH LINE OF SAID LOT, THENCE EAST ON SAID SOUTH LINE TO THE PLACE OF BEGINNING.

ALSO
THIRTY-FOUR (34) FEET OFF OF THE EAST SIDE OF LOT NUMBER SEVEN (7) IN BLOCK NUMBER ONE (1) IN SHINNEMAN'S FIRST ADDITION TO THE TOWN OF COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, INDIANA, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT THE SOUTHEAST CORNER OF LOT NUMBER SEVEN (7) AND RUNNING THENCE WEST ON THE SOUTH LINE THEREOF AND ALONG VAN BUREN STREET IN SAID CITY, THIRTY-FOUR (34) FEET; THENCE NORTH PARALLEL WITH THE EAST LINE THEREOF ONE HUNDRED FIFTY (150) FEET TO THE NORTH LINE OF SAID LOT; THENCE EAST ALONG THE NORTH LINE THEREOF, THIRTY-FOUR (34) FEET TO THE NORTHEAST CORNER OF SAID LOT NUMBER SEVEN (7); THENCE SOUTH ALONG THE EAST LINE OF SAID LOT TO THE PLACE OF BEGINNING.

ALSO
COMMENCING ON THE SOUTH LINE OF, AND AT A POINT FORTY (40) FEET WEST OF THE SOUTHWEST CORNER OF LOT NUMBER EIGHT (8) IN BLOCK NUMBER ONE (1) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CALLED COLUMBIA CITY; RUNNING FROM THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID LOT TO THE NORTH LINE THEREOF, THENCE WEST ON THE NORTH LINE TO THE NORTHEAST CORNER OF SAID LOT; THENCE SOUTH ON THE WEST LINE OF SAID LOT TO THE SOUTHWEST CORNER THEREOF; THENCE EAST ON THE SOUTH LINE OF SAID LOT TO A POINT FORTY (40) FEET WEST OF THE SOUTHWEST CORNER OF SAID LOT BEING THE POINT OF COMMENCING.

ALSO
LOT TWO (2) IN BLOCK ONE (1) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CITY OF COLUMBIA CITY.

JACKSON STREET (82.5' R/W)

NORTH LINE STREET

ALLEY (16.5' R/W)

ALLEY (16.5' R/W)

ALLEY (16.5' R/W)

VAN BUREN STREET (82.5' R/W)

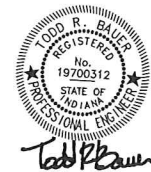


Overall Site Plan
Scale: 1" = 20'

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Certification:



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Performed for:

Cover Sheet For:



306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number
182297

Date
February 8th, 2019

Title
Cover Sheet

Sheet Number

CO.0



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GENERAL SPECIFICATIONS

1. ALL WORK PERFORMED ON THE SITE SHALL CONFORM TO THE SITE CONSTRUCTION PLANS AND SPECIFICATIONS. SITE CONSTRUCTION SHALL BE IN CONFORMANCE WITH APPLICABLE FEDERAL, STATE, COUNTY, CITY OR LOCAL AGENCY ORDINANCE REQUIREMENTS, STANDARDS, SPECIFICATIONS, AND DETAILS. WHEN CONFLICTING SPECIFICATIONS ARE FOUND, REPORT TO ENGINEER IMMEDIATELY FOR CLARIFICATION. GENERALLY THOSE SPECIFICATIONS AND DETAILS FOUND IN THE APPLICABLE LOCAL GOVERNMENT JURISDICTION CONSTRUCTION GUIDELINES SHALL PREVAIL IN THE EVENT OF A DISCREPANCY.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TIMELY NOTIFICATION OF GOVERNMENTAL AGENCIES REGARDING THE COMMENCEMENT OF CONSTRUCTION ACTIVITY IS REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER AND TO VERIFY THAT ALL PERMITS HAVE BEEN OBTAINED, AND THAT ALL GOVERNMENTAL AGENCIES HAVE BEEN NOTIFIED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE WITH OWNER AND ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LOCAL PERMITS REQUIRED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY OR ANY OTHER PERMITS REQUIRED BY ANY LOCAL AGENCY. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION AS DETAILED IN THESE PLANS. THE OWNER OR HIS REPRESENTATIVE WILL ALLOW THE CONTRACTOR IN OBTAINING SUCH PERMITS AS MAY BE NECESSARY.
4. A MINIMUM OF 48 HOURS NOTICE WILL BE PROVIDED TO THE APPROPRIATE GOVERNMENTAL AGENCY PRIOR TO CONSTRUCTION, RESTART, OR CHANGE OF OPERATION AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST FURTHER NOTIFY THE CITY ENGINEER'S OFFICE 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY INCLUDING UTILITY INSTALLATION WITHIN EXISTING RIGHT-OF-WAY TO SCHEDULE INSPECTION. ANY WORK WITHIN SAID RIGHT-OF-WAY THAT HAS NOT BEEN INSPECTED WILL BE REJECTED.
5. ANY UTILITY CONNECTIONS THAT REQUIRE CONSTRUCTION WITHIN STATE OF INDIANA RIGHT-OF-WAY SHALL REQUIRE AN INDOT LINE CUT PERMIT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ENGINEER AND OWNER TO COMPLETE THE PERMIT.
6. A PRE-CONSTRUCTION CONFERENCE INCLUDING THE OWNER, ARCHITECT, ENGINEER, CONTRACTOR, GOVERNMENT OFFICIALS, REPRESENTATIVES OF PRIVATE UTILITY COMPANIES, AND OTHER INTERESTED PARTIES SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7. THE OWNER OR HIS REPRESENTATIVE SHALL NOTIFY ALL UTILITY COMPANIES AND THE CONTRACTOR BEFORE THE PRECONSTRUCTION MEETINGS. NO CONSTRUCTION WILL BEGIN UNTIL SAID PRECONSTRUCTION MEETING HAS BEEN HELD.
8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DISCREPANCIES. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITION, THE CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING FEATURES WHICH LIE ALONG THE PERIMETER OF THE SITE. THESE FEATURES INCLUDE, BUT ARE NOT LIMITED TO, BUILDINGS, PLANTS, TREES, FENCES, VEGETATION, UTILITIES, ETC. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITY LINES OR ANY DAMAGE WHICH OCCURS DURING OR AS A RESULT OF CONSTRUCTION ACTIVITY. REPLACEMENT OF DAMAGED PROPERTY SHALL BE EQUAL TO EXISTING CONDITIONS.
10. UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE LOCATIONS AS LOCATED BY THE VARIOUS UTILITY COMPANIES. CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. DURING CONSTRUCTION, ALL UTILITIES SHALL BE ADEQUATELY SUPPORTED TO MINIMIZE DAMAGE. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY OR GOVERNMENTAL AGENCY IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS AND SHALL BE RESPONSIBLE FOR REPAIRS TO THE UTILITY IN ACCORDANCE WITH THE AFFECTED UTILITY'S REPAIR POLICY.
11. THE CONTRACTOR SHALL NOTIFY INDIANA UNDERGROUND PLANT PROTECTION SERVICES, "INDIANABOI", FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION BY CALLING 1-800-382-5544 OR 811, OR ON THE INTERNET AT www.in.gov/811. IN ACCORDANCE WITH I.C. 8-2-2-1, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES SHALL BE PERFORMED BY HAND EXCAVATION, AIR CUTTING, OR VACUUM EXCAVATION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE TRAFFIC CONTROL ON THE ADJACENT PUBLIC STREETS AS RELATED TO BOTH PHYSICAL SITE IMPROVEMENTS AND THE MOVEMENT OF CONSTRUCTION TRAFFIC. CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE FROM THE CONSTRUCTION ENTRANCE AS SHOWN ON THE STORM WATER POLLUTION PREVENTION PLAN.
13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOBSITE AND SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. ALL CONSTRUCTION ACTIVITY AND SAFETY PROVISIONS SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES. ALL TRENCHING, PIPE LAYING AND BACKFILLING OPERATIONS SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS.
14. SUFFICIENT SHEETNS, SHORINGS AND BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO ENSURE SAFETY OF THE WORKMEN AND WHEREVER IT IS NECESSARY TO PROTECT AND PRESERVE LIFE STRUCTURES AND PROPERTY AND COMPLETE THE WORK IN THESE PLANS. THE DESIGN AND INSTALLATION OF SUCH DEVICES SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A QUALIFIED INDIVIDUAL EXPERIENCED IN SUCH WORK.
15. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AT HIS EXPENSE ALL AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL AGENCY. THE AMOUNT, LOCATION AND SIZE SHALL BE PER DIRECTION OF AGENCY.
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL MUD, DIRT, GRAVEL, AND ANY OTHER MATERIALS TRACKED ONTO ANY PUBLIC OR PRIVATE STREETS OR SIDEWALKS. THE CONTRACTOR MUST CLEAN THESE DAILY. IF NECESSARY, THE CONTRACTOR MUST USE WATER OR OTHER METHODS TO KEEP AIRBORNE DUST TO A REQUIRED MINIMUM. NO METAL DUMPSTERS SHALL BE PLACED ON STREETS OR PAVED AREAS AFTER CONSTRUCTION.
17. SITE CONSTRUCTION LAYOUT FOR BUILDING FOUNDATIONS, CURBS, STREETS, WATER MAINS, DRAINAGE SHALES, STORM SEWER STRUCTURES, AND SANITARY SEWERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PERFORMED BY OR UNDER THE SUPERVISION OF A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN 865 IAC 11-2-5.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING INSPECTIONS WITH THE APPROPRIATE GOVERNMENTAL AGENCY OR UTILITY IN ACCORDANCE WITH SAID AGENCY'S OR UTILITY'S REQUIREMENTS AND STANDARDS. ALL NECESSARY INSPECTIONS AND CERTIFICATIONS REQUIRED BY ORDINANCE, CODES, GOVERNMENTAL AGENCIES OR UTILITIES SHALL BE PERFORMED BEFORE THE FINAL CONNECTION OF SERVICES. THE CONTRACTOR SHALL HAVE ALL WORK OPEN TO INSPECTION OF ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT. CONSTRUCTION WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACTOR SHALL PROTECT SAFE ACCESS TO THE PROJECT. THE CONTRACTOR SHALL PROTECT SAFE ACCESS TO THE CONSTRUCTION SITE FOR ALL INSPECTORS AND SHALL PROVIDE MATERIAL SAMPLES FOR TESTINGS, AS REQUIRED.
19. TOPOGRAPHIC AND EXISTING SITE INFORMATION SHOWN IN THESE PLANS HAS BEEN PROVIDED BY THE OWNER AND THE CONTRACTOR ACCEPTS SUCH INFORMATION BY ACCEPTING THIS CONTRACT. IF THE CONTRACTOR BELIEVES A SIGNIFICANT CONFLICT EXISTS BETWEEN SUCH TOPOGRAPHIC INFORMATION AND THE ACTUAL SITE CONDITIONS, HE SHALL SUBMIT A TOPOGRAPHIC SURVEY COMPLETED AND CERTIFIED BY A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA PRIOR TO THE BEGINNING OF ANY CONSTRUCTION AT THE SITE FOR THE OWNER'S REVIEW. FURTHERMORE, THE CONTRACTOR SHALL INFORM HIMSELF OF THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE SITE OF THE WORK, THE OBSTACLES WHICH MAY BE ENCOUNTERED, AND ALL OTHER RELEVANT MATTERS CONCERNING THE WORK TO BE PERFORMED, THE CONTRACTOR SHALL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT HAVE FULLY INFORMED HIMSELF, BECAUSE OF HIS FAILURE TO HAVE SO INFORMED HIMSELF PRIOR TO BIDDING THE JOB. IT IS UNDERSTOOD AND AGREED THAT THE OWNER DOES NOT WARRANT OR GUARANTEE THAT THE MATERIALS AND CONDITIONS ENCOUNTERED DURING CONSTRUCTION WILL BE THE SAME AS INDICATED BY THE INFORMATION SHOWN ON THESE DRAWINGS. THE CONTRACTOR MUST SATISFY HIMSELF REGARDING THE CHARACTER, QUANTITIES, AND CONDITIONS OF THE VARIOUS MATERIALS AND WORK TO BE DONE.
20. ELEVATIONS OF ALL EXISTING FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
21. IN GENERAL, ALL OPEN TRENCHES OR SIMILAR EXCAVATIONS SHALL BE FILLED AT THE END OF THE DAY'S WORK OR OTHER SPECIFIC OPERATIONS. WHEN THIS IS NOT POSSIBLE OR PRACTICAL, ALL OPEN TRENCHES OR SIMILAR EXCAVATIONS SHALL BE ADEQUATELY FENCED OR "CAUTION" TAPE AT THE END OF EACH DAY'S WORK OR DURING OTHER TIMES WHEN THE CONTRACTOR IS NOT ACTIVELY WORKING AT THE SITE.
22. CONTRACTOR SHALL INDEMNIFY AND SAVE AND HOLD OWNER HARMLESS FROM ANY LOSS, COSTS, CLAIMS OR EXPENSES INCLUDING BUT NOT LIMITED TO: ATTORNEY'S FEES AND COURT COSTS) ARISING OUT OF OR IN CONNECTION WITH ANY NEGLIGENCE OR OTHER BREACH OF CONTRACT OR MATERIAL OR EQUIPMENT SUPPLIER EMPLOYED OR EMPLOYED IN CONNECTION WITH THE WORK IN THESE PLANS OR WITH SUBSEQUENT CHANGE ORDERS, EXCEPT THIS INDEMNIFICATION SHALL NOT BE ENFORCEABLE DURING ANY PERIOD OF TIME WHEN THE CONTRACTOR IS IN DEFAULT IN FAILING TO MAKE PAYMENTS WHEN DUE THE CONTRACTOR UNDER THEIR MUTUAL AGREEMENT.
23. ANY BONDS OR INSURANCE REQUIRED BY ANY GOVERNMENTAL AGENCY, UTILITY OR OTHER AGENCY FOR THE COMPLETED WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
24. ALL AREAS DISTURBED BY THE CONSTRUCTION PROCESS SHALL BE RESTORED TO THE CONDITION THAT EXISTED PRIOR TO CONSTRUCTION, AS APPLICABLE. BACKFILLING SHALL BE TO THE GRADE OF THE EXISTING GROUND LEVEL, OR TO THE GRADE AS ESTABLISHED BY THE PROPERTY OWNER IN THE EVENT THE PROPERTY OWNER PERMITS THE DEPOSIT OF EXCESS MATERIAL UPON HIS LAND, UNLESS SPECIFICALLY DIRECTED OTHERWISE IN THESE PLANS.
25. THE CONTRACTOR SHALL CONFINE HIS WORK TO THE PROPERTY AND CONSTRUCTION LIMITS SHOWN IN THESE PLANS AND WITHIN APPLICABLE PUBLIC RIGHT-OF-WAY AND EASEMENT LIMITS. IF THE METHODS OF CONSTRUCTION EMPLOYED BY THE CONTRACTOR ARE SUCH AS TO REQUIRE THE USE OF ANY ADDITIONAL LAND, HE SHALL MAKE HIS OWN ARRANGEMENTS WITH THE PROPERTY OWNERS AFFECTED FOR THE USE OF SUCH ADDITIONAL LAND.

GENERAL SPECIFICATIONS CONTINUED

26. IN THE EVENT THAT THE OWNER LETS OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THE CONTRACTOR, THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS WITH REGARD TO STORAGE OF MATERIALS AND EXECUTION OF THEIR WORK.
27. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND EQUIPMENT INSTALLED ON THE PROJECT SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIAL SHALL BE OF GOOD QUALITY. MANUFACTURED MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED AND CONSTRUCTED AS DIRECTED BY THE MANUFACTURER'S GUIDELINES AND RECOMMENDATIONS. WHEREVER PROPRIETARY EQUIPMENT IS SPECIFIED OR "APPROVED EQUIPMENT" IS IMPLIED, ALL PROPOSALS FOR SUBSTITUTION SHALL BE SUBMITTED TO THE APPROPRIATE AGENCY IN WRITING FOR THEIR APPROVAL.
28. UPON FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THESE CONSTRUCTION PLANS AND SPECIFICATIONS, AND AFTER FIFTY (50) DAYS WRITTEN NOTICE TO THE CONTRACTOR, THE OWNER MAY, WITHOUT FURTHER NOTICE TO ANY OTHER REVEYER, HE MAY HAVE, CORRECT SUCH DEFICIENCIES IN WORK INTENDED TO BECOME A PERMANENT PART OF THE PROJECT. THE COST TO CORRECT SUCH DEFICIENCIES MAY BE DEDUCTED FROM THE PAYMENT DUE TO THE CONTRACTOR.
29. THE OWNER SHALL HAVE THE AUTHORITY TO SUSPEND THE WORK WHOLLY OR IN PART, FOR SUCH PERIOD OR PERIODS AS HE MAY DEEM NECESSARY DUE TO UNSUITABLE WEATHER OR SUCH OTHER CONDITIONS AS ARE CONSIDERED UNFAVORABLE TO CARRY OUT THE PROVISIONS OF THE WORK.
30. THE CONTRACTOR, PROMPTLY AFTER BEING ADVISED THE CONTRACT, SHALL PREPARE AND SUBMIT FOR THE OWNER AND SUBMIT TO THE CONTRACTOR'S CONSTRUCTION SCHEDULE FOR THE WORK. THE CONTRACTOR SHALL PERFORM THE WORK ACCORDING TO SAID SCHEDULE AS MUCH AS POSSIBLE.
31. THE CONTRACTOR IS RESPONSIBLE TO THE OWNER FOR THE WORK OF HIS SUBCONTRACTORS, AS APPLICABLE. AND THE DIRECT AND INDIRECT EMPLOYEES TO THE SAME EXTENT AS HE IS RESPONSIBLE FOR THE WORK OF HIS EMPLOYEES. THE CONTRACTOR SHALL BIND ANY SUBCONTRACTOR BY THE TERMS OF THESE CONSTRUCTION PLANS AND SPECIFICATIONS.
32. THE CONTRACTOR SHALL REMOVE FROM THE OWNER'S PROPERTY, AND FROM ALL PUBLIC AND PRIVATE PROPERTY, ALL TEMPORARY STRUCTURES, RUBBISH, AND WASTE MATERIALS RESULTING FROM HIS OPERATION OR CAUSED BY HIS EMPLOYEES, ALL OF HIS EQUIPMENT, TOOLS AND SUPPLIES, AND ALL SURPLUS MATERIALS (UNLESS OTHERWISE DIRECTED IN THESE PLANS OR DIRECTED BY THE OWNER) LEAVING THE SITE SMOOTH, CLEAN AND TRUE TO LINE AND GRADE.
33. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THESE CONSTRUCTION PLANS AND SPECIFICATIONS AND SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF THE CONTRACTOR. CHANGE ORDERS OR REVISED CONSTRUCTION PLANS SHALL BE AS APPROVED BY THE OWNER AND ANY APPLICABLE GOVERNMENT AGENCY OR UTILITY AND MAY BE ISSUED BY THE OWNER PRIOR TO THE COMPLETION OF THE PORTION OF THE WORK AFFECTED BY SUCH CHANGE. PAYMENT FOR CHANGE ORDERS SHALL BE AS NEGOTIATED BY THE CONTRACTOR AND THE OWNER PRIOR TO BEGINNING SUCH WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE CHANGE SPECIFICATIONS AND ANY OTHER INFRASTRUCTURE CONSTRUCTED ON THIS PROJECT. (A) CONTRACTOR SHALL COMPLETE FINISHED GRADING AND PUBLIC IMPROVEMENTS, SUCH AS SEWERS AND STREETS, TO WITHIN 0.1 FEET OF THE ELEVATIONS CONTAINED IN THESE PLANS. (B) CONTRACTOR SHALL COMPLETE INSTALLATION OF STREET AND SEWER TO THE GRADES OR ELEVATIONS CONTAINED IN THESE PLANS SUCH THAT THEY DEVIATE BY NO MORE THAN 10% FROM THEIR DESIGN GRADE (SLOPE). E.G. A DESIGN GRADE OF 0.50% SHALL BE CONSTRUCTED BETWEEN 0.45% AND 0.55%. THE CONTRACTOR SHALL BE REQUIRED TO REWORK ANY AREA THAT DOES NOT MEET THESE TOLERANCES AT HIS EXPENSE UNTIL COMPLIANCE IS OBTAINED.
- THIS SPECIFICATION DOES NOT ALLOW THE ENTIRE PROJECT TO BE CONSTRUCTED AT SUCH LIMITS (E.G. CONSTRUCT THE ENTIRE PROJECT 0.1-FOOT BELOW DESIGN ELEVATIONS). IN GENERAL, CONTRACTOR SHALL CONSTRUCT STRICTLY TO THE DESIGN GRADES AND ELEVATIONS CONTAINED IN THESE PLANS. THE ABOVE LIMITS ARE BEING ESTABLISHED AS A MINIMUM CONSTRUCTION REQUIREMENT TO ENSURE PROPER DRAINAGE AND FUNCTIONALITY OF THE CONSTRUCTED INFRASTRUCTURE. DEVIATIONS IN EXCESS OF THESE LIMITS WILL REQUIRE APPROVAL WITH I.C. 8-2-2-1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES SHALL BE PERFORMED BY HAND EXCAVATION, AIR CUTTING, OR VACUUM EXCAVATION.
34. THE OWNER SHALL HAVE THE RIGHT TO TAKE POSSESSION OF AND USE ANY COMPLETED OR PARTIALLY COMPLETED PORTION OF THE WORK AS NEGOTIATED WITH THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE WORK. SUCH POSSESSION AND USE SHALL IN NO MANNER BE DEEMED ACCEPTANCE OF ANY WORK NOT IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.
35. ANY PLAN CONFLICTS SHALL BE SUBMITTED IN WRITING IMMEDIATELY TO CRIPE ARCHITECTS - ENGINEERS FOR REVIEW.
36. AS-BUILT CONSTRUCTION DRAWINGS SHALL BE FURNISHED TO THE OWNER BY THE CONTRACTOR AND SHALL BE PERFORMED BY A LAND SURVEYING FIRM WITH A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA. THE CONTRACTOR SHALL ASSIST THE OWNER IN PREPARING THE AS-BUILT DRAWINGS AND SHALL BE REQUIRED TO RECORD DURING CONSTRUCTION AND INFORMATION REQUIRED FOR PREPARING SUCH RECORD SHALL BE RECORDED PRIOR TO THE BACKFILLING OF THE UNDERGROUND FACILITY. SEE SPECIFIC SECTIONS ELSEWHERE IN THESE SPECIFICATIONS FOR SPECIFIC AS-BUILT INFORMATION REQUIRED. AS-BUILT FIELD DATA SHALL BE COLLECTED AND DRAWINGS SHALL ONLY BE COMPLETED AND ISSUED ONCE ANY EXPENSE FOR ADDITIONAL FIELD DATA OR REISSUANCE OF AS-BUILTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DEMOLITION SPECIFICATIONS

1. CONTRACTOR SHALL USE REASONABLE MEASURES TO MINIMIZE DISTURBANCE OF BUILDINGS, TREES, VEGETATION AND SITE IMPROVEMENTS ADJACENT TO CONSTRUCTION AREAS. OWNER SHALL DESIGNATE SUITABLE AREAS WITHIN THE PROPERTY FOR USE IN THE STORAGE, STAGING AND STOCKPILING OF MATERIALS, EXCAVATION, TRENCHING, AND USE OF HEAVY EQUIPMENT ON THE GROUND UNDER TREES TO BE PRESERVED SHALL BE MINIMIZED.
2. TREE PROTECTION SHALL BE IN PLACE FOR THE TREES THAT WILL BE SAVED BEFORE CONSTRUCTION BEGINS. TREE PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. TREES TO BE PROTECTED SHALL BE IDENTIFIED BY THE CONTRACTOR AND SHALL BE PROTECTED BY A FENCE. NO STORAGE OF MATERIALS OR VEHICLES SHALL BE ALLOWED WITHIN THE FENCE LINE.
3. BRUSH, TREES, STUMPS AND GRUBBING DEBRIS SHALL BE REMOVED AS NECESSARY TO COMPLETE THE WORK IN THESE PLANS OR AS MAY BE DIRECTED BY THE OWNER. NO ON-SITE DISPOSAL SHALL BE ALLOWED. NO BURNING SHALL BE ALLOWED. EXISTING TREES ON THE SITE SHALL BE PRESERVED AT THE OWNER'S DISCRETION.
4. DISPOSAL AND REMOVAL OF MATERIALS FROM SITE SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL GUIDELINES.
5. WHEN SAN CUTTING EXISTING CONCRETE PAVEMENT, CONTRACTOR SHALL LOCATE SAWCUTS ALONG EXISTING EXPANSION JOINTS WHEN FEASIBLE.

EARTHWORK, SUBGRADE, TRENCHING, AND BUILDING PAD SPECIFICATIONS

1. EARTHWORK SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 200 OF THE INDOT "STANDARD SPECIFICATIONS", LATEST EDITION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER'S OFFICE AND THE OWNER AT LEAST 48 HOURS BEFORE BEGINNING EXCAVATION AND EMBANKMENT CONSTRUCTION.
2. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL STORM WATER POLLUTION PREVENTION ORDINANCES THAT APPLY. ALL EROSION AND SEDIMENT CONTROL MEASURES AND DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS PROJECT'S STORM WATER POLLUTION PREVENTION PLAN.
3. THE CONTRACTOR SHALL EMPLOY A QUALIFIED GEOTECHNICAL ENGINEER FOR THE INSPECTION OF ALL BUILDING PADS AND FOR THE INSPECTION OF SUBGRADES AND COMPACTED FILLS AS REQUIRED BY THESE SPECIFICATIONS. THE GEOTECHNICAL ENGINEER SHALL INSPECT SOIL CONDITIONS, PROOF-ROLLING, AND FIELD DENSITY OF COMPACTED FILLS. ALL SUBGRADES AND FILLS SHALL MEET OR EXCEED THE SPECIFIED DENSITIES, AS DISCUSSED BELOW. BASED UPON REPORTS FROM THE GEOTECHNICAL ENGINEER, SUBGRADES OR FILLS WHICH ARE BELOW SPECIFIED DENSITIES WILL REQUIRE ADDITIONAL COMPACTION WORK AND TESTING AT NO ADDITIONAL EXPENSE TO THE OWNER. COMPACTION TESTS SHALL BE TAKEN AT RANDOM INTERVALS AND ELEVATIONS THROUGHOUT THE FILL EMBANKMENTS.
4. EXCESS MATERIAL FROM THE EXCAVATIONS AND MASS EARTHWORK OR CLEARED MATERIAL UNSUITABLE FOR FILLING SHALL BE REMOVED FROM THE SITE AND DONE SO AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL INCLUDE A SEPARATE ITEM IN HIS BID SHOWING THE ANTICIPATED EARTHWORK QUANTITIES (NET EXCESS ONSITE OR IMPORT MATERIAL TO CONFORM TO THIS GRADING PLAN) AND SHALL COORDINATE REMOVAL AND/OR TEMPORARY STOCKPILING OF EXCESS ONSITE MATERIALS WITH THE OWNER PRIOR TO ACCEPTING THE JOB. IN ANY CASE WHEN EXCESS ONSITE MATERIAL IS ANTICIPATED, CONTRACTOR SHALL INCLUDE A SEPARATE AND ADDITIONAL ITEM IN HIS BID FOR REMOVAL OF EXCESS ONSITE MATERIAL.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING THE SITE IN ACCORDANCE WITH THE GRADING PLANS CONTAINED IN THIS CONSTRUCTION SET. ANY REMAINING TOPSOIL, STOCKPILES AND OVERBURDEN MATERIAL SHALL BE REMOVED FROM THE SITE UPON COMPLETION OF THE PROJECT. CONTRACTOR SHALL NOT BE ALLOWED ANY EXTRA COMPENSATION FOR SATISFYING THIS SPECIFICATION.
7. IN CASES WHEN THERE IS EXCESS ONSITE MATERIAL AND IF THE ENGINEER DETERMINES THE MATERIAL IS SUITABLE FOR LANDSCAPING, THE CONTRACTOR SHALL ANTICIPATE USING A PORTION OF SUCH MATERIAL TO PLACE LANDSCAPING MOUNDS WITHIN THE CURBED AREAS OF THE PROJECT AND SHALL DO SO AT THE OWNER'S DISCRETION. ANY SUCH LANDSCAPING SHALL BE APPROVED IN WRITING BY THE ENGINEER AND SHALL NOT ALTER THE DRAINAGE PATTERNS AS SHOWN ON THE APPROVED GRADING PLAN.

EARTHWORK, SUBGRADE, TRENCHING, AND BUILDING PAD SPECIFICATIONS CONTINUED

8. CONSTRUCTION AS-BUILT DRAWINGS SHALL INCLUDE AS-BUILT ELEVATIONS FOR DRAINAGE SHALES SERVING MORE THAN THEIR OWN SINGLE LOT, CONTOURS ON A ONE-FOOT INTERVAL, AND AS-BUILT STORM SEWER SYSTEM, TOP OF CASTINGS AT INVERT ELEVATIONS.
9. CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE IS ACHIEVED ON ALL FINAL SURFACES. IN THE EVENT OF GRADING DISCREPANCIES ON THIS PLAN, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY FOR RESOLUTION.
10. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHILE EXCAVATING AROUND EXISTING TREES SO NOT TO DISTURB AND TO MINIMIZE OR ELIMINATE DAMAGE TO ROOT SYSTEM.
11. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO NOT TO CAUSE DAMAGE.
12. CONTRACTOR WILL REMOVE TOPSOIL FROM ALL AREAS OF EXCAVATION AND WITHIN 3 FEET OF BACK OF CURB OR BUILDING PADS AND STOCKPILE ON SITE AT A LOCATION DESIGNATED IN THESE PLANS OR AS PRESCRIBED BY THE OWNER. DURING FINAL LOT GRADING, CONTRACTOR WILL RETRIEVE TOPSOIL FROM STOCKPILE AND SPREAD ONTO THE LANDSCAPED AREAS, AND ANY OTHER AREAS REQUIRING PERMANENT SEEDING.
13. IT IS BELIEVED THAT THERE IS NO TOPSOIL PRESENT ON THE LOT SINCE THE PREVIOUS DEVELOPER HAD PLACED STRUCTURAL FILL ACROSS LOT TO SELL AS PAD READY. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE DURING FINISH GRADING AND LANDSCAPE WORK. TOPSOIL IS DEFINED AS FERTILE, FRIABLE NATURAL LOAM SURFACE SOILS, REASONABLY FREE OF PLANTS, RUBBISH, AND OTHER LITTER OR STONES LARGER THAN 1/2 INCH. LOOSE DEBRIS, TOPSOILS AND UNSUITABLE SUBSOILS SHALL BE STRIPPED FROM AREAS OF THE SITE THAT ARE TO BE DEVELOPED. THE CONTRACTOR SHOULD REVIEW THE GEOTECHNICAL REPORT AND THE DEPTH OF STRIPPING OF SURFACE SOILS MAY VARY BY LOCATION WITHIN THE SITE. THE ENGINEER SHALL DESIGNATE ON-SITE LOCATIONS TO STORE OR DEPOSIT STRIPPED SOILS. CONTRACTOR SHALL REMOVE TOPSOILS AND UNSUITABLE SUBSOILS FROM ALL AREAS TO BE OCCUPIED BY BUILDINGS AND PAVEMENTS. IN ADDITION, ANY AREAS TO BE UTILIZED AS BORROW AREAS FOR FILL MATERIAL MUST ALSO BE STRIPPED OF TOPSOILS. A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE REPLACED IN LAWN AND LANDSCAPED AREAS. IF THE AMOUNT OF STOCKPILED TOPSOIL EXCEEDS QUANTITY REQUIRED, THE EXCESS SHALL BE SPREAD ON THE SITE WHERE DIRECTED BY THE ENGINEER.
14. AFTER THE PAVEMENT AREAS HAVE BEEN STRIPPED, FILLED, AND COMPACTED, THESE AREAS SHALL BE PROOF-ROLLED WITH A MEDIUM HEIGHT ROLLER OR EQUIVALENT EQUIPMENT TO DETERMINE IF ANY POCKETS OF SOFT, YIELDING, OR UNSUITABLE MATERIAL ARE PRESENT. THE GEOTECHNICAL ENGINEER OR A REPRESENTATIVE APPOINTED BY THE OWNER AND APPROVED BY THE ENGINEER SHALL BE PRESENT FOR THE PROOF-ROLLING. IF UNSUITABLE MATERIALS ARE ENCOUNTERED, THEY SHALL BE REMOVED AND REPLACED WITH SPOT SUBGRADE REINFORCEMENT OR COMPACTABLE GRANULAR FILL.
15. SUBGRADE REPLACEMENT SHALL BE ILLUSTRATED ON AS-BUILT DRAWINGS AND SHALL INCLUDE THE DEPTH, TYPE OF GRANULAR FILL UTILIZED AND AREA.
16. WHERE B BORROW IS SPECIFIED IN THESE PLANS, DETAILS, OR SPECIFICATIONS, IT SHALL BE DEFINED AS FOLLOWS: THE MATERIAL USED FOR SPECIAL FILLING SHALL BE OF ACCEPTABLE QUALITY, FREE FROM LARGE OR FROZEN LIMBS, ROCK, OR OTHER UNSUITABLE MATERIAL. THE MATERIAL SHALL BE 20 GRAVEL, CRUSHED STONE, ACRB, GSF, OR OTHER APPROVED MATERIAL. THE MATERIAL SHALL CONTAIN NO MORE THAN 10% PASSING THE NO. 200 (75 MM) SIEVE AND SHALL BE OTHERWISE SUITABLY GRADED. THE USE OF AN ESSENTIALLY ONE-SIZE MATERIAL WILL NOT BE PERMITTED UNLESS APPROVED.
17. ALL COMPACTED FILL MATERIAL SHALL BE SATISFACTORY BORROW SOILS APPROVED BY THE GEOTECHNICAL ENGINEER. REFER TO THE DETAILS FOR STONE TYPE AND DEPTH FOR THE SUBGRADE STONE FOR PAVEMENTS. ALL FILL MATERIAL SHALL BE FREE OF ORGANIC MATTER, FROZEN MATERIAL, LARGE ROCK GREATER THAN 3 INCHES, RUBBISH, OR OTHER UNSUITABLE MATERIAL. SAMPLES OF THE FILL MATERIALS SHALL BE SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO EXCAVATION. ALL FILL EMBANKMENTS UNDER PAVED AREAS, SIDEWALKS, AND PADS SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES IN LOOSE THICKNESS AND COMPACTED TO 98% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557. THE TOP 12 INCHES OF BUILDING SUBGRADE AND EACH 8 INCH LAYER OF BUILDING FILL EMBANKMENTS SHALL BE COMPACTED TO 100% MAXIMUM DRY DENSITY. THE AREA OF COMPACTED FILL FOR THE BUILDING FILL SHALL EXTEND TO EACH SIDE OF THE EXTERIOR WALLS. FILL IN LAWN OR LANDSCAPE AREAS SHALL BE COMPACTED TO 93% MAXIMUM DRY DENSITY. FILL MATERIALS SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES IN LOOSE THICKNESS AND SHOULD BE SPRINKLED WITH WATER AS NECESSARY TO ENSURE COMPACTION SPECIFICATIONS ARE MET. EXCESSIVELY WET MATERIAL SHALL BE SPREAD AND DRIED SUFFICIENTLY SO THAT THE MOISTURE CONTENT WILL PERMIT PROPER COMPACTION. EACH LAYER SHALL BE UNIFORMLY COMPACTED USING A VIBRATORY COMPACTOR OR OTHER APPROVED EQUIPMENT. EXCESSIVE WET MATERIAL AND MATERIAL BEING PLACED UNDER NO CIRCUMSTANCES SHOULD A BULLDOZER OR SIMILAR TRACKED VEHICLES BE USED AS COMPACTING EQUIPMENT. LIFTS SHALL NOT EXCEED 4 INCHES IN LOOSE THICKNESS FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
18. IN-PLACE DENSITY TESTS SHALL BE PERFORMED THROUGHOUT THE BUILDING FILL EMBANKMENTS, AT EACH COMPACTED FILL AND BACKFILL LAYER. AT LEAST ONE DENSITY TEST SHALL BE PERFORMED FOR EVERY 2000 SQ. FT. OF BUILDING FILL OR SUBGRADE, BUT IN NO CASE FEWER THAN 3 TESTS. WHERE THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE COMPACTION SPECIFICATIONS ARE NOT OBTAINED, OR WHERE APPROVED COMPACTED FILLS ARE DISTURBED BY THE CONTRACTOR'S SUBSEQUENT ACTIVITY OR ADVERSE WEATHER, THOSE AREAS SHALL BE REWORKED UNTIL COMPACTION CRITERIA IS ACHIEVED. THE GEOTECHNICAL ENGINEER SHALL ISSUE A REPORT DOCUMENTING THE SUFFICIENCY OF THE FINAL COMPACTED FILL TO THE OWNER AND THE PROJECT ENGINEER.
19. IN AREAS WHERE THE PAVEMENT SUBGRADE ELEVATIONS ARE ACHIEVED WITHOUT FILL OPERATIONS, THESE AREAS SHALL BE PROOF-ROLLED WITH A MEDIUM HEIGHT ROLLER OR OTHER APPROVED EQUIPMENT TO DETERMINE IF ANY POCKETS OF SOFT, UNSUITABLE MATERIALS ARE PRESENT. IF POCKETS OF UNSUITABLE MATERIALS ARE ENCOUNTERED, THEY SHALL BE REMOVED AND REPLACED WITH SPOT SUBGRADE REINFORCEMENT OR COMPACTABLE GRANULAR FILL. THE GEOTECHNICAL ENGINEER OR A REPRESENTATIVE APPOINTED BY THE OWNER AND APPROVED BY THE ENGINEER SHALL BE PRESENT DURING PROOF-ROLLING OPERATIONS AND SHALL SUBMIT A REPORT OF ACCEPTANCE TO THE ENGINEER AND OWNER.
20. WHERE PREVIOUSLY APPROVED AND COMPACTED SUBGRADES ARE DISTURBED BY CONTRACTOR'S SUBSEQUENT ACTIVITY OR ADVERSE WEATHER, THE SUBGRADES SHALL BE SCARIFIED AND RECOMPACTED AS SPECIFIED ABOVE PRIOR TO THE CONTINUATION OF CONSTRUCTION.
21. EXCAVATE FOR STRUCTURES TO WITHIN 0.1 FOOT OF THE DESIGN ELEVATIONS AND DIMENSIONS. EXTEND EXCAVATIONS A SUFFICIENT DISTANCE FROM PERIMETER OF STRUCTURES FOR REMOVAL AND REMOVAL OF FORMWORK. DO NOT DISTURB THE BOTTOM OF THE EXCAVATION INTENDED FOR BEARING SURFACE. EXCAVATE BY HAND TO FINAL GRADE BEFORE PLACING CONCRETE FORMWORK AND REINFORCEMENT SO FOOTINGS AND FOUNDATIONS BEAR ON UNDISTURBED COMPACTED SOILS.
22. BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATTER, FROZEN MATERIAL, LARGE ROCK GREATER THAN 2 INCHES, SLAG, RUBBISH OR OTHER UNSUITABLE MATERIAL. BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES LOOSE THICKNESS AND THOROUGHLY COMPACTED BY TAMPING OR ROLLING. WHERE BACKFILLING IS REQUIRED FOR BOTH SIDES OF A FOUNDATION OR RETAINING WALL, THE BACKFILL MATERIAL SHALL BE PLACED EQUALLY ON BOTH SIDES TO AVOID UNSBALANCED SOIL PRESSURE ON ONE SIDE OF THE WALL.
23. TRENCHING FOR ALL PIPE SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE PLANS WITH THE SIDES KEPT NEARLY AS VERTICAL AS POSSIBLE. LEDGE ROCK, BOLLERS, AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE AS SHOWN ON THE BEDDING DETAILS IN THESE PLANS ON ALL SIDES OF ALL PIPES. ALL WATER ENTERING THE EXCAVATIONS OR OTHER PARTS OF THE WORK SHALL BE REMOVED UNTIL ALL THE WORK HAS BEEN COMPLETED. NO PIPE SHALL BE USED FOR THE DISPOSAL OF TRENCH WATER. EXCAVATIONS SHALL BE KEPT FREE FROM WATER UNTIL THE STRUCTURES TO BE BUILT THEREIN ARE COMPLETED AND WILL SAFELY WITHSTAND FORCES FROM SAID WATER. THE CONTRACTOR SHALL PROVIDE SUFFICIENT Dewatering EQUIPMENT AND MAKE NECESSARY ARRANGEMENTS FOR THE DISPOSAL OF SAID WATER WITHOUT UNDUE INTERFERENCE WITH OTHER WORK OR DAMAGE TO PROPERTY.
24. TRENCHES UNDER PAVED AREAS (EXCLUDING SIDEWALKS) SHALL BE BACKFILLED WITH GRANULAR MATERIAL IN ACCORDANCE WITH SECTION 211 OF THE INDOT "STANDARD SPECIFICATIONS", LATEST EDITION, AND COMPACTED IN LIFTS. GRANULAR MATERIAL SHALL EXTEND 2 FT. BEYOND THE LIMITS OF THE PAVED AREA WITH A 1:1 OUTWARD SLOPE TO THE BOTTOM OF THE TRENCH. WHEN THE TRENCH IS PARALLEL TO THE EDGE OF A PAVEMENT AREA, GRANULAR MATERIAL SHALL BE REQUIRED WITHIN 3 FEET FROM BACK OF CURB (TO THE LEADING EDGE OF THE TRENCH). GRANULAR BEDDING IS REQUIRED UNDER ALL PAVED AREAS.
25. TRENCHES OUTSIDE OF PAVED AREAS (EXCLUDING SIDEWALKS) SHALL BE BACKFILLED WITH SUITABLE MATERIAL, COMPACTED TO WITHIN SIX (6) INCHES OF THE FINISHED GROUND SURFACE. TOPSOIL SHALL BE USED TO BRUSH THE SURFACE TO FINISH GRADE. IF SPILL MATERIAL IS ENCOUNTERED AND FOUND TO BE UNACCEPTABLE FOR BACKFILL, THEN GRANULAR MATERIAL SHALL BE USED.
26. BACKFILL AND BEDDING FOR FLEXIBLE PIPE CONDUIT MATERIALS SHALL BE GRANULAR MATERIAL IN ACCORDANCE WITH THE STANDARD BEDDING DETAILS CONTAINED HEREIN. BACKFILL FOR PIPES IN SHALLOW CONDITION (LESS THAN 2 FEET OF COVER) SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES IN LOOSE THICKNESS AND COMPACTED TO 100% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH 5TH DENSITY TEST D-1557.
27. FOLLOWING THE COMPLETION OF SITE GRADING AND SUBURBAN UTILITY INSTALLATION, CONTRACTOR SHALL SUPPLY AND INSTALL TOPSOIL IN AREAS DESIGNATED FOR SEEDING AND GRASSING. LANDSCAPING, TO THE FINISH GRADES INDICATED ON THE GRADING PLAN AND TO A MINIMUM DEPTH OF 6 INCHES. THE FINISHED SURFACE SHALL BE UNIFORMLY AND SMOOTHLY GRADED AND SHALL BE FREE OF DEPRESSED AREAS WHERE WATER WILL POOL. LIGHTLY COMPACT TOPSOIL TO THE FINISH GRADE. THE FINISHED SURFACE GRADES SHALL NOT BE MORE THAN 0.1 FOOT ABOVE OR BELOW THE GRADES INDICATED ON THE PLANS. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES AND ADJACENT FILL.

EARTHWORK, SUBGRADE, TRENCHING, AND BUILDING PAD SPECIFICATIONS CONTINUED

28. NOTE: DUE TO THE LACK OF TOPSOIL PRESENT ONSITE, THE CONTRACTOR SHALL IMPORT TOPSOIL TO SPREAD IN ALL LANDSCAPED AND LAWN AREAS. CONTRACTOR WILL BACKFILL ALL GRASS AREAS WITH A MINIMUM OF 6-INCHES OF TOPSOIL. THIS AREA SHALL BE SEEDING AND MULCHED, AND/OR LANDSCAPED, IF NECESSARY, UPON COMPLETION OF THE WATER, SANITARY AND STORM SEWER SYSTEMS WITH A SEED MIXTURE APPROPRIATE FOR THE TIME OF YEAR.
29. THE CONTRACTOR SHALL PLACE 6-INCHES MINIMUM OF TOPSOIL IN ALL DRAINAGE SHALES. THIS AREA SHALL BE IMMEDIATELY PERMANENTLY SEEDDED AND LINED IN ACCORDANCE WITH THESE PLANS.
30. TOPSOIL FILL SHALL BE FREE OF BRICK, BLOCK, CONCRETE WASTE, ROCK, RUBBISH, OR OTHER UNSUITABLE MATERIAL AND SHALL BE MODERATELY COMPACTED WHEN PLACED TO AVOID EXCESSIVE SETTLEMENTS.
31. FURTHER SPECIFICATIONS REGARDING EARTHWORK AND THE CONTROL OF SEDIMENTATION MAY BE REQUIRED. SEE THE STORM WATER POLLUTION PREVENTION PLAN FOR FURTHER DETAILS.

STORM SEWER SYSTEM SPECIFICATIONS

1. CONSTRUCTION OF STORM DRAINS SHALL BE IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL REQUIREMENTS, STANDARDS AND SPECIFICATIONS, AND SECTION 115 OF THE INDOT "STANDARD SPECIFICATIONS", LATEST EDITION AND DETAILS INCLUDED IN CONSTRUCTION DOCUMENTS.
2. THE CONTRACTOR SHALL NOTIFY THE LOCAL STORMWATER AUTHORITY AT LEAST 48 HOURS PRIOR TO ANY SEWER EXCAVATION OR CONSTRUCTION THAT IS WITHIN THE PUBLIC RIGHT-OF-WAY OR CONNECTS TO AN EXISTING PUBLIC FACILITY. SEWER PERMIT AND INSPECTION REQUIRED FOR ALL CONNECTIONS TO PUBLIC SEWER SYSTEM. SEWER PERMIT SHALL BE REQUIRED ON-SITE DURING ANY SEWER CONSTRUCTION, AS REQUIRED BY SAID REGULATIONS.
3. IN ACCORDANCE WITH 821 IAC 8-3-2-4, MAINTAIN A MINIMUM OF 10-FOOT HORIZONTAL SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF STORM SEWER. MAINTAIN A MINIMUM OF 8-FOOT SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF STORM MANHOLES. WHEN CROSSING WATER MAINS MAINTAIN A MINIMUM ANGLE OF 45° AND 18-INCHES VERTICAL SEPARATION.
4. ALL STORM DRAINS CROSSING WITHIN 18" VERTICALLY OF A SANITARY SEWER OR WATER MAIN SHALL HAVE A CONCRETE SPACER BLOCK FLOURED BETWEEN THE PIPES TO PROVIDE STRUCTURAL SUPPORT. WHEN CROSSING A WATER MAIN, A MINIMUM VERTICAL SEPARATION AT THE CROSSING LESS THAN 18 INCHES REQUIRES THAT THE SEWER (STORM OR SANITARY) MUST BE CONSTRUCTED OF PVC 30R 21 CONFORMING TO ASTM D-2241 OR APPROVED WATER MAIN MATERIAL HAVING A MINIMUM PRESSURE RATINGS OF 200 PSI, USING COMPRESSION FITTINGS, IN ACCORDANCE WITH 821 IAC 8-3-2-4 1 TA.
5. PRIMARY DRAINAGE SYSTEM SHALL BE CONSTRUCTED OF REINFORCED CONCRETE PIPE (RCP) CONFORMING TO ASTM C-76. HIGH DENSITY POLYETHYLENE (HDPE) ADS STORM XP DUAL WALL SINGLE MOULD PIPE WITH WATER TIGHT INTEGRAL BELL COUPLERS CONFORMING TO AASHTO M-294 AND ASTM F-461, OR POLYVINYLCHLORIDE (PVC) 30R-35 (30R 26 WHEN INDICATED IN THE PLANS) CONFORMING TO ASTM D-3034 FOR PIPES 15 INCHES AND SMALLER. PVC RESIN COMPOUND SHALL CONFORM TO ASTM D-1184 AND RUBBER GASKETS TO ASTM D-3212 AND F-471. PIPE REACHES FOR JOINTS SHALL BE GASKETED BELL AND SPIGOT TYPE WITH THE BELL END MADE IN THESE PLANS. THE CONTRACTOR SHALL SUBSTITUTIONS ACCEPTED BY THE ENGINEER MAY BE PERMITTED, BUT MUST BE FORMALLY REQUESTED BY CONTRACTOR IN WRITING AND APPROVED BY ENGINEER PRIOR TO INSTALLATION.
6. STORM DOWNSPOUT DRAIN LATERALS FOR BUILDING SUB-DRAIN AND DOWNSPOUT CONNECTIONS SHALL BE 6 IN DIAMETER PVC 30R-35 CONFORMING TO ASTM D-3034, LAID AT A MINIMUM SLOPE OF 0.5%. PIPE FITTINGS SHALL BE 6 INCHES WITH THE BELL END MADE IN THESE PLANS. THE CONTRACTOR SHALL HAVING A CLASSIFICATION OF 12454-B OR 12454-C AS DEFINED IN ASTM U. 1184. SITE WORK. CONTRACTOR SHALL COORDINATE WITH GUTTER/DOWNSPOUT CONTRACTOR FOR CONNECTIONS.
7. ALL MANHOLES AND INLET STRUCTURES SHALL BE PRECAST CONCRETE OR MONOLITHIC, CONSTRUCTED OF CLASS "A" 4000 PSI CONCRETE, AND CONFORMING TO ASTM C-418.
8. NON-SHRINK GROUT SHALL BE USED ON ALL STORM DRAIN INLETS AND MANHOLES.
9. HOLES FOR PIPES IN PRECAST INLET BOXES MUST BE PRECAST OR SAWCUT. THE DIAMETER OF THE HOLE SHALL BE NO LARGER THAN FOUR INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE THAT IS TO FIT INTO THE HOLE.
10. ADJUSTMENT OF CASTINGS TO BE ACCOMPLISHED WITH FOUR IN PLACE MONOLITHIC CONCRETE TO A MAXIMUM DEPTH OF 4 INCHES. ANY CASTINGS ADJUSTMENT OVER 4 INCHES SHALL BE MADE WITH A PRECAST CONCRETE ADJUSTMENT RING.
11. MINIMUM FLANGE BEARING SURFACE SHALL BE 1/12" ON ALL SIDES OF THE INLET. CASTINGS SHALL REST FLUSH ON THE STRUCTURE. THE THICKNESS OF THE SIDES OF THE INLET BOXES TO BE A MINIMUM OF 6 INCHES.
12. CASTINGS SHALL BE SET IN MORTAR PER SECTION 120 OF THE INDOT "STANDARD SPECIFICATIONS", LATEST EDITION. ALL CASTINGS ARE TO BE COATED WITH BITUMASTIC PAINT.
13. PREMOULDED EXPANSION JOINTS ARE TO BE PROVIDED BETWEEN THE PAVEMENT AND THE DRAINAGE INLET CASTINGS LOCATED IN PAVED AREAS.
14. CONFIGURATION OF THE INLETS MAY BE VARIED TO ACCOMMODATE THE DIMENSIONS OF THE CASTINGS. PRIOR WRITTEN APPROVAL BY THE ENGINEER IS REQUIRED.
15. PIPES FOR STORM SEWERS ARE NOT TO ENTER OR EXIT RECTANGULAR PRECAST CONCRETE DRAINAGE BOXES AT THE CORNERS OF THE STRUCTURES. PIPE SHALL EITHER ENTER THROUGH ONE VERTICAL FACE, OR A CIRCULAR MANHOLE STRUCTURE SHALL BE EMPLOYED. PIPE TO BE CUT FLUSH WITH THE INSIDE OF THE STRUCTURE.
16. THE COMPLETED STORM SEWER SHALL BE HIGH PRESSURE WATER JET CLEANED AND TESTED IN ACCORDANCE WITH LOCAL REQUIREMENTS. ALL COSTS OF CLEANING AND TESTINGS ARE TO BE BORNE BY THE CONTRACTOR.
17. MAINLINE STORM SEWERS (MANHOLE TO MANHOLE) SHALL BE TELEVIEWED. LATERAL STORM SEWERS (MANHOLE TO INLET) IN EXCESS OF 40 FT. SHALL ALSO BE TELEVIEWED. MAINLINE STORM SEWERS THAT ARE 36" DIAMETER OR LESS SHALL BE TESTED TO A MANHOLE. DEFLECTION TEST, WHEN CONSTRUCTED USING FLEXIBLE PIPE CONDUIT MATERIALS, MANHOLE TESTING SHALL BE PERFORMED USING A NINE POINT "GO-NO-GO" MANHOLE HAVING A DIAMETER NOT LESS THAN 95% OF THE PIPE DIAMETER. MANHOLE SHALL BE MANUALLY PULLED WITHOUT THE USE OF MECHANICAL DEVICES. CLEANING, TESTING AND TELEVIEWING SHALL BE PERFORMED A MINIMUM OF 45 DAYS AFTER INSTALLATION, ANY DEFICIENCIES SHALL BE REPAIRED, AND THE REWORKED SECTION SHALL BE RE-TESTED 30 DAYS AFTER COMPLETED REPAIRS. VIDEO BACKFILLING, CLEANING, TESTING AND TELEVIEWING SHALL BE WITNESSED BY THE LOCAL STORMWATER AUTHORITY. ALL COSTS OF CLEANING, TESTING AND TELEVIEWING ARE TO BE BORNE BY THE CONTRACTOR.
18. PIPE LENGTHS SHOWN ON THE DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING EXACT PIPE LENGTHS REQUIRED FOR INSTALLATION.

WATER SERVICE SPECIFICATIONS

1. ALL WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE THE LOCAL JURISDICTIONAL REQUIREMENTS, STANDARDS AND SPECIFICATIONS, AND SHALL MEET THE MINIMUM REQUIREMENTS OF THE INDIANA STATE BOARD OF HEALTH, THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM) FOR DRINKING WATER SYSTEMS, AND SHALL MEET ALL APPLICABLE REQUIREMENTS OF INDIANA ADMINISTRATIVE CODE, TITLE 321, ARTICLE 8.
2. THE CONTRACTOR SHALL NOTIFY THE LOCAL WATER AUTHORITY AT LEAST 24 HOURS PRIOR TO START OF CONSTRUCTION TO MAKE ARRANGEMENTS FOR INSPECTION, TAPS AND SHUT DOWN OF EXISTING WATER MAINS WHERE REQUIRED.
3. NO UTILITY CONSTRUCTION SHALL COMMENCE UNTIL SUFFICIENT EARTHWORK HAS BEEN COMPLETED TO MEET THE MINIMUM COVER REQUIREMENTS CONTAINED IN THESE PLANS FOR ALL UTILITIES.
4. WATER SERVICE LINES SHALL HAVE A MINIMUM OF 60" OF COVER OVER THE TOP OF THE PIPE, IN ACCORDANCE WITH 821 IAC 8-3-2-4.1, MAINTAIN A MINIMUM OF 10-FOOT HORIZONTAL SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF SEWERS (STORM AND SANITARY). MAINTAIN A MINIMUM OF 8-FOOT SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF MANHOLES (STORM AND SANITARY) AND WHEN CROSSING SEWERS (STORM AND SANITARY) MAINTAIN A MINIMUM OF 18-INCHES VERTICAL SEPARATION.
5. WATER MAINS CROSSING ANY AND ALL SEWERS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN PIPE AND THE SEWER PIPE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED TO THE SEWER PIPE. WHEN CROSSING THE SEWER, THE SEWER SHALL BE AT LEAST 18 INCHES ABOVE THE SEWER AS POSSIBLE. A MINIMUM VERTICAL SEPARATION AT THE CROSSING LESS THAN 18 INCHES REQUIRES THAT THE SEWER (STORM OR SANITARY) MUST BE CONSTRUCTED FROM WATER MAIN MATERIAL HAVING A MINIMUM PRESSURE RATINGS OF 200 PSI AND USING COMPRESSION FITTINGS, IN ACCORDANCE WITH 821 IAC 8-3-2-4 1 TA. TO ACCOMMODATE THE PIPES CALLED FOR.
6. ALL WATERMAINS SHALL BE CONSTRUCTED CONFORMING TO AWWA C-110, C-111, C-150 AND C-151 AS APPLICABLE.
7. THE CONTRACTOR SHALL FURNISH, INSTALL, AND TEST ALL GATE VALVES. VALVES SHALL BE INSTALLED WITH VALVE BOX ALIGNED WITH THE GRADE AND MUST BE OPENED PRIOR TO ACCEPTANCE. VALVE OPENING DIRECTION SHALL BE LEFT-HAND OPEN / COUNTER-CLOCKWISE.
8. WATER SERVICE CONNECTION SHALL BE MADE WITH STAINLESS STEEL TAPPING SLEEVE MEETING JURISDICTIONAL REQUIREMENTS. ALL WATER SERVICE LINES FROM THE MAIN EXTENDING TO 1 FOOT BEYOND THE OUTSIDE OF THE METER SHALL BE 3/4" OF COVER. THE METER SHALL BE 3/4" OF COVER. SERVICE LINES BEYOND THE METER SHALL BE TYPE "K" COPPER TUBES OR POLYVINYLCHLORIDE (PVC) 30R-21.
9. ALL TEES, PLUGS, DEAD-ENDS, AND BENDS EXCEEDING 1/25% SHALL BE MECHANICALLY RESTRAINED.
10. THE COMPLETED WATER SERVICE LINE SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH LOCAL WATER AUTHORITY REQUIREMENTS AND AWWA C-651-4.2. TEST RESULTS ARE TO BE SENT TO THE LOCAL WATER AUTHORITY ENGINEER'S OFFICE WITHIN 5 DAYS OF TESTING.

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SANITARY SEWER SYSTEM SPECIFICATIONS

- ALL SANITARY SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS. SHALL MEET THE REQUIREMENTS OF THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM) FOR SANITARY SEWER COLLECTION SYSTEMS, AND SHALL MEET ALL APPLICABLE REQUIREMENTS OF INDIANA ADMINISTRATIVE CODE, TITLE 327, ARTICLE 8.
- IN ACCORDANCE WITH 327 IAC 3-6-9, MAINTAIN A MINIMUM OF 10-FOOT HORIZONTAL SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF SANITARY SEWER, MAINTAIN A MINIMUM OF 8-FOOT SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF SANITARY MANHOLES, AND WHEN CROSSINGS WATER MAINS MAINTAIN A MINIMUM ANGLE OF 45% AND 18-INCHES VERTICAL SEPARATION.
- ALL SANITARY CROSSINGS WITHIN 18" VERTICALLY OF A STORM DRAIN OR WATER MAIN SHALL HAVE A CONCRETE SPACER BLOCK POURED BETWEEN THE PIPES, TO PROVIDE STRUCTURAL SUPPORT, WHEN CROSSING A WATER MAIN, A MINIMUM VERTICAL SEPARATION AT THE CROSSINGS LESS THAN 18 INCHES REQUIRES THAT THE SEWER (STORM OR SANITARY) MUST BE CONSTRUCTED OF PVC SDR 21 CONFORMING TO ASTM D-2241 OR APPROVED WATER MAIN MATERIAL HAVING A MINIMUM PRESSURE RATINGS OF 200 PSI, USING COMPRESSION FITTINGS, IN ACCORDANCE WITH 327 IAC 3-6-2(b) & 174.
- THE CONTRACTOR SHALL NOTIFY THE LOCAL SANITARY SEWER AUTHORITY AT LEAST 48 HOURS PRIOR TO ANY SEWER EXCAVATION OR CONSTRUCTION THAT IS WITHIN THE PUBLIC RIGHT-OF-WAY OR CONNECTS TO AN EXISTING PUBLIC FACILITY. SEWER TAP PERMIT AND LOCAL SANITARY SEWER AUTHORITY INSPECTION ARE REQUIRED FOR ALL CONNECTIONS TO EXISTING SANITARY SEWER SYSTEMS, SEWER PERMIT REQUIRED ON SITE DURING SEWER CONSTRUCTION, SEWER PERMIT MUST BE REQUIRED ON-SITE DURING ANY SEWER CONSTRUCTION, AS REQUIRED BY SAID REGULATIONS.
- ADDITIONS, DELETIONS, AND/OR REVISIONS TO THE SANITARY SEWER FACILITIES SHALL NOT BE MADE WITHOUT APPROVAL BY THE LOCAL SANITARY SEWER AUTHORITY.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- SANITARY MANHOLES SHALL BE PRECAST CONCRETE OR MONOLITHIC, CONSTRUCTED OF CLASS "A" 4000 PSI CONCRETE, AND CONFORMING TO ASTM C-418.
- JOINTS BETWEEN PRECAST SANITARY MANHOLE SECTIONS SHALL CONFORM TO ASTM C-443.
- SANITARY SEWER PIPE AND FITTINGS MAY BE EITHER POLYVINYL CHLORIDE PIPE (PVC) THAT CONFORMS TO ASTM D-3034, SDR 35 (SDR 26 FOR SANITARY SEWERS WITH AN EXCESS OF 15 FEET OF COVER OR WHEN INDICATED IN THE PLANS) WITH A MINIMUM CELL CLASSIFICATION OF 12454-C, OR HIGH DENSITY POLYETHYLENE PIPE (HDPE) CONFORMING TO ASTM-3350 AND ASTM-F14, CELL CLASS P.E. 3344 33C, OR REINFORCED CONCRETE PIPE (RCP) CLASS III, IV, OR V IN ACCORDANCE WITH ASTM C-76, OR DUCTILE IRON PIPE (DI) CONFORMING TO ANSI SPECIFICATIONS A21.51 AND ANNA C-151.
- THE MINIMUM WALL THICKNESS OF PVC PIPE SHALL CONFORM TO SDR-35, TYPE FPM, AS SPECIFIED IN ASTM D-3034, PVC, AND HDPE PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 46 POUNDS PER SQUARE INCH FOR EACH DIAMETER WHEN MEASURED AT FIVE PERCENT DEFLECTION AND TESTED IN ACCORDANCE WITH ASTM D-2412.
- PIPE JOINTS SHALL HAVE A BELL HALL, GASKET GROOVE, AND SPIGOT WHICH IS INTEGRAL WITH THE PIPE THE ASSEMBLY OF JOINTS SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND ASTM D-3212. SOLVENT CEMENT JOINTS SHALL NOT BE ALLOWED FOR MAINLINE PIPE.
- PIPE FITTINGS SHALL BE SDR-26 MANUFACTURED FITTINGS MADE OF PVC PLASTIC HAVING A CELL CLASSIFICATION OF 12454-B OR 12454-C, AS DEFINED IN ASTM V. 1704. SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW CONSTRUCTION. LATERAL CONNECTIONS SHALL OCCUR AT SDR-26 TEE-HYPS.
- SANITARY SEWER LATERALS FOR BUILDING CONNECTIONS SHALL BE 6 IN DIAMETER PVC SDR-35 CONFORMING TO ASTM D-3034, AND AT A MINIMUM SLOPE OF 1/200. PIPE LATERALS LONGER THAN 100 FT REQUIRE A CLEAN-OUT STRUCTURE. LATERAL CONNECTIONS TO AN EXISTING SEWER SHALL BE MADE USING A BOOT-N-SADDLE TYPE CONNECTOR WITH STAINLESS STEEL STRIPS AND APPROPRIATE RUBBER FITTINGS.
- ALL MANHOLE AND CLEAN-OUT CASTINGS SHALL HAVE THE WORDS "SANITARY SEWER" CAST IN THE LID.
- THE COMPLETED SANITARY SEWER SHALL BE HIGH PRESSURE WATER JET CLEANED AND TESTED IN ACCORDANCE WITH LOCAL AND IDEM REQUIREMENTS. ALL COSTS OF CLEANING AND TESTING ARE TO BE BORNE BY THE CONTRACTOR.
- MAINLINE SANITARY SEWERS SHALL BE SUBJECTED TO AN AIR TEST CONFORMING TO ASTM F1417-12 AND TELEVISION. MAINLINE SANITARY SEWERS SHALL BE SUBJECTED TO A MANHOLE DEFLECTION TEST WHEN CONSTRUCTED USING FLEXIBLE PIPE CONDUIT MATERIALS. MANHOLE TESTING SHALL BE PERFORMED USING A NINE POINT "60-10-60" MANHOLE, HAVING A DIAMETER NOT LESS THAN 95% OF THE PIPE DIAMETER. MANHOLE SHALL BE MANUALLY FILLED WITHOUT THE USE OF MECHANICAL DEVICES. CLEANING, TESTING AND TELEVISIONS SHALL BE PERFORMED A MINIMUM OF 45 DAYS AFTER INSTALLATION, ANY DEFICIENCIES SHALL BE REPAIRED AND THE REWORKED SECTION SHALL BE RE-TESTED 30 DAYS AFTER COMPLETED REPAIRS. CLEANING, TESTING AND TELEVISION SHALL BE WITNESSED BY LOCAL SEWER AUTHORITY. ALL COSTS OF CLEANING, TESTING AND TELEVISIONS ARE TO BE BORNE BY THE CONTRACTOR.
- DEWATERING OF THE SANITARY SEWER AS REQUIRED FOR CONSTRUCTION OR TESTING SHALL BE APPROVED BY THE LOCAL SANITARY SEWER AUTHORITY AND SHALL BE IN ACCORDANCE 327 IAC 3-6-20.
- THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND THE PIPE INVERT DEPTH WHERE THE PROPOSED CONNECTION IS MADE. TO THE EXISTING SANITARY SEWER, VERTICAL DEVIATIONS GREATER THAN 0.1 FT. AND HORIZONTAL DEVIATIONS GREATER THAN 1.0 FT. SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION AT THAT LOCATION.
- PIPE LENGTHS SHOWN ON THE DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING EXACT PIPE LENGTHS REQUIRED FOR INSTALLATION.

CAST - IN - PLACE CONCRETE

- THIS SECTION SPECIFIES CAST-IN-PLACE CONCRETE, INCLUDING FORMWORK, REINFORCEMENT, CONCRETE MATERIALS, MIXTURE DESIGN, PLACEMENT PROCEDURES, AND FINISHES.
- DESIGN MIXTURES FOR EACH CONCRETE MIXTURE INDICATE THE FOLLOWING:
 - AREA(S) IN THE PROJECT WHERE MIX WILL BE USED
 - COMPLETED MIX CONSTITUENT LIST BY WEIGHT
 - SPECIFIC CEMENTITIOUS CONSTITUENTS BY WEIGHT
 - WATER/CEMENT RATIO
 - SLUMP COLOR TO ADDITION OF WATER REDUCING ADMIXTURES
 - ADMIXTURE IDENTIFICATION WITH PRODUCT SHEETS
 - AGGREGATE GRADATION BY SIEVE SIZE
 - AMOUNT OF FINE AGGREGATE TO COARSE AGGREGATE RATIO
 - TEST DATA SUBSTANTIATING DESIGN STRENGTH PER ACI-301 METHOD 1 OR 2. TEST DATA SUBMITTED MUST BE LESS THAN 2 YEARS OLD
 - INDICATE AMOUNTS OF MIXING WATER TO BE WITHHELD FOR LATER ADDITIONS AT PROJECT SITE.
 - SHOP DRAWINGS FOR STEEL REINFORCEMENT.
 - MATERIAL TEST REPORTS AND CERTIFICATIONS.
- MANUFACTURER QUALIFICATIONS. A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C44 REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT.
- MANUFACTURER CERTIFIED ACCORDING TO INRCA'S CERTIFICATION OF
- FORMS FOR EXPOSED FINISH CONCRETE. PLYWOOD, METAL, METAL FRAMED PLYWOOD FACED, OR OTHER ACCEPTABLE PANEL - TYPE MATERIALS TO PROVIDE CONTINUOUS, STRAIGHT, SMOOTH EXPOSED SURFACES, FURNISH IN LARGEST PRACTICABLE SIZES TO MINIMIZE NUMBER OF JOINTS AND TO CONFORM TO JOINT SYSTEM SHOWN ON DRAWINGS.
- FORMS FOR UNEXPOSED FINISH CONCRETE. PLYWOOD, LUMBER, METAL, OR OTHER ACCEPTABLE MATERIAL. PROVIDE LUMBER DRESSED ON AT LEAST 2 EDGES AND ON SIDE FOR JOINT FIT.
- FORM COATINGS. PROVIDE WATER BASED COMMERCIAL FORMULATION FORM COATINGS COMPOUNDS THAT WILL NOT BOND WITH STAIN, NOR ADVERSELY AFFECT CONCRETE SURFACES, AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.
- MANUFACTURER. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS OF THE FOLLOWING: A) DEBORN, L & M CONSTRUCTION CHEMICALS, INC.; B) BURKE CO; C) OR APPROVED EQUAL.
- FORM TIES. FACTORY-FABRICATED, ADJUSTABLE-LENGTH, REMOVABLE OR SNAP OFF METAL FORM TIES, DESIGNED TO PREVENT FORM DEFLECTION AND TO PREVENT SPALLING CONCRETE UPON REMOVAL. PROVIDE PLASTIC CONE OR BUTTON TYPE UNITS WHICH WILL LEAVE NO METAL CLOSER THAN 1/4" TO SURFACE. PROVIDE TIES WHICH, WHEN REMOVED, WILL LEAVE HOLES NOT LARGER THAN 1/4" DIAMETER IN CONCRETE SURFACE.
- STEEL REINFORCEMENT
 - REINFORCING BARS. ASTM A 615 - GRADE 60, DEFORMED
 - PLAIN-STEEL WELDED WIRE REINFORCEMENT. ASTM A 105 - PLAIN, FABRICATED FORM AS-DRAWN STEEL WIRE INTO FLAT SHEETS.
 - DEFORMED-STEEL WELDED WIRE REINFORCEMENT ASTM A 441 - FLAT SHEET.
 - BAR SUPPORTS. BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS AND WELDED WIRE REINFORCEMENT IN PLACE. MANUFACTURE BAR SUPPORTS FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE ACCORDING TO CRSI MANUAL OF STANDARD PRACTICE.
 - FOR SLABS-ON-GRADE. USE SUPPORTS WITH SAND PLATES OR HORIZONTAL RIBBERS WHERE BASE MATERIAL WILL NOT SUPPORT CHAIR LEGS. CONCRETE BRICK MAY BE USED.
 - FOR EXPOSED-TO-VIEW CONCRETE SURFACES, WHERE LEGS OF SUPPORTS ARE IN CONTACT WITH FORMS, PROVIDE SUPPORTS WITH LEGS WHICH ARE PLASTIC PROTECTED (CRSI, CLASS 1) OR STAINLESS STEEL PROTECTED (CRSI, CLASS 2).

CAST - IN - PLACE CONCRETE CONTINUED

- CONCRETE MATERIALS
 - CEMENTITIOUS MATERIAL: USE THE FOLLOWING CEMENTITIOUS MATERIALS, OF THE SAME TYPE, BRAND AND SOURCE THROUGHOUT THE PROJECT.
 - PORTLAND CEMENT- ASTM C150, TYPE 1 SUPPLEMENT WITH THE FOLLOWING: FLYASH - ASTM C618, CLASS F
 - NORMAL-WEIGHT AGGREGATES - ASTM C33, GRADED SEE MIX DESIGN SECTION FOR MAXIMUM AGGREGATE SIZES.
 - FINE AGGREGATE - FREE OF MATERIALS WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.
 - WATER - ASTM C44 AND POTABLE.
 - ADMIXTURES.
 - GENERAL - PROVIDE ADMIXTURES THAT CONTAIN NOT MORE THAN 0.15 PERCENT CHLORIDE IONS, AND NO CALCIUM CHLORIDE THIOCYANATES.
 - AIR ENTRAINMENT ADMIXTURE- ASTM C260
 - WATER-REDUCING ADMIXTURE - ASTM C44 TYPE A
 - HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER) - ASTM C494 TYPE F OR TYPE G
 - WATER-REDUCING, NON-CORROSIVE, NON-CHLORIDE ACCELERATOR ADMIXTURE ASTM C494 TYPE C OR E, AND NOT CONTAINING MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURE MUST HAVE LONG-TERM NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY OF AT LEAST A YEARS DURATION USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THOSE USING ELECTRICAL POTENTIAL MEASURES.
 - WATER-REDUCING, RETARDING ADMIXTURE - ASTM C494 TYPE D.
- WATER RETARDERS. PLASTIC VAPOR RETARDER - ASTM E 1745 CLASS C - NOT LESS THAN 10 MILS THICK. INCLUDE MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE- SENSITIVE JOINT TAPE.
- CURING MATERIALS
 - EVAPORATION RETARDER - WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
 - ABSORPTIVE COVER - AASHTO M 102 CLASS 2 - BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ. / SQ.YD. WHEN DRY.
 - MOISTURE-RETAINING COVER - ASTM C11 - POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE
 - WATER - POTABLE
 - CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND - ASTM C801 TYPE I CLASS B DISSIPATING.
 - SILENCURE - ASTM C801 TYPE I, ID # 11 - CLASS A & B - ACRYLIC CURING & SEALING COMPOUND CONTAINING SILANE
- CONCRETE MIXTURES. PREPARE DESIGN MIXTURES FOR EACH TYPE OF STRENGTH OF CONCRETE, PROPORTIONED ON THE BASIS OF LABORATORY TRIAL MIXTURE OR FIELD TEST DATA, OR BOTH, ACCORDING TO ACI 301.
 - PROPORTION NORMAL-WEIGHT CONCRETE MIXTURE AS FOLLOWS. PREPARE DESIGN MIXES FOR EACH TYPE AND STRENGTH OF CONCRETE BY EITHER LABORATORY TRIAL BATCH OR FIELD EXPERIENCE METHODS AS SPECIFIED IN ACI 301. IF TRIAL BATCH METHOD USED, USE AN INDEPENDENT TESTING FACILITY ACCEPTABLE TO ARCHITECT/ENGINEER FOR PREPARING AND REPORTING PROPOSED MIX DESIGNS. THE TESTING FACILITY SHALL NOT BE THE SAME AS USED FOR FIELD QUALITY CONTROL TESTING.
 - SUBMIT WRITTEN REPORTS TO ARCHITECT/ENGINEER AND STRUCTURAL ENGINEER OF EACH PROPOSED SURFACES AND FINISHES. CONCRETE AT LEAST 15 DAYS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL ARCHITECT/ENGINEER HAS REVIEWED MIXES.
- DESIGN MIXES. PROVIDE NORMAL WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES, AS INDICATED ON DRAWINGS.

	CLASS A6 BAG A/E STONE	CLASS C7 BAG A/E STONE
COARSE AGG. TYPE	CLASS A#8 OR #5 STONE	CLASS A#8 OR #5 STONE
FNE AGG. TYPE	#23 SAND	#23 SAND
FINE AGG. TO COARSE AGG. RATIO	35-45 %	35-45 %
TYPE 1 CEMENT	564	658
MAX. FLYASH REPLACEMENT *	15 %	15 %
WATER TO CEMENT RATIO	0.45	0.40
SLUMP MAX	5"	5"
MAX. SLUMP WITH MID RANGE WATER REDUCER	6"	6"
MAX. SLUMP WITH HIGH RANGE WATER REDUCER	7"	7"
AIR ENTRAINMENT	6.5 +/- 1.5%	6.5 +/- 1.5%

NOTES:
 - ASTM C33 DESIGNATIONS.
 - PROVIDE COARSE AGGREGATE #5 AGGREGATE TOP SIZE 1/4" AND #0 AGGREGATE (1/4 TOP SIZE. THE USE OF FLYASH IS PERMITTED BETWEEN THE MONTHS OF APRIL 15TH TO OCTOBER 15TH. TYPE C FLYASH OR C/F SHALL BE USED.

- ADMIXTURE. USE MID RANGE WATER-REDUCER OR HIGH RANGE WATER-REDUCER ADMIXTURE IN CONCRETE AS REQUIRED FOR PLACEMENT AND WORKABILITY.
 - USE NON-CHLORIDE ACCELERATING ADMIXTURE IN CONCRETE PLACED IN AMBIENT TEMPERATURES BELOW 50 DEGREES F.
 - USE AIR-ENTRAINMENT ADMIXTURE IN EXTERIOR EXPOSED CONCRETE, UNLESS OTHERWISE INDICATED. ADD AIR-ENTRAINMENT ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING TOTAL AIR CONTENT WITH IN THE TOLERANCE OF PLUS OR MINUS 1% PERCENT. OTHER CONCRETE NOT EXPOSED TO FREEZING, THAWING, OR HYDRAULIC PRESSURE 2 PERCENT TO 4 PERCENT.
 - SLUMP LIMITS - PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP AT POINT OF PLACEMENT AS FOLLOWS: GENERAL 4A +/- 1A, INTERIOR SLAB ON GRADE 3A +/- 1A, CONCRETE CONTAINING MOISTURE-RETAINING COVER NOT MORE THAN 6A AFTER HOUR IS ADDED; CONCRETE CONTAINING RUBBER ADMIXTURE (SUPER-PLASTICIZER) NOT MORE THAN 7A AFTER ADDITION OF HOUR.
 - CEMENTITIOUS MATERIALS - LIMIT PERCENTAGE, BY WEIGHT, OF CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE AS FOLLOWS: FLY ASH - 15 PERCENT MAX.
- RELATED MATERIALS:
 - EXPANSION AND ISOLATION JOINT FILLER STRIPS - ASTM D1751 - ASPHALT SATURATED CELLULOSE FIBER.
 - WATERSTOPS - PROVIDE TYPES AS NOTED ON PLAN FOR SPECIAL APPLICATIONS, PERFORMED, FLAT, DUMBBELL OR CENTER BULB TYPES AT CONSTRUCTION JOINTS AND OTHER JOINS AS INDICATED. RUBBER WATERSTOPS - CORPS OF ENGINEERS CRD-C 513, POLYVINYL CHLORIDE WATERSTOPS - CORPS OF ENGINEERS CRD-C 512.
 - NON-SHRINK GROUT - CRD-C 621 FACTORY PRE-MIXED GROUT, NON-METALLIC.
 - BONDING COMPOUND - POLYVINYL ACETATE OR ACRYLIC BASE. PRODUCTS - SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
 - POLYVINYL ACETATE (INTERIOR ONLY).
 - EUCO FELD - EUCID CHEMICAL CO.
 - EVERVELD - L & M CONSTRUCTION CHEMICALS
 - ACRYLIC OR STYRENE BUTADIENE
 - EVERBOND - L & M CONSTRUCTION CHEMICALS
 - SONOCRETE - SONNEBORN
 - ACRYLIC BONDCRETE - THE BURKE CO
 - SEAL LATEX - EUCID CHEMICAL CO.
 - PARAVELD C - W R GRACE
 - ACRYL SET - MASTER BUILDERS
 - INTERLOK - W R GRACE
 - EPOXY ADHESIVE - ASTM C881 - TWO-COMPONENT MATERIAL SUITABLE FOR USE ON DRY OR DAMP SURFACES. PROVIDE MATERIAL TYPE, GRADE AND CLASS TO SUITE PROJECT REQUIREMENTS.
- JOINTS:
 - GENERAL. CONSTRUCT JOINTS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE.
 - CONSTRUCTION JOINTS. INSTALL JO STRENGTH AND APPEARANCE OF CONCRETE ARE NOT IMPAIRED, AT LOCATIONS INDICATED OR AS APPROVED BY ARCHITECT.
 - CONTRACTION JOINTS IN SLAB-ON-GRADE. FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF CONCRETE THICKNESS AS FOLLOWS:
 - SAVED JOINTS. FORM CONTRACTION JOINTS WITH POWER SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND RIMMED BLADES. CUT 1/8 INCH WIDE JOINTS INTO CONCRETE WHEN CUTTING ACTION WILL NOT SUPPORT CHAIR LEGS, OR OTHERWISE DAMAGE SURFACE AND BEFORE CONCRETE DEVELOPS RANDOM CONTRACTION CRACKS.
 - ISOLATION JOINTS IN SLAB-ON-GRADE. AFTER REMOVING FORMWORK, INSTALL JOINT-FILLER STRIPS AT SLAB JUNCTIONS WITH VERTICAL SURFACES, SUCH AS COLUMN PEDESTALS, FOUNDATION WALLS, GRADE BEAMS, AND OTHER LOCATIONS, AS INDICATED.

CAST - IN - PLACE CONCRETE CONTINUED

- CONCRETE PLACEMENT, BEFORE PLACING CONCRETE, VERIFY THAT INSTALLATION OF FORMWORK, REINFORCEMENT, AND EMBEDDED ITEMS IS COMPLETE AND THAT REQUIRED INSPECTIONS HAVE BEEN PERFORMED. DEPOSIT CONCRETE CONTINUOUSLY IN ONE LAYER OR IN HORIZONTAL LAYERS OF SUCH THICKNESS THAT NO NEW CONCRETE WILL BE PLACED ON CONCRETE THAT HAS HARDENED ENOUGH TO CAUSE SEAMS OR PLANES OF WEAKNESS. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, PROVIDE CONSTRUCTION JOINTS AS INDICATED. DEPOSIT CONCRETE TO AVOID SEGREGATION. CONSOLIDATE PLACED CONCRETE WITH MECHANICAL VIBRATING EQUIPMENT ACCORDING TO ACI 301.
 - COLD WEATHER PLACEMENT - COMPLY WITH ACI 306I.
 - HOT WEATHER PLACEMENT - COMPLY WITH ACI 301
- SLAB FINISH TOLERANCE. LOCAL FLATNESS/LEVELNESS TOLERANCES. ALL FLOORS SHALL CONFORM TO THE FOLLOWING ACI F-NUMBER REQUIREMENTS: A) SPECIFIED OVERALL VALUE: FF-25/F1-20; B) MINIMUM LOCAL VALUE: FF-20/F1-15
 - AT CONSTRUCTION JOINTS IN ALL AREAS, A 10-FOOT STRAIGHT EDGE CENTERED ON THE CONSTRUCTION JOINT SHALL NOT HAVE A GAP OF MORE THAN 1/8 INCH AT CENTER (JOINT TOO LOW) OR EITHER END (JOINT TOO HIGH).
 - GENERAL CONFORMITY TO DESIGN GRADE. THE FLOOR SHALL FALL WITHIN +/- 1/4 INCH OF THE FINISHED FLOOR ELEVATION SHOWN ON THE PLANS.
 - FLOOR TOLERANCE MEASUREMENTS. FLOOR FLATNESS AND LEVELNESS TEST ON THE FLOOR SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ASTM E 1155-87. FLOOR TOLERANCE MEASUREMENTS SHALL BE MADE BY THE OWNER WITHIN 48 HOURS AFTER COMPLETION OF THE FINAL TROWELS OPERATION - AND IN ALL CASES BEFORE FORMS AND/OR SHORES HAVE BEEN REMOVED - USING A DIPSTICK FLOOR PROFILER AS MANUFACTURED BY THE EDWARD H FACHE COMPANY, INC. OR NORFOLK, VA. RESULTS OF ALL FLOOR TOLERANCE TESTS - INCLUDING A FINAL NOTICE OF ACCEPTANCE OR REJECTION OF THE WORK - SHALL BE PROVIDED TO THE CONTRACTOR WITHIN 24 HOURS AFTER DATA COLLECTION.
 - WEEKENDS AND HOLIDAYS SHALL BE IGNORED WHEN COMPUTING THE TESTING AND REPORTING DEADLINES SPECIFIED ABOVE.
 - REMEDY FOR OUT-OF-TOLERANCE WORK. ALL FLOOR SECTIONS MEASURING AT OR ABOVE BOTH OF THE SPECIFIED MINIMUM LOCAL F-NUMBERS SHALL BE ACCEPTED FOR TOLERANCE COMPLIANCE AS CONSTRUCTED. ALL FLOOR SECTIONS MEASURING BELOW EITHER (OR BOTH) OF THE SPECIFIED MINIMUM LOCAL F-NUMBERS SHALL BE REMOVED AND RECONSTRUCTED IN ACCORDANCE WITH THE SPECIFIED MINIMUM LOCAL F-NUMBERS. NO REWORKS FOR SUB-MINIMUM GROUND AND/OR RE-TOPPED (IN THE CASE OF ELEVATED SLABS), NO REWORKS FOR SUB-MINIMUM LOCAL F-NUMBER SECTIONS OTHER THAN REPLACEMENT OF SLABS-ON-GRADE, AND GRINDING OR TROWELING OF ELEVATED SLABS WILL BE PERMITTED. FOR THE PURPOSES OF THIS PARAGRAPH, A FLOOR SECTION SHALL BE ANY RECTANGULAR AREA BOUND BY COLUMN AND/OR HALF-COLUMN LINES.
- FINISHING FORMED SURFACES
 - ROUGH-FORMED FINISH. AS-CAST CONCRETE TEXTURE IMPARTED BY FORM- FACINGS MATERIAL WITH THE HOLES AND DEFECTS REPAIRED AND PATCHED. REMOVE FINIS AND OTHER PROJECTIONS THAT EXCEED SPECIFIED LIMITS ON FORMED-SURFACE IRREGULARITIES. APPLY TO CONCRETE SURFACES NOT EXPOSED TO PUBLIC VIEW.
 - SMOOTH-FORMED FINISH. AS-CAST CONCRETE TEXTURE IMPARTED BY FORM-FACINGS MATERIAL, ARRANGED IN AN ORDERLY MANNER WITH A MINIMUM OF SEAMS. REPAIR AND PATCH THE HOLES AND DEFECTS. REMOVE FINIS AND OTHER PROJECTIONS THAT EXCEED SPECIFIED LIMITS ON FORMED-SURFACE IRREGULARITIES. APPLY TO CONCRETE SURFACES EXPOSED TO PUBLIC VIEW. TO RECEIVE A RUBBED FINISH, TO BE COVERED WITH A COATING OR COVERING MATERIAL APPLIED DIRECTLY TO CONCRETE.
 - RUBBED FINISH. APPLY THE FOLLOWING TO SMOOTH-FORMED FINISH AS- CAST CONCRETE WHERE INDICATED.
 - SMOOTH-RUBBED FINISH. NO LATER THAN ONE DAY AFTER FORM REMOVAL, MOISTEN CONCRETE SURFACES AND RUB WITH A BRUSH OR BRICK. RUB TO REMOVE ABRASIVE UNTIL PERFORM A UNIFORM COLOR AND TEXTURE. DO NOT APPLY CEMENT GROUT OTHER THAN THAT CREATED BY THE RUBBING PROCESS.
 - GROUT-CLEANED FINISHES. NET CONCRETE SURFACES AND APPLY GROUT OF A CONSISTENCY OF THICK PAINT TO COAT SURFACES AND FILL SMALL HOLES. MIX ONE PART PORTLAND CEMENT TO ONE AND ONE-HALF PARTS FINE SAND WITH A 1:1 MIXTURE OF BONDING ADHESIVE AND WATER. ADD WHITE PORTLAND CEMENT IN AMOUNTS DETERMINED BY TRIAL PATCHES SO COLOR OF DRY GROUT WILL MATCH ADJACENT SURFACES. SCRUB GROUT INTO VOIDS AND REMOVE EXCESS GROUT. WHEN GROUT WHITENS, RUB SURFACE WITH CLEAN BURLAP AND KEEP SURFACE DAMP BY FOG SPRAY FOR AT LEAST 36 HOURS.
 - RELATED INFORMED SURFACES. AT TOPS OF WALLS, HORIZONTAL OFFSETS, AND SIMILAR UNFORMED SURFACES ADJACENT TO FORMED SURFACES, STRIKE OFF SMOOTH AND FINISH WITH A TEXTURE MATCHING ADJACENT FORMED SURFACES. CONTINUE FINAL SURFACE TREATMENT OF FORMED SURFACES UNFORMALLY ACROSS ADJACENT UNFORMED SURFACES, UNLESS OTHERWISE INDICATED.
- FINISHING FLOORS AND SLABS. COMPLY WITH ACI 302.1R RECOMMENDATIONS FOR SCREEDING, RESTRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT NET WET CONCRETE SURFACES.
 - SCRATCH FINISH. WHILE STILL PLASTIC, TEXTURE CONCRETE SURFACE THAT HAS BEEN SCREEDED AND BULL-FLOATED OR DARNED. USE STIFF BRUSHES OR RAGS TO PRODUCE A PROFILE AMPLITUDE OF 1/4 INCH IN 1 DIRECTION. APPLY SCRATCH FINISH TO SURFACES INDICATED AND TO RECEIVE CONCRETE FLOORING TOPFININGS OR TO RECEIVE MORTAR SETTING BEDS FOR BONDED CEMENTITIOUS FLOOR FINISHES.
 - FLOAT FINISH. CONSOLIDATE SURFACE WITH POWER-DRIVEN FLOATS OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER DRIVEN FLOATS. RESTRAIGHTEN, CUT DOWN HIGH SPOTS, AND FILL LOW SPOTS. REPEAT FLOAT PASSAGES AND RESTRAIGHTENING UNTIL SURFACES IS LEFT WITH A UNIFORM SMOOTH GRANULAR TEXTURE. APPLY FLOAT FINISH TO SURFACES TO RECEIVE TROWEL FINISHES. APPLY A TROWEL FINISH TO SURFACES EXPOSED TO VIEW OR TO BE COVERED WITH RESILIENT FLOORINGS, CARPET, OR CERAMIC OR QUARRY TILE SET OVER A CLEAVAGE MEMBRANE, PAINT, OR ANOTHER THIN-FILM-FINISH COATING SYSTEM. FINISH AND MEASURE SURFACE 50 GAP AT ANY POINT BETWEEN CONCRETE SURFACE AND AN UNLEVEL, FREESTANDING, 10-FOOT-LONG STRAIGHTEDGE RESTING ON 2 HIGH SPOTS AND PLACED ANYWHERE ON THE SURFACE DOES NOT EXCEED 3/16 INCH.
 - TROWEL AND FINE-BROOM FINISH. APPLY A FIRST TROWEL FINISH TO SURFACES WHERE CERAMIC OR QUARRY TILE IS TO BE INSTALLED BY EITHER THICKEST OR THIN-SET METHOD. WHILE CONCRETE IS STILL PLASTIC, SLIGHTLY SCRUBBY SURFACE WITH A FINE BROOM. COMPLY WITH FLATNESS AND LEVELNESS TOLERANCES FOR TROWEL FINISHED FLOOR SURFACES.
 - BROOM FINISH. APPLY A BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS AND ELSEWHERE AS INDICATED.
- CONCRETE PROTECTINGS AND CURING. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. COMPLY WITH ACI 306I FOR COLD-WEATHER PROTECTION AND ACI 301 FOR HOT-WEATHER PROTECTION DURING CURING.
 - EVAPORATION RETARDER. APPLY EVAPORATION RETARDER TO UNFORMED CONCRETE SURFACES IF HOT, DRY, OR WINDY CONDITIONS CAUSE MOISTURE LOSS APPROACHING 0.2 LBS/SQ.FT. X H BEFORE AND DURING FINISHING OPERATIONS. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AFTER PLACING, SCREEDING, AND BULL FINISHING OR DARNING CONCRETE, BUT BEFORE FLOAT FINISHING.
 - CURE CONCRETE ACCORDING TO ACI 308I, BY ONE OR A COMBINATION OF THE FOLLOWING METHODS:
 - MOIST CURING- KEEP SURFACES CONTINUOUSLY MOIST FOR NOT LESS THAN SEVEN DAYS.
 - MOISTURE-RETAINING-COVER CURING. COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER FOR CURING CONCRETE, PLACED IN WIDEST PRACTICABLE WIDTH, WITH SIDES AND ENDS LAPPED AT LEAST 12 INCHES, AND SEALED BY WATERPROOF TAPE OR ADHESIVE. CURE FOR NOT LESS THAN SEVEN DAYS. IMMEDIATELY REPAIR ANY HOLES OR TEARS DURING CURING PERIOD USING COVER MATERIALS AND WATERPROOF TAPE.
 - CURING COMPOUND - APPLY UNIFORMLY IN CONTINUOUS OPERATION BY POWER SPRAY OR ROLLER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. RECOAT AREAS SUBJECTED TO HEAVY RAINFALL WITHIN THREE HOURS AFTER INITIAL APPLICATION. REPEAT PROCESS 24 HOURS LATER AND APPLY A SECOND COAT. MAINTAIN CONTINUITY OF COATINGS AND REPAIR DAMAGE DURING CURING PERIOD.
- CONCRETE SURFACE REPAIRS. DEFECTIVE CONCRETE - REPAIR PATCH DEFECTIVE AREAS WHEN APPROVED BY ARCHITECT. REMOVE AND REPLACE CONCRETE THAT CANNOT BE REPAIRED AND PATCHED TO ARCHITECT'S APPROVAL.

CAST - IN - PLACE CONCRETE CONTINUED

- QUALITY CONTROL TESTING DURING CONSTRUCTION
 - EMPLOY A TESTING LABORATORY TO PERFORM TEST AND TO SUBMIT TEST REPORTS. THE INSPECTOR SHALL BE ACI CERTIFIED LEVEL 1.
 - SAMPLING AND TESTING FOR QUALITY CONTROL. DURING PLACEMENT OF CONCRETE MAY INCLUDE THE FOLLOWINGS, AS DIRECTED BY ARCHITECT/ENGINEER.
 - SAMPLING FRESH CONCRETE ASTM C172, EXCEPT MODIFIED FOR SLUMP TO COMPLY WITH ASTM C44.
 - SLUMP. ASTM C143, ONE TEST AT POINT OF DISCHARGE FOR EACH TIME TEST CYLINDERS ARE TAKEN. ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY SEEMS TO HAVE CHANGED.
 - AIR CONTENT. ASTM C173, VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE, ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE, ONE FOR EACH TIME TEST CYLINDERS ARE TAKEN.
 - UNIT WEIGHT. ASTM C29 BULK DENSITY (UNIT WEIGHT).
 - CONCRETE TEMPERATURE. TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREE F AND BELOW, AND WHEN 80 DEGREE F AND ABOVE, AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.
 - COMPRESSION TEST SPECIMEN. ASTM C31, ONE SET OF 4 STANDARD CYLINDERS FOR EACH LABORATORY CURED TEST SPECIMENS EXCEPT WHEN FIELD-CURE TEST SPECIMENS ARE REQUIRED.
 - COMPRESSIVE STRENGTH TEST. ASTM C39, ONE SET FOR EACH DAY'S POUR EXCEEDING 3 CUPS, PLUS ADDITIONAL SETS FOR EACH 50 CYTD OVER AND ABOVE THE FIRST 25 CUPS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY, ONE SPECIMEN TESTED AT 1 DAYS, TWO SPECIMENS TESTED AT 28 DAYS, AND ONE RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.
 - INTERIOR SLABS. ONE TEST SPECIMEN SET PER TWO BAYS OF FLOOR SLAB, NO LESS THAN ONE SET PER POUR.
 - WHEN FREQUENCY OF TESTING WILL PROVIDE LESS THAN 5 STRENGTH TESTS FOR A GIVEN CLASS OF CONCRETE, CONDUCT TESTING FROM AT LEAST 5 RANDOMLY SELECTED BATCHES FROM EACH BATCH IF FEWER THAN 5 ARE USED.
 - WHEN TOTAL QUANTITY OF A GIVEN CLASS OF CONCRETE IS LESS THAN 50 CUPS, STRENGTH TEST MAY BE WAIVED BY ARCHITECT/ENGINEER IF, IN HIS JUDGMENT, ADEQUATE EVIDENCE OF SATISFACTORY STRENGTH IS PROVIDED.
 - WHEN FREQUENCY OF FIELD CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPAION, LABORATORY CURED CYLINDERS, EVALUATE CURRENT OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING THE IN-PLACE CONCRETE.
 - STRENGTH LEVEL OF CONCRETE WILL BE CONSIDERED SATISFACTORY IF AVERAGES OF SETS OF THREE CONSECUTIVE STRENGTH TEST RESULTS EQUAL OR EXCEED THE SPECIFIED COMPRESSIVE STRENGTH, AND NO INDIVIDUAL STRENGTH TEST RESULT FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 4000 PSI.
 - FLEXURAL STRENGTH OF CONCRETE. ASTM C10, THE FLEXURAL STRENGTH OF CONCRETE USED FOR CONCRETE SLAB-ON- GRADE SHALL BE ESTABLISHED PRIOR TO START OF CONCRETE PLACEMENT OPERATIONS.
 - ONE TEST SPECIMEN SET PER FOR BAYS OF FLOOR SLAB, NO LESS THAN ONE SET PER POUR. FOUR BEAMS PER SPECIMEN SET MOLD AND STORE FOR LAB CURING. TEST ONE AT 28 DAYS, TWO AT 56 DAYS, AND ONE SPARE.
 - STRENGTH LEVEL OF CONCRETE WILL BE CONSIDERED SATISFACTORY IF AVERAGES OF SETS OF THREE CONSECUTIVE STRENGTH TEST RESULTS EQUAL OR EXCEED THE SPECIFIED FLEXURAL STRENGTH, AND NO INDIVIDUAL STRENGTH TEST RESULT FALLS BELOW SPECIFIED FLEXURAL STRENGTH BY MORE THAN 50 PSI.
 - CONCRETE FLOOR FLATNESS AND LEVELNESS
 - TWO (2) DEVICES ARE USED TO RUN TEST. TYPE I DEVICE - DIPSTICK AND TYPE II DEVICE - WHEEL. MAKE SURE THAT THE DEVICE BEING USED HAS BEEN RECENTLY CALIBRATED WITHIN THREE MONTHS. SLAB POURS, 40 DEGREE ANGLES, INSTRUMENT INACCURACIES WILL ALWAYS RESULT IN A LOWERING OF REPORTED F-NUMBERS.
 - TWO (2) LAYOUT PATTERN PER ASTM E1155-87, 45 DEGREE ANGLES TO THE LONGEST BOUNDARY (X PATTERN). EASIER TO RUN LESS TIME TO RUN PATTERN. MUST BE USED FOR NARROW WIDTH FLOOR SLAB POURS. USE THE LONGEST BOUNDARY (Y PATTERN).
 - PERFORM THE FLOOR FLATNESS AND LEVELNESS TESTING AS FOLLOWS. MINIMUM OF THE FIRST THREE SLAB POURS. MINIMUM OF EVERY OTHER SLAB POUR AFTER THE FIRST THREE SLAB POURS. TESTING MUST BE PERFORMED WITHIN 48 HOURS AFTER SLAB IS POURED. THE RESULTS OF THE TESTING MUST BE REPORTED TO THE CONTRACTOR WITH 24 HOURS.
 - AT CONSTRUCTION JOINTS SPECIFY THE FOLLOWING. SPECIFY THAT ALL CONSTRUCTION JOINTS MUST BE CHECKED WITH A 10-FOOT STRAIGHT EDGE CENTERED ON THE CONSTRUCTION JOINT. ANY JOINT THAT DOES NOT MEET WITH A 1/8 INCH OR LESS GAP UNDER THE STRAIGHT EDGE EITHER AT THE CENTER (JOINT TOO LOW) OR AT THE ENDS (JOINT TOO HIGH STRAIGHT EDGE BOOKS WILL REQUIRE GRINDING WITHIN 1/8 INCH TOLERANCE IS ET OR THE JOINT IS ACCEPTABLE. THE CONSTRUCTION JOINTS MUST BE CHECKED WITHIN 48 HOURS AFTER THE LAST ABUTTING SLAB IS POURED.
 - TEST RESULTS WILL BE REPORTED IN WRITING TO ARCHITECT/ENGINEER. THE OWNER AND CONTRACTOR WITHIN 24 HOURS AFTER TEST. REPORTS OF COMPREHENSIVE STRENGTH TEST SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPREHENSIVE STRENGTH AT 28 DAYS, ONE HOUR, AND COMPRESSIONS AND MATERIALS, COMPRESSIVE STRENGTH, BREAKING LOAD AND TYPE OF BREAK FOR BOTH 1-DAY AND 28-DAYS TEST.
 - NONDESTRUCTIVE TESTING. IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE EMPLOYED BUT SHALL NOT BE USED AS THE BASIS FOR ACCEPTANCE OR REJECTION.
 - ADDITIONAL TESTS. THE TESTING SERVICE WILL MAKE ADDITIONAL TEST OF IN-PLACE CONCRETE WHEN TEST RESULTS INDICATE SPECIFIED CONCRETE STRENGTHS AND OTHER CHARACTERISTICS HAVE NOT BEEN ATTAINED IN THE STRUCTURE, AS DIRECTED BY ARCHITECT/ENGINEER. TESTING SERVICE MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CORED CYLINDERS COMPLYING WITH ASTM C42, OR BY OTHER METHODS AS DIRECTED. CONTRACTOR SHALL PAY FOR SUCH TEST WHEN UNACCEPTABLE CONCRETE IS VERIFIED
 - CARE AND MAINTENANCE OF CONCRETE PAVEMENT

MANY OWNERS DO NOT RECOGNIZE THE NEED FOR MAINTENANCE AND MONITORING OF EXTERIOR CONCRETE PRODUCTS UNTIL THE DETEIORATION IS TOO SEVERE TO BE IGNORED. AT THIS POINT EXPENSIVE AND EXTENSIVE REPAIRS ARE NECESSARY. MOST EXTERIOR CONCRETE PRODUCTS GENERALLY PERFORM FOR MANY YEARS WITH MINIMAL MAINTENANCE AND LITTLE REPAIR COSTS. HOWEVER, THERE ARE EXCEPTIONS, AND EVEN THE MOST WELL IN TENDED MIX DESIGN AND CONSTRUCTION EFFORTS MAY RESULT IN FAILURES AND DISTRESS.

IT IS RECOMMENDED TO INSPECT EXTERIOR CONCRETE PRODUCTS IN THE SPRING AND BEFORE WINTER EACH YEAR. THIS WILL ALLOW THE INSPECTOR TO DETERMINE WHAT REPAIRS AND OR TREATMENTS NEED TO BE PERFORMED TO THE SURFACE TO PREVENT FURTHER DETEIORATION.

ROUTINE SERVICE CONDITIONS THAT AFFECT MONITORING AND MAINTENANCE INCLUDE EXPOSURE TO AGGRESSIVE CHEMICALS, CYCLES OF FREEZING AND THAWING, AND TRAFFIC LOADING. MOST SURFACE DETEIORATION IS CAUSED BY THE USE OF DEICING CHEMICALS AND BY MOISTURE INTRUSION CAN BE A SERIOUS PROBLEM. PROPER AIR ENTRAINMENT AND ADEQUATE CURING BEFORE THE SURFACE IS EXPOSED TO DEICING CHEMICALS AND FREEZE-THAW CYCLES IS ESSENTIAL. IF CONCRETE STARTS TO SHOW SIGNS OF INADEQUATE DURABILITY, IT IS UNDOUBTEDLY POROUS AND ABSORBS GREAT AMOUNTS OF MOISTURE.

SURFACE SPALLING FROM FREEZE-THAW ACTION AND STEEL CORROSION FROM SALT INTRUSION CAN RESULT, SO MORE POSITIVE PROTECTION IS NECESSARY. PRIOR TO ANY APPLICATION OF SEALER, THE CONCRETE SHOULD BE CLEANED AND ALLOWED TO DRY FOR 24 HOURS AT A TEMPERATURE ABOVE 60 DEGREES. SOME OLD CONCRETE ESPECIALLY DIRTY, CONCRETE MAY REQUIRE A MORE THOROUGH PREPARATION OF THE SURFACE. THE USE OF A SILOXANES/GLIOLINE SEALER IS RECOMMENDED. THE SILOXANES/GLIOLINE WATER REPELLENT IS AN EFFECTIVE CHLORIDE SCREEN PROTECTING THE CONCRETE FROM DEICING CHEMICALS ALONG WITH STRONG WATER REPELLENCY. THIS PRODUCT SHOULD BE USED EVERY 3 - 5 YEARS DEFENDING ON THE SERVICE CONDITIONS. AN INSPECTION OF THE WATER REPELLENCY SHOULD BE PERFORMED PRIOR TO DETERMINING RESEALING.

JOINTS IN CONCRETE PARKING LOTS ARE FREQUENTLY SEALED, BUT IN MANY SUCCESSFULLY PERFORMING PARKING LOTS THE JOINTS ARE NOT SEALED. CLOSE JOINT SPACING AND PROPER DRAINAGE WILL MINIMIZE THE INFILTRATION OF WATER THROUGH JOINTS INTO THE SUB-BASE. AUTOMOBILE AND LIGHT TRUCK TRAFFIC WILL NOT CAUSE RUMPS OF UNSEALED JOINTS UNDER MOST CONDITIONS. IN THE EVENT THAT POOR SUBSOIL CONDITIONS AND HEAVY TRUCK TRAFFIC WARRANT EXTRA PRECAUTIONS AND COSTS, EITHER GROUT-POURED OR HOT-POURED SEALING MATERIALS CAN BE USED. REFORCED MATERIALS, COMMON IN HIGHWAY PAVEMENTS, ARE SELDOM USED IN PARKING LOTS. PRIOR TO SEALING, THE JOINT OPENING SHOULD BE THOROUGHLY CLEANED TO REMOVE ALL FOREIGN MATTER. ALL CRACK FACES OF THE JOINT SHOULD BE CLEANED TO REMOVE LOOSE MATERIAL AND SHOULD BE SURFACE DRY WHEN HOT-POURED SEALING MATERIALS ARE USED. SEALING MATERIALS SHOULD BE CAREFULLY INSTALLED SO THAT SEALANTS WILL NOT BE SPILLED ON TO EXPOSED SURFACES. EXPOSED MATERIALS ON THE SURFACE OF THE CONCRETE SHOULD BE REMOVED IMMEDIATELY AND THE PAVEMENT SURFACE CLEANED. CRACKS CAN BE ROUTED AND SEALED, THIS WILL REDUCE CONCRETE SPALLING AT THE CRACK FACES AND PREVENT WATER PENETRATION.

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Certification:

Todd Baker

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Performed for:

Site Specifications For:

IDEAL BUILDERS DEVELOPMENT

www.ideal-builders.com

Commission Number

182297

Date

February 8th, 2019

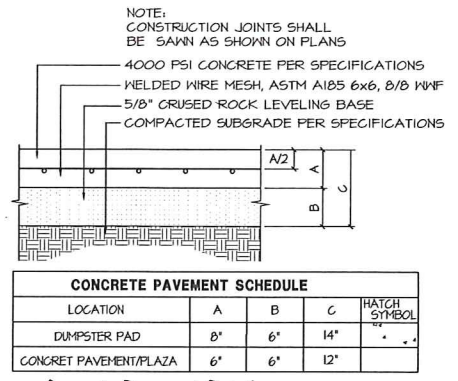
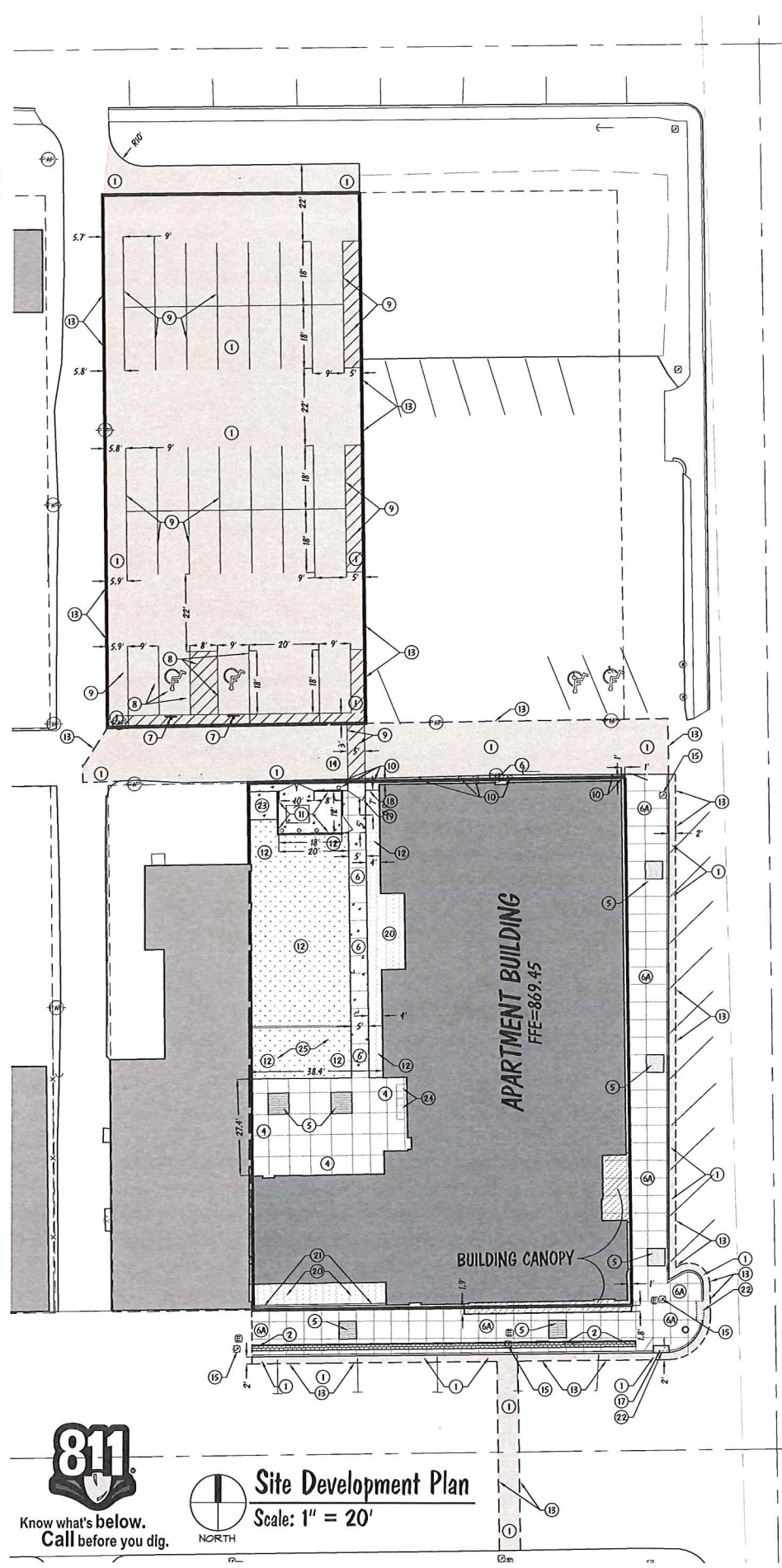
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Site Specifications

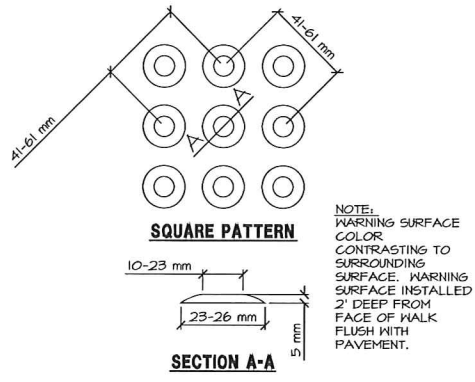
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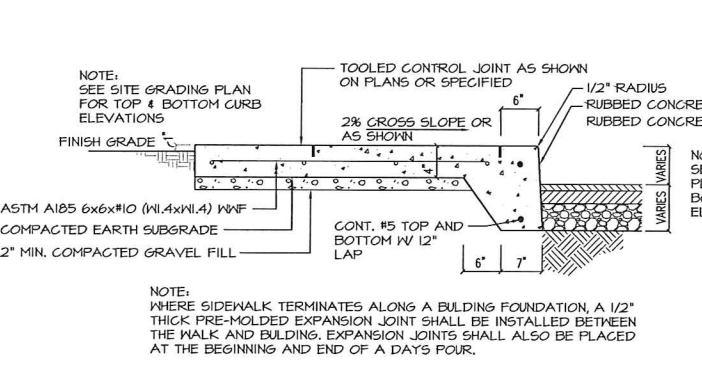
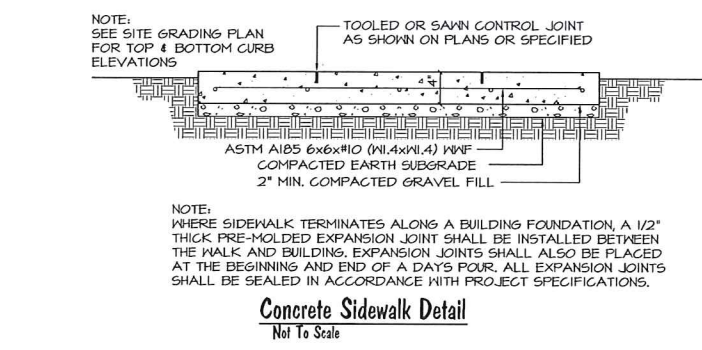
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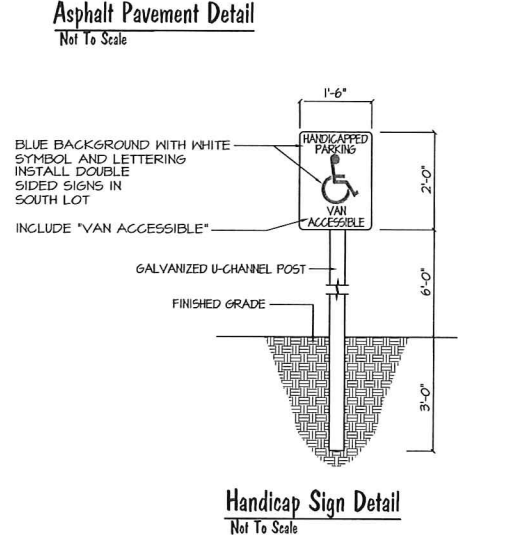
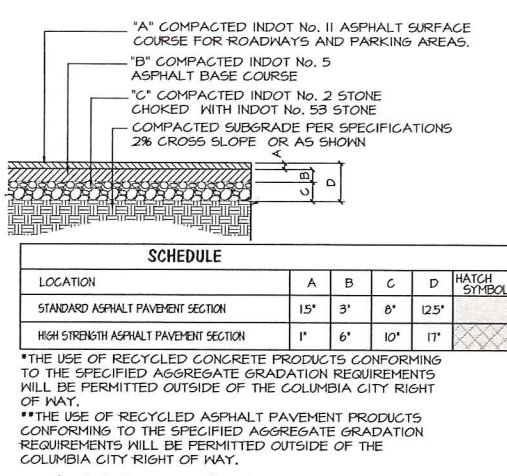
Concrete Pavement Detail
Not To Scale



**Truncated Domes for
Detectable Warnings**
Not To Scale



Concrete Curb & Walk Detail
Not To Scale



Handicap Sign Detail
Not To Scale

- GENERAL NOTES:**
- THE CONTRACTOR SHALL ENSURE THE CONDITION OF ALL EXISTING IMPROVEMENTS INDICATED TO REMAIN. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITY LINES, AND ENSURE THE PROPER FUNCTIONING OF THESE SERVICES DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNAGE AND BARRICADES FOR THE PROTECTION AND SAFETY OF VEHICULAR AND PEDESTRIAN TRAFFIC.
 - ALL BACKFILL AND FILL MATERIALS BENEATH LAWNS, PAVED AREAS, AND BUILDINGS SHALL COMPLY WITH PROJECT SPECIFICATIONS.
 - EXISTING TREES, VEGETATION AND LANDSCAPING AREAS NOT INDICATED TO BE REMOVED SHALL BE PROTECTED FROM DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES DURING CONSTRUCTION.
 - POURED-IN-PLACE SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI, UNLESS OTHERWISE SPECIFIED.
 - ALL AREAS WITHIN THE CONSTRUCTION LIMITS NOT SPECIFICALLY DESIGNATED TO RECEIVE PAVEMENT, MULCH, OR BUILDING SHALL BE CONSIDERED LAWN AREA. ALL LAWN AREAS SHALL RECEIVE A MINIMUM OF SIX INCHES OF TOPSOIL THAT WILL SUSTAIN LAWN GROWTH.
 - PROPOSED PAVEMENT ELEVATIONS ARE CRITICAL TO MAINTAINING DRAINAGE PATTERNING. ALL ELEVATIONS MUST BE WITHIN TOLERANCES STATED IN PROJECT SPECIFICATIONS AND WILL BE INSPECTED THROUGHOUT, AND AT THE COMPLETION OF CONSTRUCTION. COORDINATE INSPECTIONS WITH ENGINEER AND SURVEYOR RESPONSIBLE FOR CONSTRUCTION STAKING PRIOR TO INSTALLATION OF ASPHALT PAVEMENT SECTION.
 - FINISH FLOOR ELEVATIONS SHOWN ON THE EXISTING BUILDING ARE FOR REFERENCE ONLY, AND SHOULD NOT BE USED AS A PROJECT BENCHMARK. THE ESTABLISHED PROJECT BENCHMARK AND ITS LOCATION NOTED ON THE CONSTRUCTION DOCUMENTS SHALL BE THE ONLY ACCEPTABLE BENCHMARK FOR THE PURPOSE OF NEW CONSTRUCTION.
 - WHERE SIDEWALK IS CONSTRUCTED IMMEDIATELY ADJACENT TO CURB, THE SURFACE OF THE SIDEWALK SHALL BE CONSTRUCTED 1/2 INCH HIGHER THAN THE TOP OF THE CURB.
 - TRANSVERSE JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/2 INCH OF SPACING AS INDICATED OR DIRECTED.
 - COST OF TRANSVERSE PREFORMED JOINT FILLER TO BE INCLUDED IN CONTRACT PRICE FOR CONCRETE SIDEWALK.
 - COMPACTED SUB-GRADE - SUB-GRADE UNDER ALL CURB, SIDEWALKS, AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS. SPECIAL ATTENTION SHALL BE PAID TO UTILITY TRENCHES. THE UPPER 6 INCHES SHALL COMPLY WITH THE DENSITY REQUIREMENTS OF THE CONTRACT IMMEDIATELY PRIOR TO PLACING THE MATERIAL THEREON. ALL SOFT, YIELDING, OR OTHER UNSUITABLE MATERIAL WHICH CANNOT BE INTEGRATED SATISFACTORILY SHALL BE REMOVED. ALL ROCK ENCOUNTERED SHALL BE REMOVED OR BROKEN OFF AT LEAST SIX (6) INCHES BELOW THE SUB-GRADE SURFACE. ANY HOLES OR DEPRESSIONS RESULTING FROM THE REMOVAL OF UNSUITABLE MATERIAL SHALL BE FILLED WITH SATISFACTORY MATERIAL AND COMPACTED TO CONFORM WITH THE SURROUNDING SUB-GRADE SURFACE.
 - DECORATIVE SIDEWALKS ARE NOT ALLOWED.
 - ADA SIDEWALK RAMP MUST BE CONCRETE AND CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT INDOT STANDARDS.
 - WHERE SIDEWALK IS CONSTRUCTED ADJACENT TO THE CURB, THE SPACE BEHIND THE NEW CURB SHALL BE FILLED WITH GRANULAR MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 4 INCHES.
 - WHERE SIDEWALK IS NOT CONSTRUCTED ADJACENT TO THE CURB, THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 4 INCHES.
 - WHEN BUILT IN CONJUNCTION WITH CONCRETE PAVEMENT, EXPANSION AND CONTRACTION JOINTS SHOULD BE PLACED AT THE SAME LOCATIONS AS IN THE PAVEMENT SLAB. THE CURB AND GUTTER SHOULD BE TIED TO THE PAVEMENT BY 1/2 INCH ROUND PREFORMED EPOXY COATED BARS AT APPROXIMATELY 3 FOOT INTERVALS. IF NO CONCRETE PAVEMENT IS BEING BUILT AT THE TIME THE CURB IS CONSTRUCTED, EXPANSION JOINTS SHOULD BE PLACED AT THE ENDS OF ALL RETURNS AND AT INTERVALS NOT TO EXCEED 100 FEET. CONTRACTION JOINTS SHALL BE INSTALLED AT 20 FOOT INTERVALS.

- CONSTRUCTION NOTES: GRADING AND PAVING**
- PROVIDE AND INSTALL STANDARD STRENGTH ASPHALT PAVEMENT SECTION PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL BRICK PAVEMENT STRIP, BRICK PAVERS ARE TO MATCH EXISTING PAVEMENT SIZE, TYPE, AND LOCATION OF EXISTING PAVEMENT STRIPS ON NORTH AND SOUTH SIDES OF VAN BUREN STREET.
 - PROVIDE AND INSTALL CONCRETE DUMPSTER PAD PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL CONCRETE PAVEMENT PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL 6x6' TREE GRATE PER DETAIL SHEET C1.2.
 - PROVIDE AND INSTALL CONCRETE WALK PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL INTEGRAL CONCRETE CURB AND WALK PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL HANDICAP SIGN PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL ACCESSIBLE PARKING PAVEMENT STRIPING (BLUE) AS SHOWN ON PLANS PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT AND MANUFACTURER'S SPECIFICATIONS AND INDIANA CODE 5-16-4-4.
 - PROVIDE AND INSTALL PASSENGER CAR PAVEMENT STRIPING (WHITE) AS SHOWN ON PLANS PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND MANUFACTURER'S SPECIFICATIONS.
 - PROVIDE AND INSTALL PROTECTIVE BOLLARD PER DETAIL SHEET C1.2.
 - PROVIDE AND INSTALL DUMPSTER ENCLOSURE FENCE PER SHEET C1.2.
 - PROVIDE A MINIMUM OF 6" OF CLEAN FERTILE TOPSOIL, CAPABLE OF SUSTAINING LAWN GROWTH. PROVIDE AND SEED LAWN IN ACCORDANCE WITH PROJECT SPECIFICATIONS. REFURISH DAMAGED LAWN AREAS IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
 - MATCH EXISTING ELEVATIONS ALONG THIS LINE.
 - NOT USED.
 - EXISTING LIGHT POLE AND FIXTURE TO REMAIN.
 - NOT USED.
 - PROVIDE AND INSTALL 2" WIDE STRIP OF TRUNCATED DOME DETECTABLE WARNING SURFACE PER DETAIL THIS SHEET.
 - PROVIDE AND INSTALL 4" TALL CEDAR "SHADOW BOX" PRIVACY FENCE PER DETAILS SHEET C1.2.
 - PROVIDE AND INSTALL 5' WIDE WOOD MAN GATE FOR RESIDENT ACCESS. MAN GATE TO BE ELECTRONICALLY CONTROLLED ACCESS WITH RESIDENT KEY FOB, COORDINATE WITH ARCHITECTURAL REQUIREMENTS.
 - STONE LANDSCAPE BED. REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.
 - PROVIDE AND INSTALL 4" LANDSCAPING CURB PER DETAIL SHEET C1.2.
 - PROVIDE AND INSTALL TAPERED SIDEWALK ACCESS PER DETAIL SHEET C1.2.
 - 6" BY 8" ELECTRICAL TRANSFORMER PAD. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
 - DESIGNATED BIKE RACK AREA.
 - DESIGNATED PICNIC AREA.



Site Development Plan
Scale: 1" = 20'

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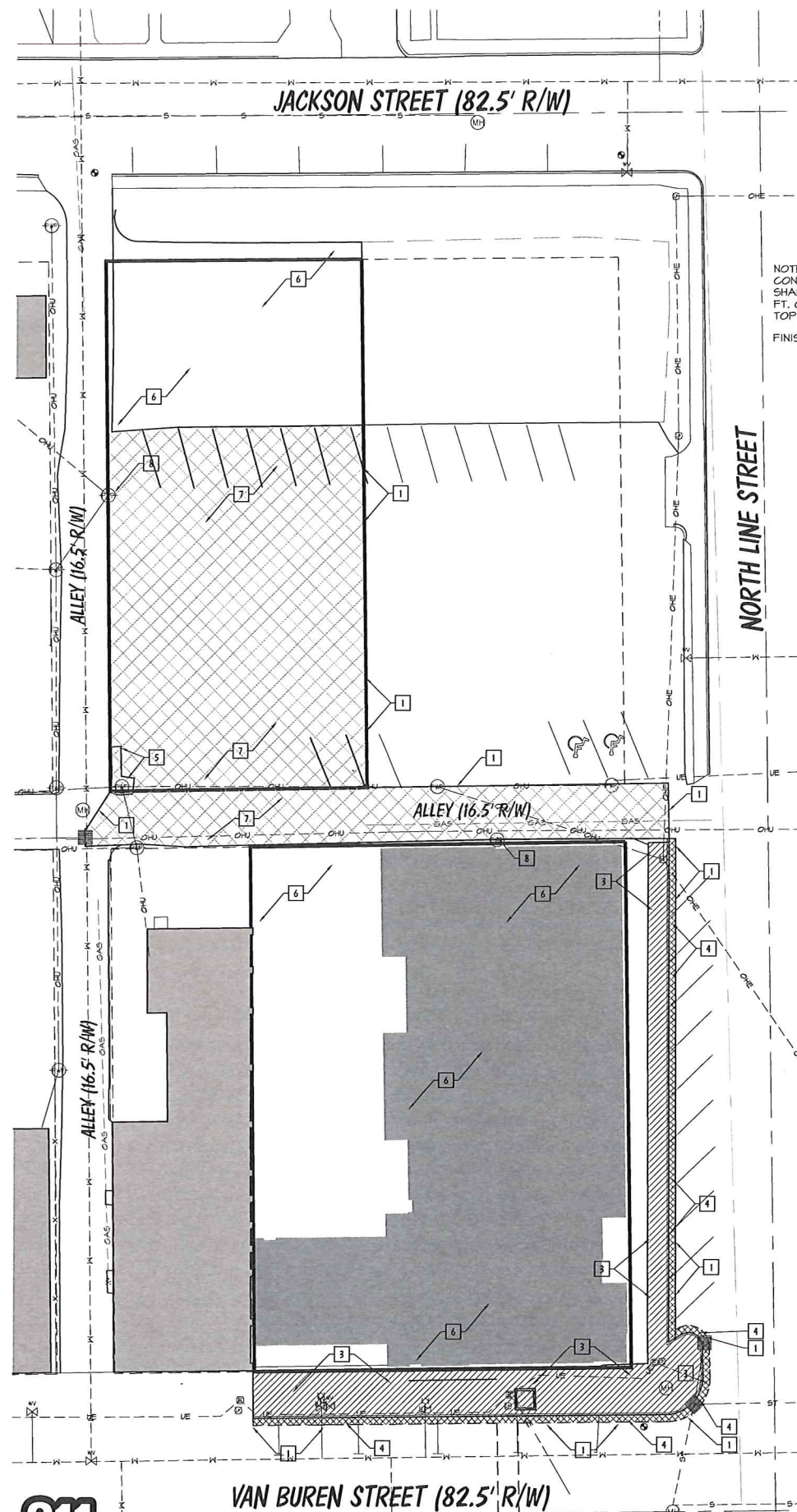
Site Development Plan For:

IDEAL BUILDERS DEVELOPMENT
www.ideal-builders.com

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

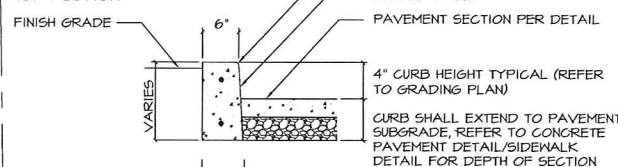
Commission Number	182297
Date	February 8th, 2019
Title	Site Development Plan
Sheet Number	C1.1



CONSTRUCTION NOTES: DEMOLITION

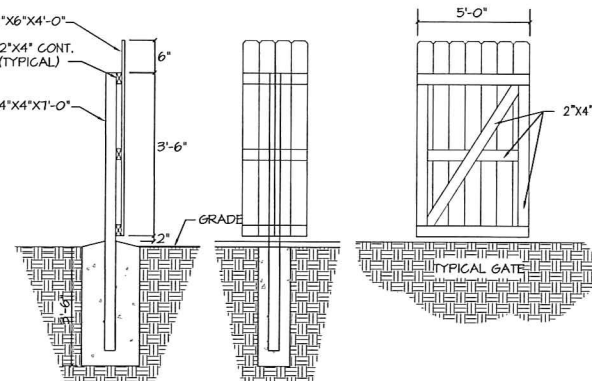
1. SAW CUT EXISTING ASPHALT PAVEMENT ALONG THIS LINE AND REMOVE AS NOTED.
2. SAW CUT EXISTING CONCRETE SIDEWALK ALONG EXPANSION JOINT AND REMOVE AS NOTED.
3. COMPLETELY DEMOLISH AND REMOVE EXISTING CONCRETE WALK IN ITS ENTIRETY.
4. COMPLETELY DEMOLISH AND REMOVE EXISTING ASPHALT PAVEMENT.
5. COMPLETELY DEMOLISH AND REMOVE EXISTING CONCRETE CURB.
6. COMPLETELY DEMOLISH AND REMOVE EXISTING GRAVEL IN THIS AREA.
7. COMPLETELY DEMOLISH AND REMOVE EXISTING ASPHALT PAVEMENT. EXISTING STONE SUB-BASE TO REMAIN AND BE UTILIZED FOR NEW ASPHALT PAVEMENT. WORK WILL COMMENCE UPON SIGNIFICANT COMPLETION OF CONSTRUCTION AND WHEN THE AREA IS NO LONGER NEEDED FOR STAGING.
8. EXISTING POLE TO BE RELOCATED. COORDINATE WITH ELECTRICAL PLANS AND UTILITY PROVIDER.

NOTE: CONTRACTION JOINTS SHALL BE LOCATED AT 10 FT. O.C. #5 BAR CONTINUOUS TOP & BOTTOM



Landscape Curb Detail

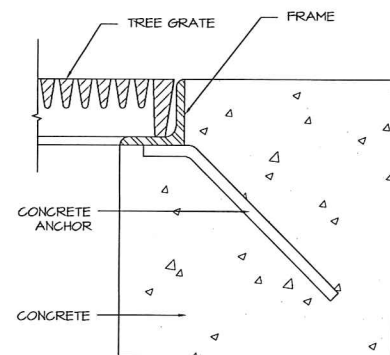
Not To Scale



NOTE: ALL WOOD IS ROUGH SURFACED CEDAR WITH 2 COATS OF STAIN, OLYMPIC SEMI-TRANSPARENT NO. 719

4' Cedar Fence Detail

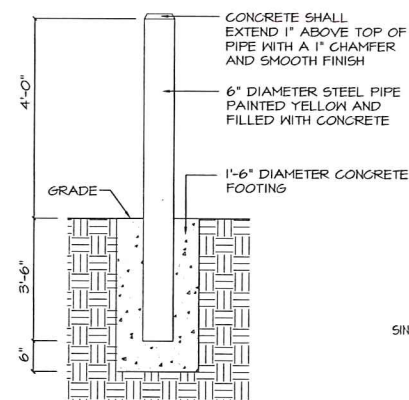
Not To Scale



NOTE: USE EAST JORDAN IRON WORKS STEEL 2 PIECE FRAME MODEL #V-8671 TREE GRATE, 30\"/>

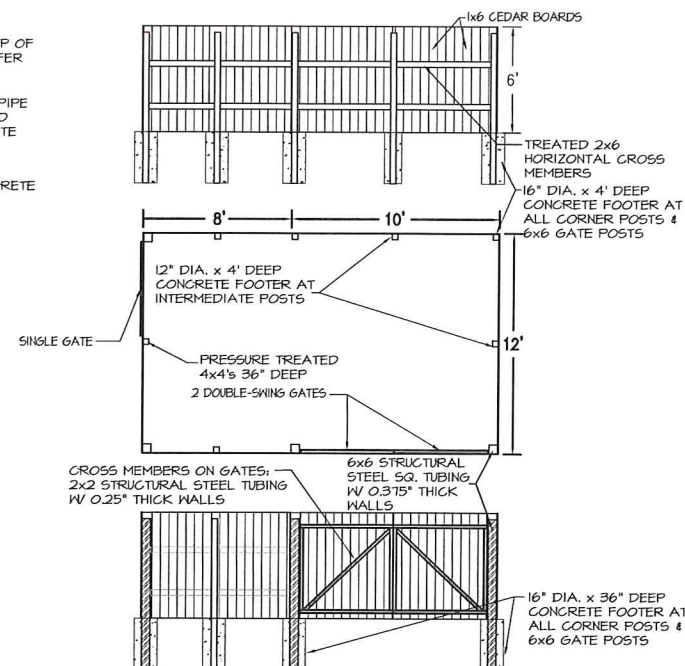
Tree Grate Installation Detail

Not To Scale



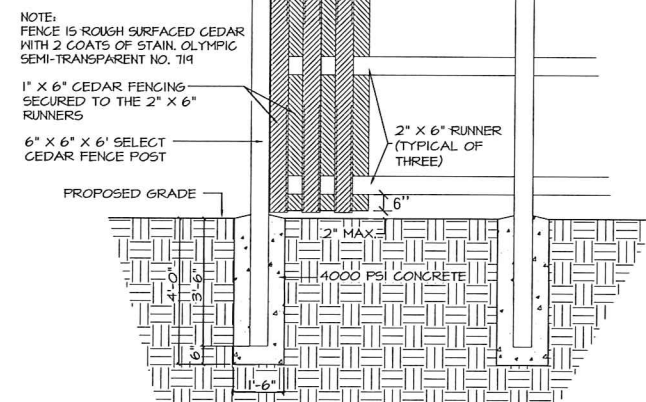
Protective Bollard Detail

Not To Scale



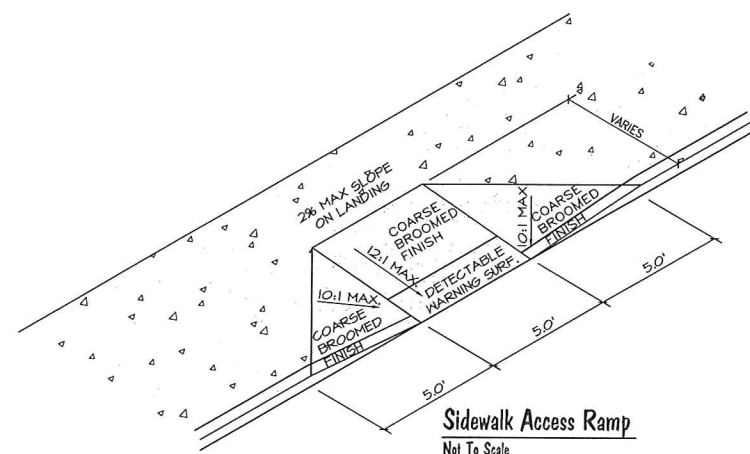
Dumpster Enclosure Detail

Not To Scale



6' Tall Dumpster Enclosure Cedar Fence Detail

Not To Scale



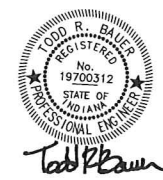
Sidewalk Access Ramp

Not To Scale

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Certification:



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Performed for:

Site Demolition Plan For:

IDEAL BUILDERS
BIGGS DEVELOPMENT
www.ideal-builders.com

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number

182297

Date

February 8th, 2019

Title

Site Demolition Plan
Sheet Number

C1.2



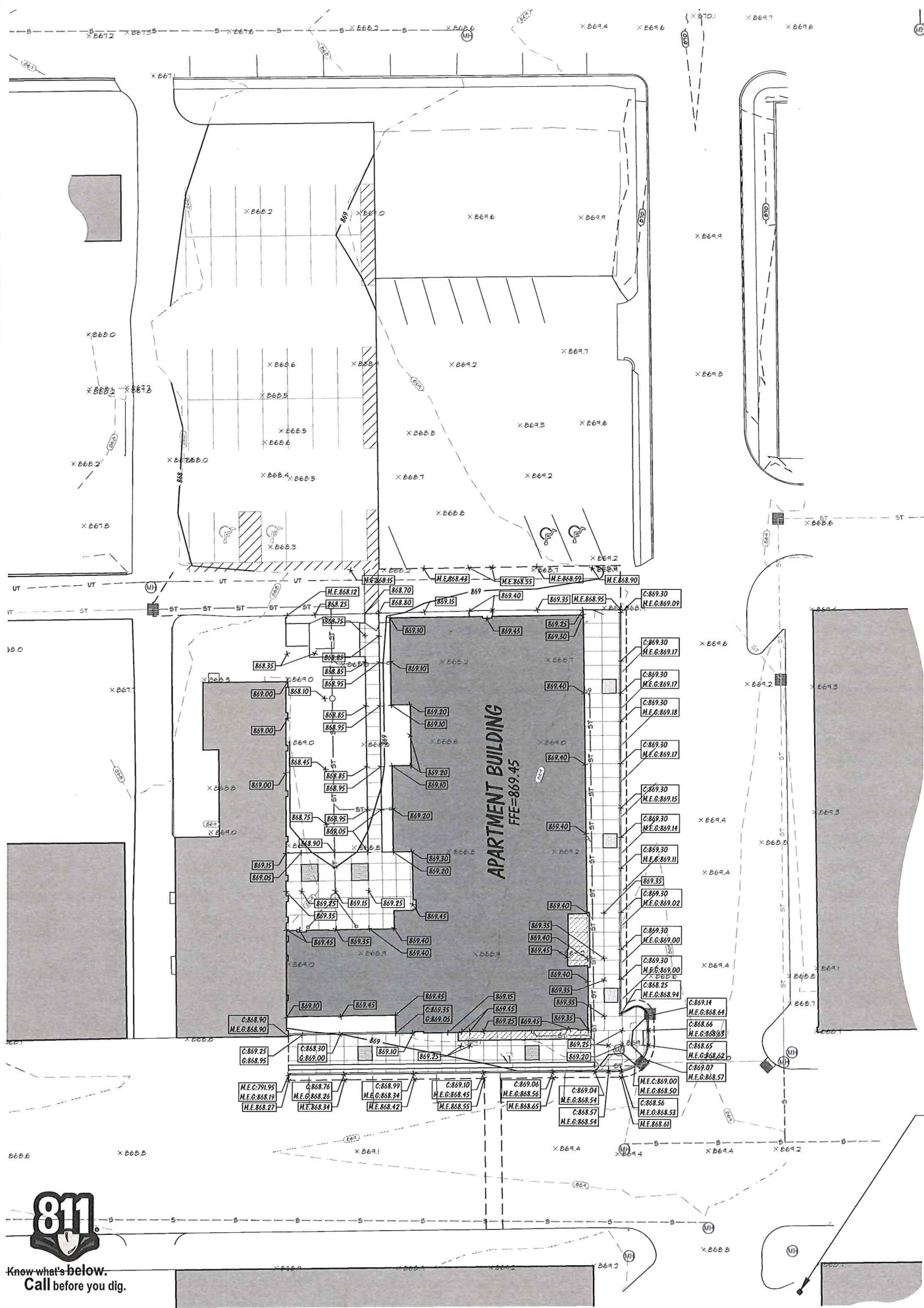
Know what's below.
Call before you dig.



Site Demolition Plan

Scale: 1" = 20'

Creating a Better Tomorrow.....with ForeSight



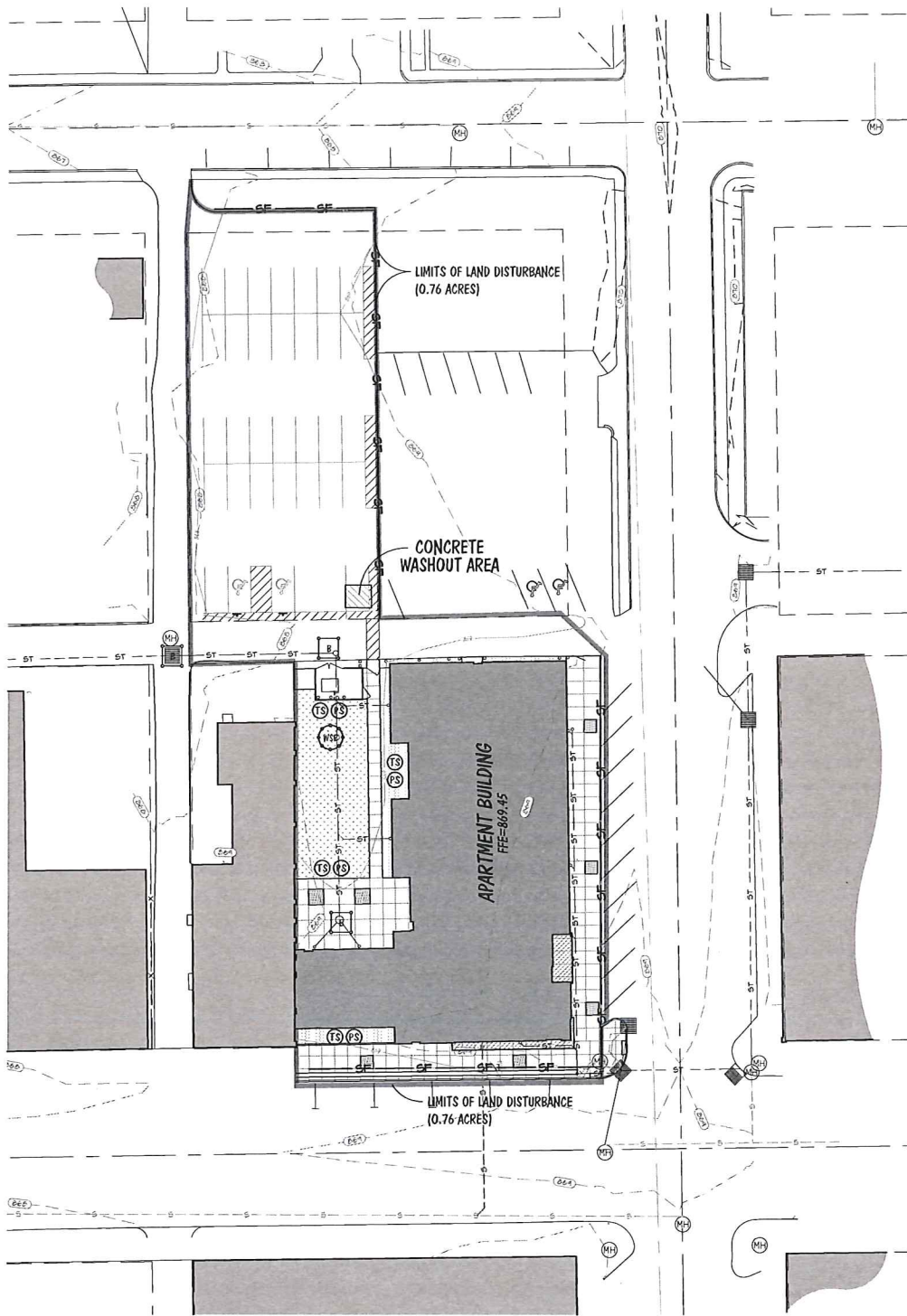
PROJECT BENCHMARK

SITE BENCHMARK #879778 (BN #778)
THE TOP OF THE NORTHEAST CORNER BOLT ON THE FIRE HYDRANT
LOCATED AT THE SOUTHEAST CORNER OF VAN BUREN STREET AND
NORTH LINE STREET.
ELEV. 870.81 (NAVD 1988)

Site Grading Plan
Scale: 1" = 20'

GENERAL NOTES:

1. THE CONTRACTOR SHALL ENSURE THE CONDITION OF ALL EXISTING IMPROVEMENTS INDICATED TO REMAIN. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITY LINES, AND ENSURE THE PROPER FUNCTIONING OF THESE SERVICES DURING CONSTRUCTION.
2. EXISTING UTILITY LOCATION SHOWN ON THESE PLANS IS BASED UPON FIELD SURVEY INFORMATION AND RECORD INFORMATION COLLECTED FOR THIS PROJECT. THE ACTUAL LOCATION OF THE EXISTING UTILITIES IS NOT CERTIFIED NOR GUARANTEED BY THE OFFICE OF THE ENGINEER OR ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNAGE AND BARRICADES FOR THE PROTECTION AND SAFETY OF VEHICULAR AND PEDESTRIAN TRAFFIC.
4. THE CONTRACTOR SHALL COORDINATE ALL MODIFICATIONS, RENOVATIONS OR DISRUPTION OF UTILITY SERVICES WITH THE APPROPRIATE GOVERNING AGENCIES, THE APPROPRIATE LOCAL UTILITY DEPARTMENT, THE OWNER AND THE CONSTRUCTION MANAGER.
5. ALL SITE CLEARING AND EARTHWORK OPERATIONS SHALL BE PERFORMED IN A MANNER TO MINIMIZE INTERFERENCE WITH THE ADJOINING ROADWAYS AND THE OWNER'S FACILITIES. COORDINATE OPERATIONS WITH THE OWNER A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
6. REMOVE EXISTING TREES, SHRUBS, GRASS AND OTHER VEGETATION, INCLUDING ALL ROOTS, STUMPS AND BRANCHES, TO A POINT 10' BELOW FINISHED GRADE AS REQUIRED FOR CONSTRUCTION.
7. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STRIP SURFACE SOIL OF UNSUITABLE TOPSOIL, INCLUDING TRASH, DEBRIS, NEEDS, ROOTS AND OTHER WASTE MATERIALS. STOCKPILE TOPSOIL ON SITE IN LOCATION AS DIRECTED BY THE OWNER FOR REUSE ON-SITE.
8. EXISTING VEGETATION INDICATED TO BE REMOVED AND RELOCATED SHALL BE PROTECTED DURING EARTHWORK OPERATIONS. ALL VEGETATION SHALL BE RELOCATED AS DIRECTED BY THE OWNER.
9. LEGALLY DISPOSE OF UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND DEBRIS OFF OWNER'S PROPERTY. SURPLUS TOPSOIL SHALL BE STORED ON SITE AS DIRECTED BY THE OWNER.
10. ONLY SATISFACTORY SOIL MATERIALS ACCEPTABLE TO, AND APPROVED BY THE OWNER, ENGINEER, AND GEOTECHNICAL ENGINEER SHALL BE USED AS FILL MATERIALS. TYPICALLY THE FOLLOWING CLASSIFICATIONS OF SOIL TYPES MAY BE USED FOR FILL BENEATH STRUCTURES AND PARKING AREAS: ASTM D 2487 SOIL CLASSIFICATIONS OF G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G72, G73, G74, G75, G76, G77, G78, G79, G80, G81, G82, G83, G84, G85, G86, G87, G88, G89, G90, G91, G92, G93, G94, G95, G96, G97, G98, G99, G100, G101, G102, G103, G104, G105, G106, G107, G108, G109, G110, G111, G112, G113, G114, G115, G116, G117, G118, G119, G120, G121, G122, G123, G124, G125, G126, G127, G128, G129, G130, G131, G132, G133, G134, G135, G136, G137, G138, G139, G140, G141, G142, G143, G144, G145, G146, G147, G148, G149, G150, G151, G152, G153, G154, G155, G156, G157, G158, G159, G160, 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GENERAL NOTE: PROJECT DOCUMENTATION
THE CONTRACTOR SHALL MAINTAIN ON-SITE AND HAVE AVAILABLE UPON REQUEST A SET OF CONSTRUCTION DOCUMENTS (INCLUDING THE SITE PLANS), ALL EROSION CONTROL INSPECTION REPORTS AND A COPY OF THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT NOTICE OF INTENT FOR REVIEW BY THE COLUMBIA CITY ENGINEERING DEPARTMENT PERSONNEL OR OTHERS ASSOCIATED WITH THE PROJECT.

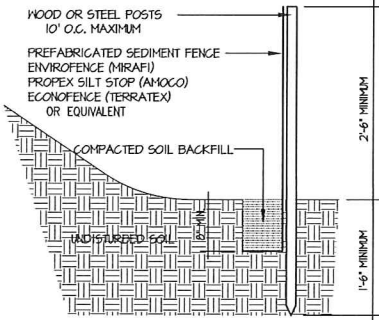
GENERAL NOTE: PERMANENT SITE STABILIZATION
UPON PERMANENT AND SATISFACTORY STABILIZATION OF THE PROJECT SITE, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES SPECIFIED ON SHEETS C3.1 THROUGH C3.4 AND SHALL SUBMIT A NOTICE OF TERMINATION TO THE COLUMBIA CITY ENGINEERING DEPARTMENT ALONG WITH COPIES OF FINAL AS-BUILT DRAWINGS TO FORMALLY TERMINATE THE PROJECT AND PROVIDE PROJECT CLOSE OUT.

GENERAL NOTE: STREET CLEANING AND SWEEPING
THE CONTRACTOR SHALL, ON A REGULAR BASIS, CLEAN AND SWEEP THE ADJOINING STREETS AND PAVED SURFACES OF ALL SOIL, MUD AND SEDIMENT TO PROVIDE A CLEAN TRAVEL WAY FOR BOTH CONSTRUCTION AND PUBLIC TRAVEL AND SAFETY.

GENERAL NOTE: ADDITIONAL EROSION CONTROL MEASURES
ADDITIONAL EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE OWNER, ARCHITECT/ENGINEER AND THE COLUMBIA CITY ENGINEERING DEPARTMENTS SHALL BE PROVIDED, INSTALLED AND MAINTAINED BY THE SITE CONTRACTOR DURING CONSTRUCTION.

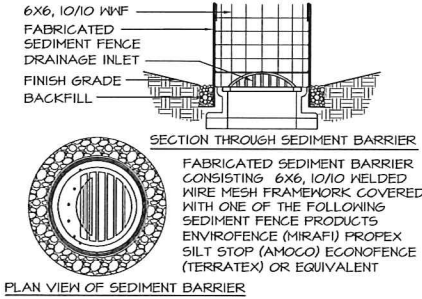
Erosion Control Symbols and Legend

Site Preparation	
Temporary Gravel Entrance/Exit	
Topsoil (Salvage and Utilization)	
Concrete Washout Area (Signage Required)	
Erosion Control Blanket	
Surface Stabilization	
Temporary Seeding	
Permanent Seeding	
Sediment Traps and Barriers	
Culvert Protection (Temporary Sediment Trap per detail Sheet C4.3)	
Silt Fence (Sediment Fence)	
Haywire Mesh Sediment Barrier	
Outlet Protections	
Rock Chute	
Conveyances	
Grass Lined Channel	
Temporary Drop Inlet Protections	
Basket Inlet Protection (ADS Filter) (Refer to detail on this sheet)	



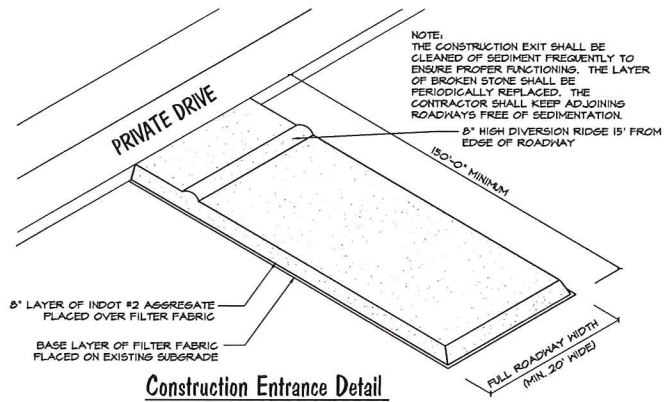
LAND SLOPE	DISTANCE BETWEEN FENCE APPLICATIONS	MINIMUM DISTANCE BETWEEN FENCE APPLICATIONS
LESS THAN 2%	100 FEET	100 FEET
2 TO 5%	75 FEET	75 FEET
5 TO 10%	50 FEET	50 FEET
10 TO 20%	25 FEET	25 FEET

Sediment Fence Detail
Not to Scale



ALTERNATIVE TO WELDED WIRE SEDIMENT BARRIER
ADS FLEXSTORM FILTER SYSTEM MAY BE INSTALLED AS AN ALTERNATIVE INLET PROTECTION SYSTEM TO THE WELDED WIRE SEDIMENT BARRIER SHOWN IN THIS DETAIL. IN AREAS WHERE PUBLIC ACCESS (PEDESTRIAN AND/ OR VEHICULAR) IS TO BE MAINTAINED DURING CONSTRUCTION.

Sediment Barrier Detail
Not to Scale

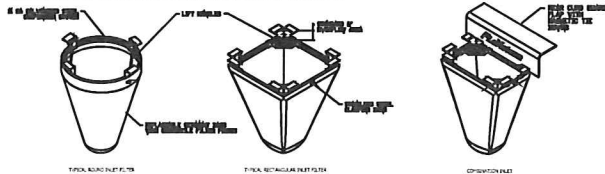


Construction Entrance Detail
Not to Scale

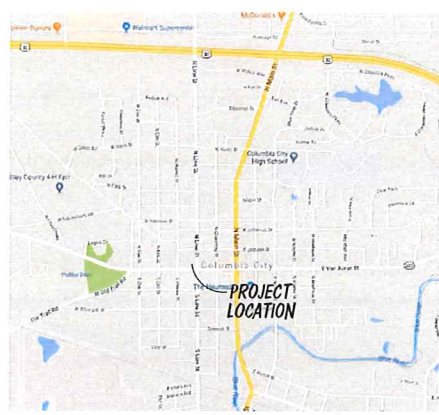
Site Erosion Control Plan

Scale: 1" = 30'

FLEXSTORM CATCH-IT FILTERS FOR TEMPORARY INLET PROTECTION
PRODUCT SELECTION AND SPECIFICATION DRAWING



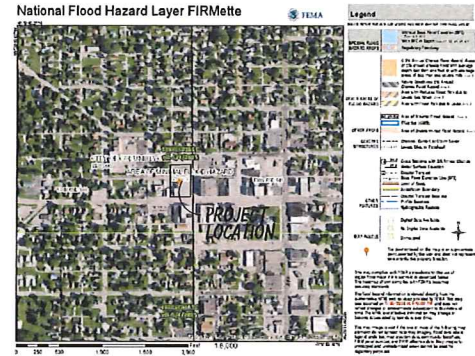
ADS Filter Detail
Not to Scale



Site Location Map
Not To Scale



National Wetlands Inventory Map
Not To Scale



F.I.R.M. Map
Not To Scale



Partial Hamilton County Soils Map
Not To Scale
SOILS LEGEND:
BmB2 - Blount silt loam, 1 to 4 percent slopes, eroded

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260.484.9980 fax
www.4site.biz



Certification:



This is an original design created by ForeSight Consulting, LLC. The concepts, ideas, plans and details are the sole property of ForeSight Consulting, LLC. None of the concepts, ideas, plans or details shall be used by or disclosed to any person, firm or corporation for any purpose without the prior written permission of ForeSight Consulting, LLC. Written dimensions on these drawings shall have precedence over the scale dimensions. The contractor shall verify and be responsible for all dimensions and conditions on the job and ForeSight Consulting, LLC must be notified of variation from the dimensions and conditions shown on these drawings. Shop drawings shall be submitted to ForeSight Consulting, LLC for approval before construction.

Performed for:

Erosion Control Plan for:

IDEAL BUILDERS DEVELOPMENT
www.ideal-builders.com

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number
182297
Date
February 8th, 2019
Title
Erosion Control Plan

Sheet Number

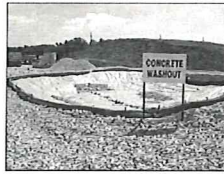
C3.1

Creating a Better Tomorrow.....with ForeSight

Concrete Washout Detail

SITE MANAGEMENT MEASURES

Concrete Washout



Concrete washout areas are designated locations within a construction site that are either a prefabricated unit or a designed measure that is constructed to contain concrete washout. Concrete washout systems are typically used to contain washout water when chutes and hoppers are rinsed following delivery.

Purpose

Concrete washout systems are implemented to reduce the discharge of pollutants that are associated with concrete washout waste through consolidation of solids and retention of liquids. Unwashed concrete and associated liquids are highly alkaline which may leach into the soil and contaminate ground water or discharge to a waterbody or wetland which can elevate the pH and be harmful to aquatic life. Performing concrete washout in designated areas and into specifically designed systems reduces the impact concrete washout will have on the environment.

Specifications

Site Management

- Complete construction installation of the system and have washout locations operational prior to concrete delivery.
- Do not wash out concrete trucks or equipment into storm drains, wetlands, streams, rivers, creeks, ditches, or streets.
- Never wash out into a storm sewer drainage system. These systems are typically connected to a natural conveyance system.
- Where necessary, provide stable ingress and egress (see Temporary Construction Ingress/Egress Pad on page 17).
- It is recommended that washout systems be restricted to washing concrete from mixer and pump trucks and not used to dispose of excess concrete or

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residual loads due to potential to exceed the design capacity of the washout system. Small amounts of excess or residual concrete (not washout waste) may be disposed of in areas that will not result in flow to an area that is to be protected.

- Install systems at strategic locations that are convenient and in close proximity to work areas and in sufficient number to accommodate the demand for disposal.
- Install signage identifying the location of concrete washout systems.

Location

- Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drain manmade conveyance systems.
- To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from adjacent land areas.
- Locate in areas that provide easy access for concrete trucks and other construction equipment.
- Locate away from other construction traffic to reduce the potential for damage to the system.

General Design Considerations

- The structure or system shall be designed to contain the anticipated washout water associated with construction activities.
- The system shall be designed, to the extent practical, to eliminate runoff from entering the washout system.
- Runoff from a rainstorm or snowmelt should not carry waste away from the washout location.
- Washout will not impact future land uses (i.e., open spaces, landscaped areas, home sites, parks).
- Washout systems/containers measures may also be utilized on smaller individual building sites. The design and size of the system can be a guide to accommodate the expected capacity.

Prefabricated Washout Systems/Containers

- Self-contained sturdy containment systems that are delivered to a site and located at strategic locations for concrete disposal.

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- These systems are manufactured to resist damage from construction equipment and protect against leaks or spills.
- Manufacturer or supplier provides the containers. The project site manager maintains the system or the supplier provides complete service that includes maintenance and disposal.
- Units are often available with or without ramps. Units with ramps lend themselves to accommodate pump trucks.
- Maintain according to the manufacturer's recommendations.

Designed and Installed Units

These units are designed and installed on site. They tend to be less reliable than prefabricated systems and are often prone to failure. Concrete washout systems can be constructed above or below grade. It is not uncommon to have a system that is partly below grade with an additional containment structure above grade.

- Washout systems shall utilize a pit or bermed area designed and maintained at a capacity to contain all liquid and concrete waste generated by washout operations.
- The volume of the system must also be designed to contain runoff that drains to the system and rainfall that enters the system for a maximum frequency, 24 hour storm event.

Below Grade System

- A washout system installed below grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled clearing periods. The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the entire excavation.
- Include a minimum 12-inch freeboard to reasonably ensure that the structure will not overflow during a rain event.
- Line the pit with non-leaking polyethylene lining to control seepage.
- The bottom of excavated pit should be above the seasonal high water table.

Above Grade System

- A system designed and built above grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled clearing periods. The size of the containment system may be limited by the size of

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Maintenance

- Inspect daily and after each storm event.
- Inspect the integrity of the overall structure including, where applicable, the containment system.
- Inspect the system for leaks, spills, and tracking of soil by equipment.
- Inspect the polyethylene lining for failure, including tears and punctures.
- Once concrete wastes burden, remove and dispose of the material.
- Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.

- Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
- Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbed and building. The availability for recycling should be checked locally.

- The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.

- The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.

- Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system on basis for further development.

- Prefabricated units are often pumped and the company supplying the unit provides this service.

- Inspect construction activities on a regular basis to ensure supplies, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violations and take appropriate action.

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- Metal pins or staples in a minimum of six inches in length, sandbags, or alternative fasteners to secure polyethylene lining to the containment system.
- Non-collapsing and non-water holding cover for use during rain events (optional).

Installation

Prefabricated Washout Systems/Containers

- Install and locate according to the manufacturer's recommendations.

Designed and Installed Systems

- Utilize and follow the design in the storm water pollution prevention plan to install the system.
- Dependent upon the type of system, either excavate the pit or install the containment system.
- A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
- Place pins, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
- Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
- Install signage that identifies concrete washout areas.
- Post signs directing contractors and suppliers to designated locations.
- Where necessary, provide stable ingress and egress (see Temporary Construction Ingress/Egress Pad on page 17) as alternative approach pad for concrete washout systems.

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- polyethylene available. The polyethylene lining should be of adequate size to extend over the berm or containment system.
- The system design may utilize an earthen berm, straw bales, sandbags, or other acceptable barriers that will maintain its shape and integrity and support the polyethylene lining.
- Include a minimum four-inch freeboard as part of the design.

Washout Procedures

- Do not leave excess mud in the chutes or hopper after the pour. Every effort should be made to empty the chutes and hopper at the pour. The less material left in the chutes and hopper, the quicker and easier the cleanup. Small amounts of excess concrete (not washout waste) may be disposed of in areas that will not result in flow to an area that is to be protected.
- At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.
- Remove as much mud as possible when washing out.
- Stop washing out in an area if you observe water running off the designated area or if the containment system is leaking or overflowing and ineffective.
- Do not kick flash equipment at the project site. Back flushing should be restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency arises, back flush should only be performed with the permission of an on-site manager for the project.
- Do not use additives with wash water. Do not use solvent or acids that may be used at the target plant.

Materials

- Minimum of six milliliner polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining (designed and installed system).
- Signage.
- Orange safety fencing or equivalent.
- Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade system).

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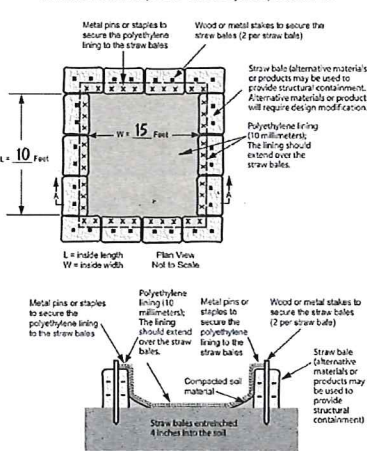
- When concrete washout systems are no longer required, the concrete washout system shall be closed. Dispose of all hauled concrete and other materials used to construct the system.
- Holes, depressions and other hard disturbances associated with the system should be backfilled, graded, and stabilized.

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CONCRETE WASHOUT

Concrete Washout (Above Grade System) Worksheet



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Dormant Seeding Detail

SURFACE STABILIZATION

Dormant Seeding & Frost Seeding



Dormant seeding is a temporary or permanent seeding application at a time when soil temperatures are too low for germination to occur (less than 50°F).

Frost seeding is a temporary or permanent seeding application in late winter when soils are in the freeze-thaw stage. This measure can be used to repair or enhance areas having thin or declining vegetative cover or to revegetate an area.

Purpose

- To provide early germination and soil stabilization in the spring.
- To reduce sediment laden storm water runoff from being transported to downstream areas.
- To improve the visual aesthetics of the construction area.
- To repair or enhance previous seeding.

Specifications

Seedbed Preparation

Grade and apply soil amendments as recommended by a soil test (incorporate soil amendments into soil prior to soil freezing).

Density of Vegetative Cover

Fifty percent or greater over the soil surface.

Materials

- Soil Amendments - Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information including available soil testing services) or 200 to 300 pounds of 12-12-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.

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DORMANT SEEDING & FROST SEEDING

- Seed - Select an appropriate plant species seed or seed mixture on the basis of soil type, soil pH, region of the state, time of year, and intended hard use of the area to be seeded (see Table 1 and Table 2).
- Mulch -
 - Straw, hay, wood fiber, compost, or protect seeded, retain moisture, and encourage plant growth.
 - Avoidance to prevent removal by wind or water or covered with precast-decked erosion control blankets.

Application

(see Tables 1 and 2)

Site Preparation

- Grade the site to relieve positive drainage.
 - Add topsoil (see Topsoil Salvage and Utilization on page 25) to achieve needed depth for establishment of vegetation.
- Dormant Seeding**
- Site preparation, seedbed preparation and mulching can be done on soils above or below the existing ground cover is adequate, seeding can be done directly into it.
- Test soil to determine pH and nutrient levels.
 - Broadcast seed and amendments as recommended by a soil test and work into the upper two to four inches of soil. If testing was not done, apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
 - Apply and anchor mulch (see Mulching on page 55 and Compost Mulching on page 59) immediately after completion of grading and addition of soil amendments.
 - Select an appropriate seed species or mixture from Table 1 for temporary seeding or Table 2 for permanent seeding. Broadcast the seed on top of the mulch and mix into existing ground cover at the rate shown. (Seed rates when the soil temperatures are below 50°F but the soil is not frozen.)

Frost Seeding

- Seed is broadcast over the prepared seedbed and incorporated into the soil by natural freeze-thaw action.
- Test soil to determine pH and nutrient levels.

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DORMANT SEEDING & FROST SEEDING

- Broadcast soil amendments as recommended by a soil test and work into the upper two to four inches of soil before it freezes. If testing was not done, apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
- Select an appropriate seed species or mixture from Table 1 for temporary seeding or Table 2 for permanent seeding. Broadcast the seed on the seedbed or into the existing ground cover at the rate shown. (Seed rates when the soil is frozen. Do not work the seed into the soil.)

Maintenance

- Inspect at least once every seven calendar days.
- Check for erosion or movement of mulch.
- Check for inadequate cover (less than 80 percent density over the soil surface), reseed and mulch in mid to late April if necessary. For best results, reseed within the recommended dates shown in Temporary Seeding on page 31 and Permanent Seeding on page 35.
- Apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent, between April 15 and May 10 or during periods of vigorous growth.
- Fertilize and water annually. Apply fertilizer in a split application. For cool-season grasses, apply one-half of the fertilizer in late spring and one-half in early fall. For warm-season grasses, apply one-third in early spring, one-third in late spring, and the remaining one-third in mid-June.

Table 1. Temporary Dormant or Frost Seeding Recommendations

Seed Species	Rate per Acre
Wheat or rye	150 lbs.
Spring oats	120 lbs.
Annual ryegrass	60 lbs.

Table 2 provides several seeding systems. Additional seed mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect, and the tolerance of each species to shade and drought.

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DORMANT SEEDING & FROST SEEDING

Table 2. Permanent Dormant or Frost Seeding Recommendations

Open Low-Maintenance Areas (seeding rate more than six months)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover ¹	75 lbs. 3 lbs.	5.6 to 7.0
2. Kentucky bluegrass - smooth bromegrass - tall fescue - timothy - perennial ryegrass - white clover ²	30 lbs. 18 lbs. 8 lbs. 8 lbs. 15 lbs. 3 lbs.	5.6 to 7.5
3. Perennial ryegrass - tall fescue ³	45 lbs. 45 lbs.	5.6 to 7.0
4. Tall fescue ⁴ - white clover ⁵	75 lbs. 3 lbs.	5.6 to 7.5

Shrub Banks and Outcrops, Low-Maintenance Areas (not mowed)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Smooth bromegrass - red clover ¹	50 lbs. 30 lbs.	5.6 to 7.5
2. Tall fescue ² - white clover ³	75 lbs. 3 lbs.	5.6 to 7.5
3. Tall fescue ⁴ - red clover ⁵	75 lbs. 30 lbs.	5.6 to 7.5
4. Orchardgrass - red clover ⁶	45 lbs. 30 lbs.	5.6 to 7.0
5. Perennial ryegrass - tall fescue ⁷	45 lbs.	5.6 to 7.5

Lawns and High-Maintenance Areas

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Bluegrass	210 lbs.	5.5 to 7.0
2. Perennial ryegrass (bif type) ¹ - bluegrass	10 lbs. 130 lbs.	5.6 to 7.0
3. Tall fescue (bif type) ² - bluegrass	250 lbs. 45 lbs.	5.6 to 7.5

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DORMANT SEEDING & FROST SEEDING

Channels and Areas of Concentrated Flow

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover ¹	225 lbs. 3 lbs.	5.6 to 7.0
2. Kentucky bluegrass - smooth bromegrass - tall fescue - timothy - perennial ryegrass - white clover ²	50 lbs. 15 lbs. 5 lbs. 5 lbs. 15 lbs. 3 lbs.	5.5 to 7.5
3. Tall fescue ³ - white clover ⁴	225 lbs. 3 lbs.	5.5 to 7.5
4. Tall fescue ⁵ - perennial ryegrass - Kentucky bluegrass	225 lbs. 50 lbs. 30 lbs.	5.5 to 7.5

¹ For best results, (b) legume seed should be inoculated, (b) seeding mixtures containing legumes should be applied by spring seeding, although the legume may be late seeded and the legume seed should be applied in late fall.

² Tall fescue provides little cover for, and may be toxic to some species of wildlife. The Indiana Department of Natural Resources recognizes the need for additional research on alternative seed mixtures for riparian revegetation, smooth bromegrass, and tall fescue. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife suitability, turf durability, and drought resistance.

Notes:

- Planting mixtures other than those listed in this table, increase seeding rates by 50 percent over the commercial seeding rates.
- A high application for late spring, seed and mulch washouts on steep banks, etc., and in channels and areas of concentrated flow.

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Certification:



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Performed for:

Site Erosion Control Details for:

BIGGS DEVELOPMENT
IDEAL BUILDERS
www.ideal-builders.com

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number
182297

Date

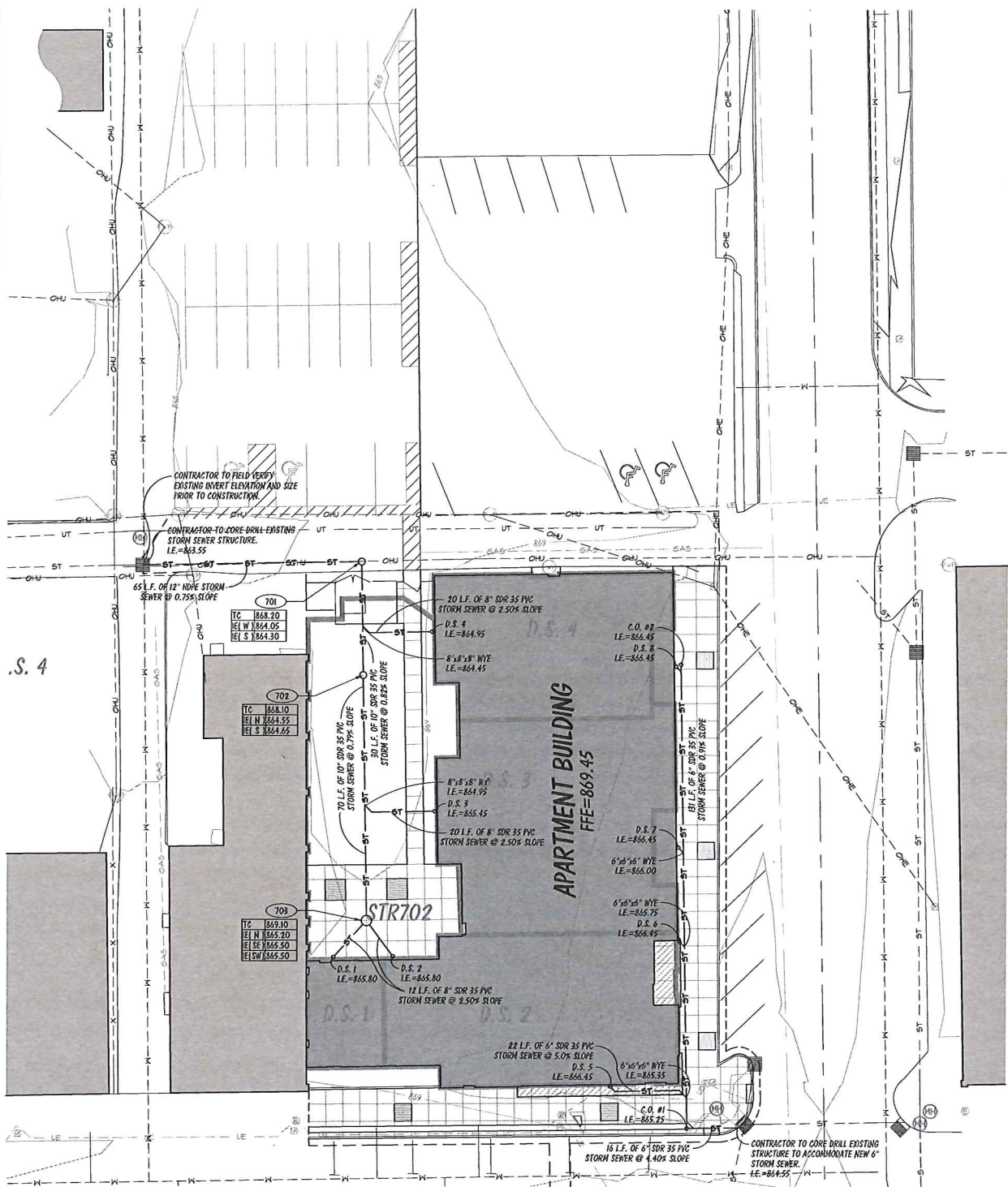
February 8th, 2019

Title

Erosion Control
Details

Sheet Number

C3.4



Stormwater Management Plan
Scale: 1" = 20'

Storm Sewer Computations

Storm Sewer		Inlet Area			Overland		Gutter		Section		(CA)										Storm Sewer System Design										Storm Sewer		Rim	Depth	Cover
From	To	Increment	Total	(C) Runoff	Distance	Time	Distance	Time	Distance	Time	Total Tc	Intensity	Increment	Total	Area Q	Lateral Q	Total Q (cfs)	Pipe Size (In.)	Slope (%)	Mannings	Capacity	Velocity	Length	% Capacity	Upper Invert	Lower Invert	From	To	Rim	Depth	Cover				
703	702	0.00	0.00	0.40	94	4.00					4.00	4.00	6.47	0.00	0.00	0.00	1.21	10	0.79%	0.013	1.95	3.57	70	62%	865.20	864.65	703	702	869.10	3.90	3.07				
702	701	0.09	0.09	0.61							0.33	4.33	6.38	0.06	0.06	0.37	0.00	1.58	10	0.82%	0.013	1.98	3.64	30	80%	864.55	864.30	702	701	868.10	3.55	2.72			
701	EX	0.10	0.10	0.95	0	0.00					0.14	4.46	6.34	0.09	0.15	0.95	1.21	2.16	12	0.77%	0.013	3.13	3.98	65	69%	864.05	863.55	701	EX	868.20	4.15	3.15			
D.S. 1	703	0.02	0.02	0.95	40	3.00					3.00	3.00	6.75	0.02	0.02	0.10	0.00	0.10	8	3.50%	0.013	2.26	6.48	20	5%	865.45	864.75	D.S. 1	703	869.10	3.65	2.98			
D.S. 2	703	0.08	0.08	0.95	68	3.00					3.00	3.00	6.75	0.08	0.08	0.52	0.00	0.52	8	3.50%	0.013	2.26	6.48	20	23%	864.95	864.25	D.S. 2	703	869.10	4.15	3.48			
D.S. 3	703	0.09	0.09	0.95	78	3.00					3.00	3.00	6.75	0.09	0.09	0.59	0.00	0.59	8	2.50%	0.013	1.91	5.47	20	31%	865.45	864.95	D.S. 3	703	869.10	3.65	2.98			
D.S. 4	702	0.06	0.06	0.95	68	3.00					3.00	3.00	6.75	0.06	0.06	0.39	0.00	0.39	8	2.50%	0.013	1.91	5.47	20	20%	864.95	864.45	D.S. 4	702	869.10	4.15	3.48			
C.O. 2	C.O. 1	0.01	0.01	0.95	10	2.00					2.00	2.00	7.05	0.01	0.01	0.00	0.03	0.03	6	0.91%	0.013	0.53	2.72	132	5%	866.45	865.25	C.O. 2	C.O. 1	869.40	2.95	2.45			
C.O. 1	EX	0.00	0.00	0.95							0.81	2.81	6.80	0.00	0.01	0.06	0.00	0.11	6	4.40%	0.013	1.18	6.00	16	9%	865.25	864.55	C.O. 1	EX	869.05	3.80	3.30			
D.S. 5	WYE	0.00	0.00	0.95	28	2.00					2.00	2.00	7.05	0.00	0.00	0.03	0.00	0.03	6	5.00%	0.013	1.25	6.39	22	2%	866.45	865.35	D.S. 5	WYE	869.35	2.90	2.40			

Storm Sewer Watershed Computations

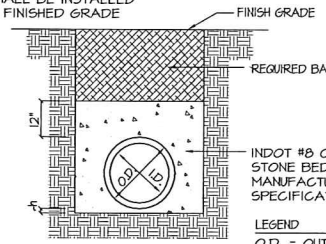
WATERSHED		TOTAL AREA (sq.ft.)	ROOF (sq.ft.)	PAVE (sq.ft.)	LAWN (sq.ft.)	WEIGHTED RUNOFF C
701	1	0.00	0.95	0.95	0.40	0.40
702	4133	0.09	0	1563	2570	0.61
D.S. 1	710	0.02	710	0	0	0.95
D.S. 2	3527	0.08	3527	0	0	0.95
D.S. 3	3988	0.09	3988	0	0	0.95
D.S. 4	2657	0.06	2657	0	0	0.95
D.S. 5	165	0.00	165	0	0	0.95
C.O. 2	375	0.01	375	0	0	0.95
TOTAL	15016	0	10882	1563	2571	0.88

Storm Sewer Structure Schedule

STR.#	SIZE	DETAIL/NOTES	CASTING	GRATE
101	30"	TYPE I INLET	EJIM 1020	MI GRATE
102	30"	TYPE I INLET	EJIM 1020	MI GRATE
103	30"	TYPE I INLET	EJIM 1020	MI GRATE

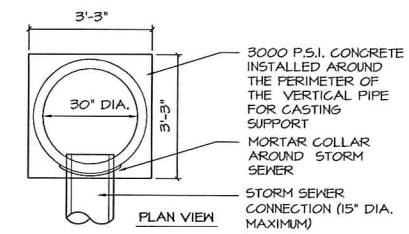
STRUCTURE SCHEDULE GENERAL NOTES:
1. ALL CASTINGS AND GRATE MODEL NUMBERS REFERENCE EAST JORDAN IRON WORKS CASTINGS AND GRATES, UNLESS OTHERWISE NOTED. EQUIVALENT MANUFACTURES WILL BE REVIEWED FOR USE IF SUBMITTED FOR REVIEW A MINIMUM OF SEVEN DAYS PRIOR TO SUBMITTAL OF BID.
2. ALL CASTINGS TO BE PRE-STAMPED WITH AN APPROPRIATE CLEAN WATER MESSAGE PER CITY OF INDIANAPOLIS STANDARD CONSTRUCTION DETAILS.

CASTING SHALL BE INSTALLED FLUSH WITH FINISHED GRADE

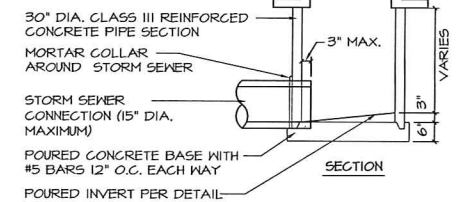


FOR ROCK OR OTHER NON-COMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVER-EXCAVATED A MINIMUM OF 6" & REFILLED WITH GRANULAR MATERIALS.

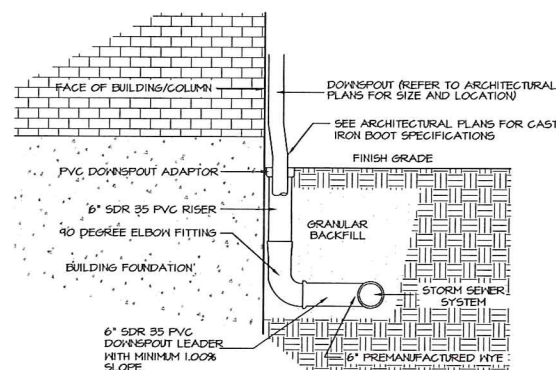
HDPE Pipe Bedding Detail
Not To Scale



REFER TO SCHEDULE FOR CASTING AND GRATE



Type I Inlet Detail
Not To Scale



Downspout Connection Detail
Not To Scale

GENERAL NOTES: STORM SEWERS

- ALL SANITARY AND STORM SEWER MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE COLUMBIA CITY SPECIFICATIONS AND DETAILS, LATEST EDITION. APPROVAL OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF THE INSTALLATION IN ACCORDANCE WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS.
- THE SEWER PIPE BEDDING SHALL BE PER COLUMBIA CITY SPECIFICATIONS OR PER DETAILS THIS SET, WHICHEVER IS MORE STRINGENT. ALL SEWER INSTALLATION BENEATH PAVED AREAS, ROADWAYS, AND WITHIN ROAD RIGHT-OF-WAYS SHALL RECEIVE FULL DEPTH GRANULAR BACKFILL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE SEWER CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR IF REQUIRED BY THE GOVERNING AUTHORITY.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, AND THE LOCATION AND INVERT OF THE EXISTING SANITARY AND STORM SEWERS. ANY CONFLICT BETWEEN THE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHOULD BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL, UPON THE COMPLETION SEWER CONSTRUCTION, VERIFY ALL FINAL MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS OF THE SANITARY AND STORM SEWER SYSTEM. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE GOVERNING AUTHORITIES "AS-BUILT" DRAWINGS CERTIFIED BY A PROFESSIONAL LAND SURVEYOR IN THE STATE OF INDIANA.
- ALL SEWER TAPS ARE FROM THE MUNICIPAL SEWER MAIN TO A POINT WITHIN FIVE FEET OF THE BUILDING, UNLESS OTHERWISE NOTED.

GENERAL NOTE: ABBREVIATIONS	
"ME"	HATCH EXISTING ELEVATIONS.
"C"	TOP OF CURB ELEVATION.
"G"	GUTTER/BOTTOM OF CURB ELEVATION.
"BUILDING BUILDING CONNECTION"	PROVIDE ALL NECESSARY FITTINGS TO CONNECT TO SERVICE. COORDINATE CONNECTION WITH MECHANICAL CONTRACTOR AND PLUMBING PLANS.
"IC"	TOP OF MANHOLE CASTING.
"DS"	DOWN SPOUTS
"CO"	CLEAN OUT

GENERAL NOTE: NOTIFICATION
THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE TO COLUMBIA CITY ENGINEERING DEPARTMENT FOR THE INSPECTION OF THE CONNECTION TO THE EXISTING INLET AND 48 HOURS NOTICE TO THE PROPERTY OWNERS PRIOR TO ANY WORK ON OFFSITE LOTS.

GENERAL NOTE: EXISTING DRAINAGE TILES
ANY EXISTING DRAINAGE TILES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE CONNECTED TO THE PROPOSED STORM SEWER NETWORK. COORDINATE METHOD OF CONNECTION WITH THE OFFICE OF THE ENGINEER, OWNER, AND THE COLUMBIA CITY STORMWATER ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

GENERAL NOTE:
NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

GENERAL NOTE:
THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY COLUMBIA CITY ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF COLUMBIA CITY IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER. AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 25 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH DESIGN PLANS AND AS APPROVED BY COLUMBIA CITY.

GRADING & DRAINAGE NOTES:
1. ALL GRADES AT BOUNDARY SHALL MEET EXISTING GRADES.
2. ALL SHALES SHALL HAVE A MINIMUM SLOPE OF 100%.
3. CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING TREES.
4. SLOPE SHALL NOT BE GREATER THAN 5:1 UNLESS OTHERWISE SPECIFIED.
5. REMOVE AND BACKFILL ALL AREAS WHERE ANY FIELD TILE CROSSES PROPOSED BUILDING PADS. ALL FIELD TILES SUBCONTRACTOR SHALL NOTIFY IN WRITING THE OWNER AND THE ENGINEER IN ANY CIRCUMSTANCES WHERE THIS CANNOT BE DONE.
6. ALL FILL AREAS UNDER FLOOR SLABS, ADJACENT TO FOUNDATIONS AND OVER FOUNDATIONS SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR DENSITY (ASTM D-698). FILL SUPPORTING FOOTINGS SHOULD BE COMPACTED TO 100% STANDARD PROCTOR DENSITY (ASTM D-698). IN CUT AREAS, WHERE PAVEMENT IS PLANNED, THE UPPER 10" SHOULD BE SCARIFIED AND COMPACTED TO 100% OF THE STANDARD PROCTOR DENSITY (ASTM D-698).
7. THE CONTRACTOR SHALL CONFIRM ALL EARTHWORK QUANTITIES PRIOR TO THE START OF CONSTRUCTION. IF AN EXCESS OR SHORTAGE OF EARTH IS ENCOUNTERED, THE CONTRACTOR SHALL CONFIRM WITH THE OWNER AND ENGINEER THE REQUIREMENTS FOR STOCKPILING, REMOVAL OR IMPORTATION OF EARTH.
8. ANY PART OF STORM SEWER TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVED AREAS IS TO BE BACKFILLED PER CITY STANDARDS.
9. STANDARD SPECIFICATIONS FOR THE LOCAL GOVERNING AUTHORITY SHALL APPLY FOR ALL STORM SEWER CONSTRUCTION.
10. ALL YARD DRAINS SHALL BE NYLOPLAST DRAIN BASINS WITH DOME CASTINGS.



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ForeSight
Certification:
Professional Engineer
No. 19700312
STATE OF INDIANA
Tad Plawn

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Performed for:

Stormwater Management Plan for:
IDEAL BUILDERS DEVELOPMENT
306 West Van Buren Street, Columbia City, Indiana 46725

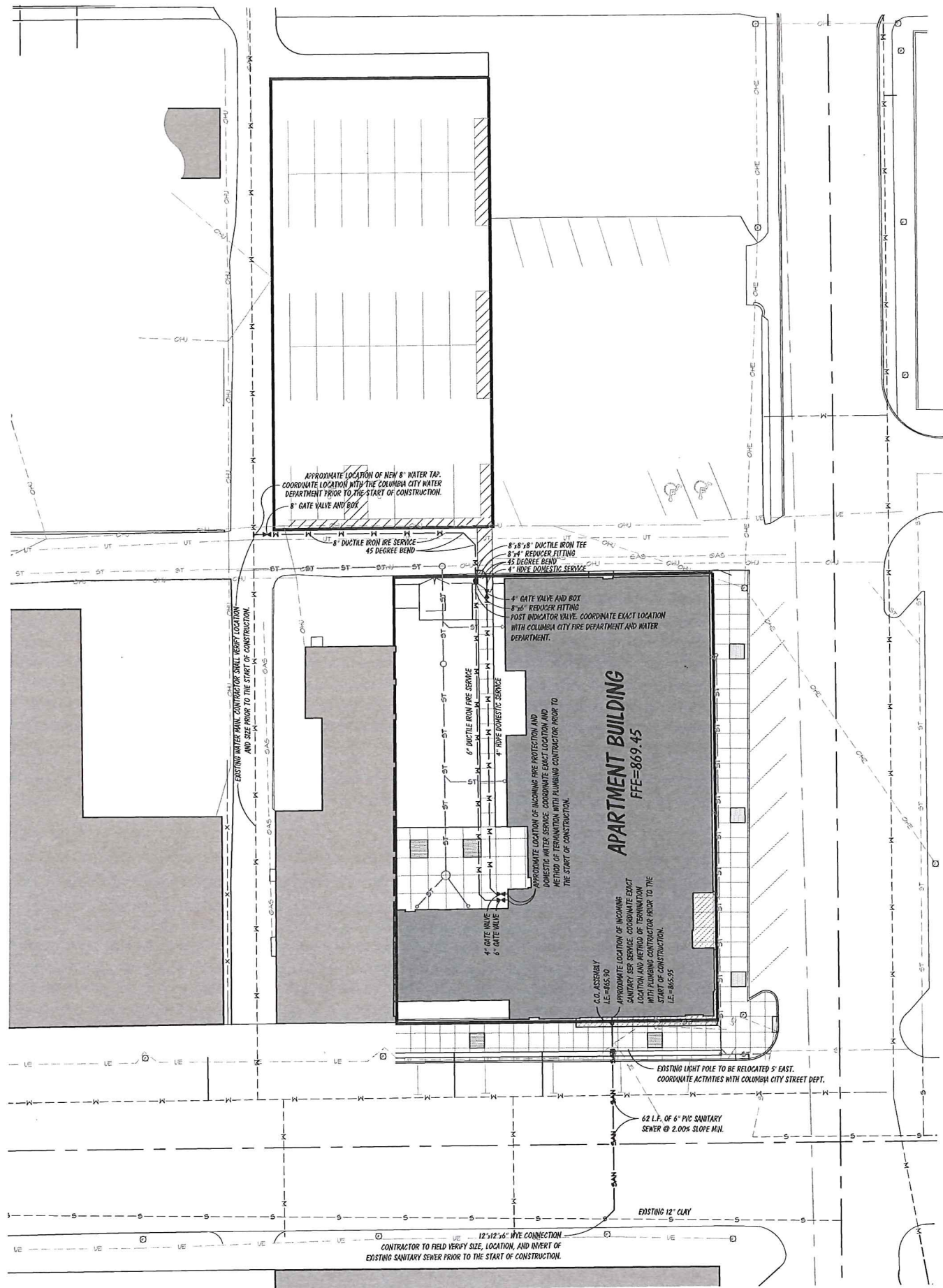
Drawing Revisions

Commission Number
182297

Date
February 8th, 2019

Title

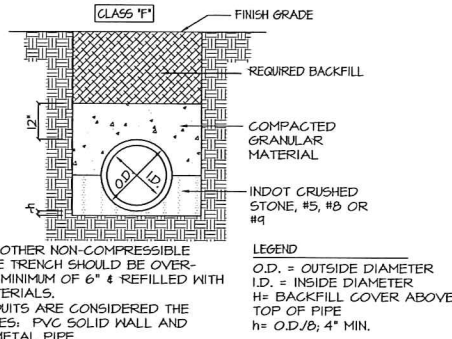
Sheet Number
C4.1



Site Utility Plan
Scale: 1" = 20'

GENERAL NOTE: UTILITY CONFLICTS
IN INSTANCES OF POTENTIAL CONFLICT BETWEEN PRESSURIZED UTILITY SERVICES (GAS AND WATER DISTRIBUTION SYSTEMS) AND GRAVITY UTILITY SERVICES (SANITARY AND STORM SEWER SYSTEMS) REQUIRED SEPARATION DISTANCES MUST BE MAINTAINED (REFER TO GENERAL NOTES, WATER SYSTEMS NOTE NO. 5). IN CASES OF CONFLICT IN ELEVATION, THE PRESSURIZED UTILITY SERVICE WILL YIELD IN ELEVATION TO THE GRAVITY SYSTEM AND THE PRESSURIZED SYSTEM WILL BE RAISED OR LOWERED TO ALLEVIATE THE CONFLICT. AT NO TIME SHALL THE MINIMUM DEPTH OF COVER REQUIRED FOR THE PRESSURIZED UTILITIES BE REDUCED TO AVOID CONFLICT.

GENERAL NOTE:
UTILITY RELOCATIONS REQUIRED BY THE PROJECT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A CONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED SHALL BE RELOCATED TO WITHIN ONE FOOT OF PROPOSED RIGHT-OF-WAY LINE.

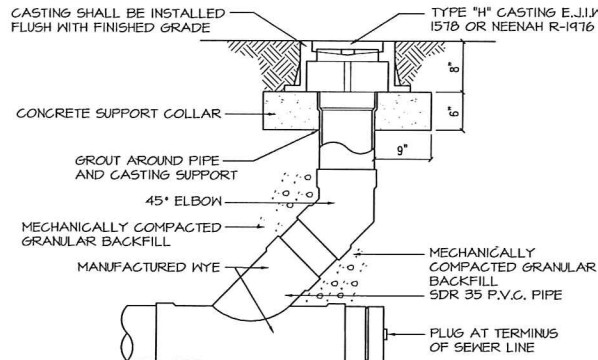


FOR ROCK OR OTHER NON-COMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVER-EXCAVATED A MINIMUM OF 6" & REFILLED WITH GRANULAR MATERIALS. FLEXIBLE CONDUITS ARE CONSIDERED THE FOLLOWING PIPES: PVC SOLID WALL AND CORRUGATED METAL PIPE.

SIZE OF COURSE AGGREGATES (CRUSHED STONE) AS PER INDIANA DEPARTMENT OF HIGHWAY STANDARDS AND SPECIFICATIONS - 1985 EDITION			
SIEVE SIZES	#5	#8	#9
1 1/2"	100	100	100
1"	85-98	100	100
3/4"	60-85	75-95	100
1/2"	30-60	40-70	60-85
3/8"	15-45	20-50	30-60
No. 4	0-15	0-15	0-15
No. 8	0-10	0-10	0-10

NOTE: STONE CHIPS ARE PERMITTED IN LIEU OF CRUSHED STONE PROVIDED THAT NO MORE THAN 20% OF STONE CHIPS PASS THE No. 4 SIEVE.

PVC Pipe Bedding Detail
Not To Scale



Cleanout Detail
Not To Scale

GENERAL NOTES: WATER SYSTEMS

- ALL WATER LINE MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL COMPLY WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS, LATEST EDITION. APPROVAL OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF THE INSTALLATION IN ACCORDANCE WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE WATER LINE CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR IF REQUIRED BY THE GOVERNING AUTHORITY. THE WATER LINE INSTALLATION WILL BE INSPECTED, AND MUST BE APPROVED PRIOR TO BACKFILLING OF THE TRENCH.
- ALL WATER LINES SHALL MAINTAIN A MINIMUM COVER DISTANCE OF FIVE FEET FROM FINISH GRADE.
- ALL WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF COLUMBIA CITY, OR THE INDIANA STATE DEPARTMENT OF HEALTH, WHICHEVER IS MORE STRINGENT.
- SANITARY AND STORM SEWER SEPARATION REQUIREMENTS WITH RESPECT TO WATER MAINS ARE AS FOLLOWS:

A MINIMUM HORIZONTAL SEPARATION OF TEN FEET SHALL BE MAINTAINED BETWEEN ALL SEWER SYSTEMS AND WATER MAIN LOCATIONS.

A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE MAINTAINED WHEN SEWERS CROSS UNDER WATER LINES (MEASURED FROM THE BOTTOM OF THE WATER LINE TO THE TOP OF THE SANITARY SEWER).

IF EITHER THE HORIZONTAL OR VERTICAL SEPARATION CANNOT BE MET, THE SEWER SHALL BE CONSTRUCTED OF WATERWORKS GRADE MECHANICAL JOINT DUCTILE IRON PIPE OR SDR 26 PVC PRESSURE PIPE WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. THE SEWER SHALL BE CONSTRUCTED SO THAT THE WATERWORKS GRADE PIPE EXTENDS A DISTANCE OF TEN FEET ON EACH SIDE OF THE WATER MAIN AND SHALL BE CONSTRUCTED WITH ONE FULL LENGTH OF PIPE CENTERED ON THE WATER MAIN SO THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN.
- ALL WORK SHALL CONFORM TO STATE AND LOCAL PLUMBING AND BACKFLOW PREVENTION CODES AND SPECIFICATIONS OF CITIZENS ENERGY GROUP.
- ALL WATER LINES 3" AND LARGER MUST BE DISINFECTED AND SAMPLES FROM THREE CONSECUTIVE DAYS MUST BE TAKEN TO AN APPROVED TESTING LAB, AND THE LAB ANALYSIS REPORTS MUST BE SUBMITTED TO INDIANA AMERICAN WATER SHOWING THAT THE SAMPLES HAVE PASSED THE TESTS FOR THREE CONSECUTIVE DAYS.
- VACUUM BREAKERS MUST BE INSTALLED ON ALL EXISTING OR PROPOSED HOSE BIBS, MOP/SERVICE SINKS, AND WALL/YARD HYDRANTS.
- PER STATE CODE, BACKFLOW DEVICES ARE TO BE TESTED UPON INSTALLATION AND THEN PERIODICALLY THEREAFTER. SUBMIT COPIES OF TESTS TO COLUMBIA CITY ENGINEERS.
- ALL WATER LINE SHALL HAVE A TRACING WIRE INSTALLED IN ACCORDANCE WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS, LATEST EDITION.

GENERAL NOTES: SANITARY AND STORM SEWERS

- ALL SANITARY AND STORM SEWER MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL COMPLY WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS, LATEST EDITION. APPROVAL OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF THE INSTALLATION IN ACCORDANCE WITH COLUMBIA CITY SPECIFICATIONS AND DETAILS.
- THE SEWER PIPE BEDDING SHALL BE PER COLUMBIA CITY SPECIFICATIONS OR PER DETAILS THIS SHEET, WHICHEVER IS MORE STRINGENT. ALL SEWER INSTALLATION BENEATH PAVED AREAS, ROADWAYS, AND WITHIN ROAD RIGHT-OF-WAYS SHALL RECEIVE FULL DEPTH GRANULAR BACKFILL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE SEWER CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR IF REQUIRED BY THE GOVERNING AUTHORITY.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, AND THE LOCATION AND INVERT OF THE EXISTING SANITARY AND STORM SEWERS. ANY CONFLICT BETWEEN THE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHOULD BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL, UPON THE COMPLETION SEWER CONSTRUCTION, VERIFY ALL FINAL MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS OF THE SANITARY AND STORM SEWER SYSTEM. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE GOVERNING AUTHORITIES WITH ALL DRAWINGS CERTIFIED BY A REGISTERED LAND SURVEYOR IN THE STATE OF INDIANA.
- ALL SEWER TAPS ARE FROM THE MUNICIPAL SEWER MAIN TO A POINT WITHIN THREE FEET OF THE BUILDING, UNLESS OTHERWISE NOTED.
- SANITARY SEWER LATERAL CONTRACTOR TO CONNECT TO THE TRACER WIRE AT THE SEWER MAIN AND EXTEND THE WIRE ALONG THE TOP OF PIPE TO THE CLEANOUT ADJACENT TO THE STRUCTURE.

TRACING WIRE: MODIFICATION TO DESIGN MANUAL SPECIFICATIONS
CURRENT TRACING WIRE REQUIREMENTS
DESIGN MANUAL (PER SECTIONS 3.1.3 & 6.1.1)
• TRACING WIRE REQUIRED ON ALL NON-METAL PIPES.
• INSULATED #10 SOLID COPPER TRACING WIRE REQUIRED.
• THE WIRE MUST BE ATTACHED TO THE WATER MAIN WITH PLASTIC 'ZIP' STRAPPING OR METAL WIRE.
• THE WIRE SHOULD BE BROUGHT TO GROUND LEVEL AT EACH VALVE AND HYDRANT.
ADDITIONAL NOTES REQUIRED BY DEVELOPMENT SERVICES ON PLAN APPROVAL
(PER PVC DOCUMENT RECEIVED FROM PLANNING & DESIGN)
• INSULATED #10 SOLID COPPER WIRE USED IN AREAS UNDER PAVEMENT.
• INSULATED #12 SOLID COPPER WIRE USED IN AREAS NOT UNDER PAVEMENT (PARK AREAS, GRASS, ETC.)
• TRACING WIRE SHALL BE LAID DIRECTLY OVER THE WATER MAIN AND ATTACHED TO THE PIPE AT REGULAR INTERVALS NOT TO EXCEED TEN (10) FEET.
• THE WIRE SHALL BE CONNECTED TO THE LOOP BELOW THE STEAMER CAP (EYELET UNDER PUMPER NOZZLE WHERE CHAIN HOOKED INTO) AT HYDRANTS AND BE ATTACHED TO THE BARREL AT REGULAR INTERVALS NOT TO EXCEED TWO (2) FEET.
• THE WIRE SHALL BE DRAWN THRU THE INSIDE OF VALVE BOX RISERS.

TRACING WIRE REQUIREMENTS (FROM EMAIL CORRESPONDENCE ON 2/6/04, 2/10/04 & 2/19/04)
• TRACING WIRE REQUIRED ON ALL WATER MAIN 12" AND LARGER, NOT EXCLUSIVE TO NON-METAL PIPE.
• ONLY INSULATED #10 SOLID COPPER TRACING WIRE WILL BE ALLOWED.
• THE WIRE MUST BE ATTACHED TO THE WATER MAIN WITH PLASTIC 'ZIP' STRAPPING OR METAL WIRE.
• TRACING WIRE SHALL BE LAID DIRECTLY OVER THE WATER MAIN AND ATTACHED TO THE PIPE AT REGULAR INTERVALS NOT TO EXCEED TEN (10) FEET.
• FOR VALVES, THE WIRE SHALL BE DRAWN THRU THE INSIDE OF VALVE BOX RISERS. IN PAVEMENT, THE WIRE SHOULD BE INSTALLED WITH AN EXCESS LENGTH OF 4'-6" THAT IS TO BE FOLDED DOWN IN THE VALVE BOX. IN SOIL, THE WIRE SHALL BE EXTENDED THROUGH THE HOLES IN THE VALVE BOX (SEE STR-43).
• FOR HYDRANTS, THE WIRE SHALL BE ATTACHED TO THE BARREL AT REGULAR INTERVALS NOT TO EXCEED TWO (2) FEET. THE WIRE SHALL BE BROUGHT UP NEXT TO THE FIRE HYDRANT IN A 1/2" SCHEDULE 40 THICK WALL PVC PIPE 36" IN LENGTH AND SHALL BE CONNECTED TO THE LOOP BELOW THE STEAMER CAP (EYELET UNDER PUMPER NOZZLE WHERE CHAIN HOOKED INTO). THE PVC PIPE SHOULD EXTEND AT LEAST A MINIMUM OF 4' ABOVE FINISH GRADE. (SEE W-17)
• THE FOLLOWING TECHNIQUE SHOULD BE USED WHEN SPLICING WIRES TOGETHER: CAREFULLY PEEL OFF COATINGS ON WIRE, TWIST WIRE 6-8 TIMES, FOLD DOWN WIRE AND WRAP WIRE WITH ELECTRICAL TAPE. THE ELECTRICAL TAPE NEED NOT BE WATERPROOF.
• SUCCESSFUL COMPLETION OF CONDUCTIVITY TEST BY WATER MAINTENANCE WILL BE REQUIRED PRIOR TO ACCEPTANCE OF WATER MAIN.

MARKING POST REQUIREMENTS (FROM EMAIL CORRESPONDENCE ON 2/6/04, 2/10/04 & 2/19/04)
• MARKING POSTS WILL BE REQUIRED FOR ALL BORES OR ON FEEDER MAINS WHERE STANDARD VALVE AND HYDRANT SPACING CANNOT BE MAINTAINED. USE WILL BE AS DETERMINED BY WATER RESOURCES.
• MARKING POSTS SHALL BE BURIED AT LEAST 12" (SEE W-48).
• THE WIRE SHALL BE BROUGHT UP TO THE MARKING POST AND ATTACHED AT THE TOP WITH TWO HOLES DRILLED IN THE MARKING POSTS SO THAT THE WIRE CAN BE WRAPPED AROUND AN INSERTED EYE-BOLT OR THE WIRE CAN BE EXTENDED THROUGH THE HOLE AND LEFT EXTENDED ON THE EXTERIOR OF THE POST.
• THE FOLLOWING MARKING POSTS AND DECALS, OR APPROVED EQUIVALENTS, ARE ACCEPTABLE FOR USE IN CONNECTION WITH WATER MAIN INSTALLATION:
POSTS: RHINO TRI-VIEW FLEX (USA BLUEBOOK)
DECALS: "WARNING WATER PIPELINE" (USA BLUEBOOK)

ForeSight Consulting, LLC
Professional Engineers & Surveyors
1910 St. Joe Center Road, Suite #51
Fort Wayne, Indiana 46825
260.484.9900 phone
260.484.9980 fax
www.fs-site.biz

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Certification:

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Performed for:

Site Utility Plan for:
IDEAL BUILDERS
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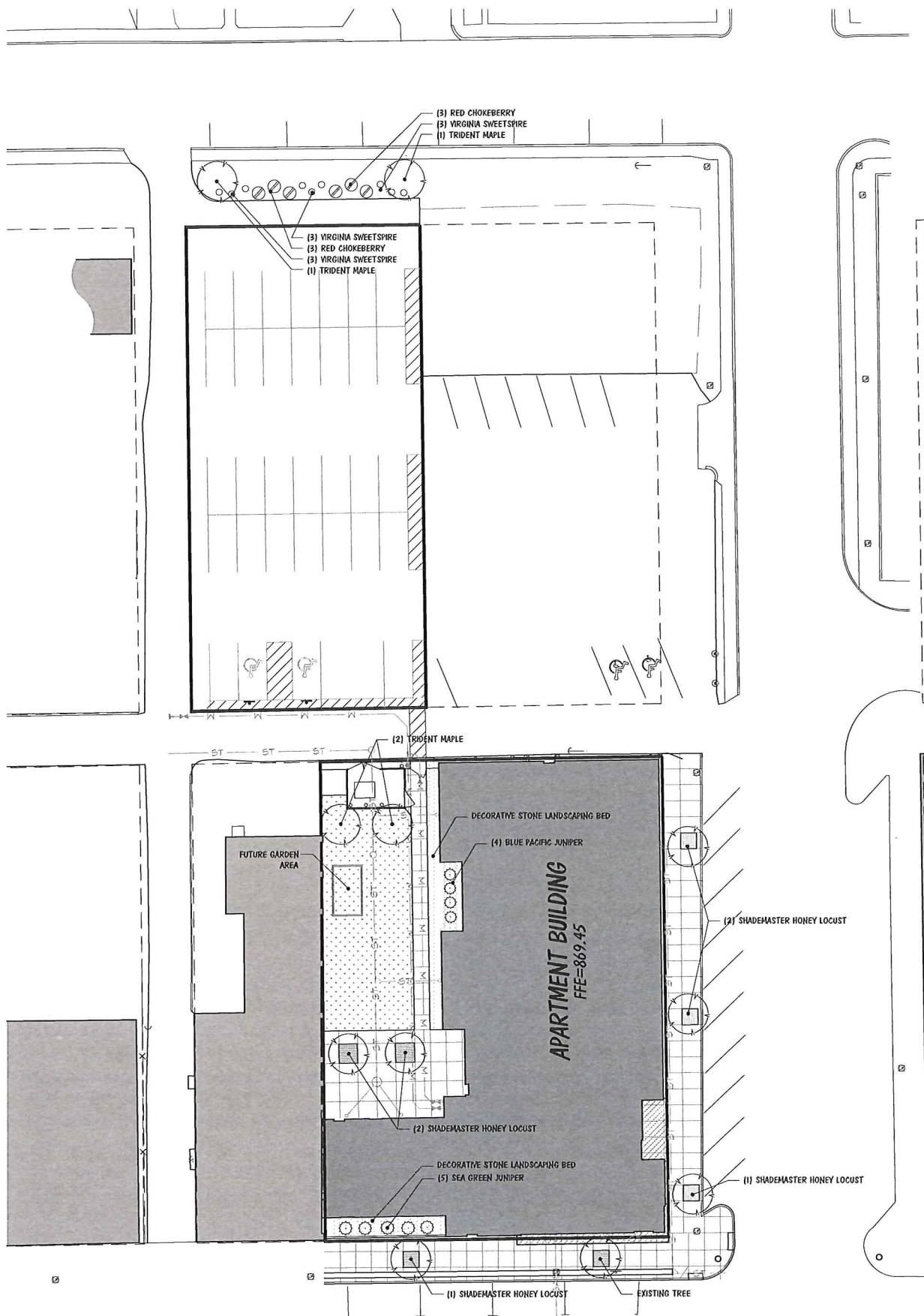
Drawing Revisions

Commission Number	182297
Date	February 8th, 2019
Title	Site Utility Plan
Sheet Number	C5.1

BIGGS DEVELOPMENT

306 West Van Buren Street, Columbia City, Indiana 46725





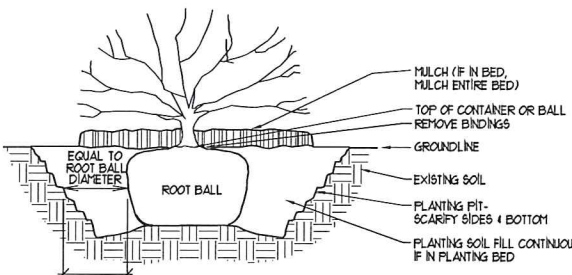
GENERAL NOTES/SPECIFICATIONS:
SITE CLEARING AND EARTHWORK

- ALL SITE CLEARING AND EARTHWORK OPERATIONS SHALL BE PERFORMED IN A MANNER TO MINIMIZE INTERFERENCE WITH THE ADJOINING ROADWAYS AND THE OWNER'S FACILITIES. COORDINATE OPERATIONS WITH THE OWNER A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- REMOVE EXISTING TREES, SHRUBS, GRASS AND OTHER VEGETATION, INCLUDING ALL ROOTS, STUMPS AND BRANCHES TO A POINT 18" BELOW FINISHED GRADE AS REQUIRED FOR CONSTRUCTION.
- STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STRIP SURFACE SOIL OR UNSUITABLE TOPSOIL, INCLUDING TRASH, DEBRIS, WEEDS, ROOTS AND OTHER WASTE MATERIALS. STOCKPILE TOPSOIL ON SITE IN LOCATION AS DIRECTED BY THE OWNER FOR REUSE ON-SITE.
- EXISTING VEGETATION INDICATED TO BE REMOVED AND RELOCATED SHALL BE PROTECTED DURING EARTHWORK OPERATIONS. ALL VEGETATION SHALL BE RELOCATED AS DIRECTED BY THE OWNER.
- DISPOSE OF SURPLUS SOIL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
- ONLY SATISFACTORY SOIL MATERIALS ACCEPTABLE TO, AND APPROVED BY THE OWNER, ARCHITECT, AND GEOTECHNICAL ENGINEER SHALL BE USED AS FILL MATERIALS. TYPICALLY THE FOLLOWING CLASSIFICATIONS OF SOIL TYPES MAY BE USED FOR FILL BENEATH STRUCTURES AND PARKING AREAS:
ASTM D 2487 SOIL CLASSIFICATIONS OF GW, GP, GM, GU, SP, AND SH OR A COMBINATION OF THESE SOIL GROUPS.
- THE PRELIMINARY GEOTECHNICAL ANALYSIS OF THE SITE HAS SUGGESTED THE INSTALLATION OF A SEPARATION FABRIC TO REINFORCE THE PAVEMENT STRUCTURE. THE SEPARATION FABRIC SHALL BE A WOVEN GEOTEXTILE WITH THE FOLLOWING MINIMUM PROPERTIES ACCORDING TO ASTM D 4759:
GRAB TENSILE STRENGTH: 200 LBF ASTM D 4632
TEAR STRENGTH: 75 LBF ASTM D 4533
PUNCTURE RESISTANCE: 90 LBF ASTM D 4833
WATER FLOW RATE: 4 GPM PER SQ. FT. ASTM D 4491
APPARENT OPENING SIZE: No. 30 ASTM D 4751
- PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT.
- COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557:
UNDER PAVEMENTS, SCARIFY AND RECOMPACT THE TOP 12 INCHES OF THE EXISTING SUBGRADE AND EACH LAYER OF FILL MATERIAL AT 95 PERCENT.
UNDER LAWN OR UNPAVED AREAS, SCARIFY AND RECOMPACT THE TOP 6 INCHES OF THE EXISTING SUBGRADE AND EACH LAYER OF FILL MATERIAL AT 90 PERCENT.
- ALL DAMAGED AND RECONDITIONED LAWN AREAS SHALL BE PREPARED AND PLANTED WITH THE FOLLOWING SUN AND PARTIAL SHADE LAWN SEED MIXTURE:

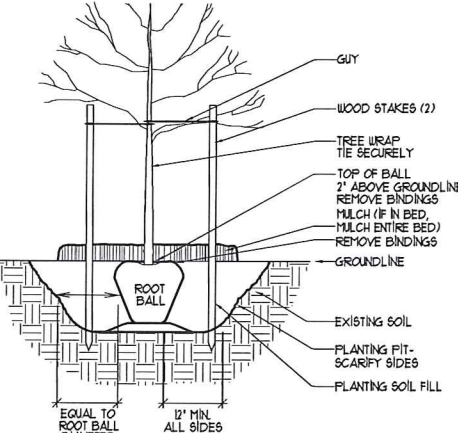
PROPORTION:	NAME/TYPE:
50%	KENTUCKY BLUEGRASS
30%	CHEWINGS RED FESCUE
10%	PERENNIAL RYE GRASS
10%	REDTOP

GENERAL LANDSCAPE NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LANDSCAPE PLAN SHEET L11.
 - ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THE LANDSCAPE WORK SHALL BE SECURED BY CONTRACTOR PRIOR TO BEGINNING ANY WORK.
 - THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ROADS, WALKS, AND ADJACENT PROPERTIES CLEAR OF ALL LANDSCAPE CONSTRUCTION EQUIPMENT, DIRT, AND OTHER DEBRIS.
 - THE LANDSCAPE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT.
 - THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL LANDSCAPING RELATED WORK WITH OTHER CONTRACTORS AND TRADES.
 - THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS ARE FOUND.
 - THE LANDSCAPE CONTRACTOR IS NOT RESPONSIBLE FOR ROUGH GRADING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINE GRADING IN ALL LAWN AREAS. THE SITE OR GRADING CONTRACTOR SHALL DEVELOP THE SITE GRADES TO WITHIN 1 INCH OF FINE GRADE. THIS SHALL INCLUDE TOPSOIL, IF AVAILABLE.
 - THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING APPROVED PLANTING SOIL MIX. TILL THE EXISTING SUBGRADE TO MINIMUM DEPTH OF 8" PRIOR TO INSTALLING THE PLANTING SOIL MIX. THE FOLLOWING AREAS SHALL RECEIVE APPROVED PLANTING SOIL MIX PER THE PLANTING DETAILS:
1) Shrub Planting Pits 2) Tree Planting Pits
 - ANY SERIES OF TREES OR SHRUBS TO BE PLACED IN A PARTICULAR ARRANGEMENT MAY BE FIELD CHECKED AND
- APPROVED BY THE LANDSCAPE ARCHITECT FOR ACCURACY OF SPACING PRIOR TO PLANTING. ANY PLANTS NOT ARRANGED PER THE LANDSCAPE PLANS WILL BE RELOCATED AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR.
- CONTRACTOR TO LOOSEN SUBSOIL IN ALL PLANTING AREAS PER SPECIFICATIONS.
 - APPLY HERBICIDE TO PLANT BEDS PRIOR TO PLANTING FOR WEED CONTROL. FOLLOW LABEL DIRECTIONS. DO NOT APPLY TO ANY PLANTING BEDS THAT MAY RESULT IN DAMAGE TO PLANT MATERIALS.
 - PLANTING BEDS TO HAVE A MINIMUM OF 3" PROCESSED SHREDDED HARDWOOD MULCH, UNLESS OTHERWISE NOTED. ALL SHRUBS TO BE INCLUDED IN A MULCHED BED AS INDICATED ON PLANS. TREES TO HAVE A 4" DIAMETER CIRCLE OF 3" PROCESSED SHREDDED HARDWOOD MULCH.
 - DIMENSION FOR HEIGHT AND SPREAD OF PLANT MATERIAL SPECIFIED ON THE PLANT LIST ARE GENERAL GUIDES FOR THE MINIMUM DESIRED SIZE OF EACH PLANT. EACH PLANT SHALL HAVE A UNIFORM AND CONSISTENT SHAPE AS IT PERTAINS TO THE SPECIFICATIONS AND PARTICULAR SPECIES. ANY PLANT MATERIAL WHICH FAILS TO CONFORM TO THE SPECIFICATIONS IS SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT.
 - THE QUANTITIES INDICATED ON THE PLANT LIST ARE PROVIDED FOR THE BENEFIT OF THE LANDSCAPE CONTRACTOR BUT SHOULD NOT BE ASSUMED TO ALWAYS BE CORRECT. IN THE EVENT OF A DISCREPANCY, THE PLANTING PLANS WILL TAKE PRECEDENCE OVER THE PLANT LIST. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITIES, CALCULATIONS AND THE LIABILITY PERTAINING TO THOSE QUANTITIES AND ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS.
 - ALL PLANTING BEDS ADJACENT TO THE BUILDING SHALL HAVE A MINIMUM SLOPE OF 2% AWAY FROM THE BUILDING TO INSURE POSITIVE DRAINAGE.
 - REFER TO CIVIL PLANS FOR SITE GRADING AND UTILITY PLANS.



Shrub Planting Detail
Not To Scale



Tree Planting Detail
Not To Scale

PLANT LEGEND

QUANTITY	COMMON NAME	SCIENTIFIC NAME	ROOT	SIZE
DECIDUOUS TREES				
4	TRIDENT MAPLE	ACER BUERGERIANUM	B4B	2"
6	SHADEMASTER HONEY LOCUST	GLEDTISIA TRIACANTHOS VAR. NERITIS	B4B	2"
SHRUBS				
3	VIRGINIA SWEETSPICE	THEA VIRGINICA	CONT.	18"-24"
6	RED CHOKEBERRY	ARONIA ARBUTIFOLIA	CONT.	36"
4	BLUE PACIFIC JUNIPER	JUNIPERUS CONFERTA 'BLUE PACIFIC'	CONT.	18"
5	SEA GREEN JUNIPER	JUNIPERUS CHINENSIS KALLAT'S COMPACT	CONT.	24"

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ForeSight
Certification:
TODD R. BAKER
REGISTERED
No. 19700312
STATE OF INDIANA
PROFESSIONAL ENGINEER
T. Baker

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Performed for:

Site Landscaping Plan for:
IDEAL BUILDERS
www.ideal-builders.com
BIGGS DEVELOPMENT
306 West Van Buren Street, Columbia City, Indiana 46725

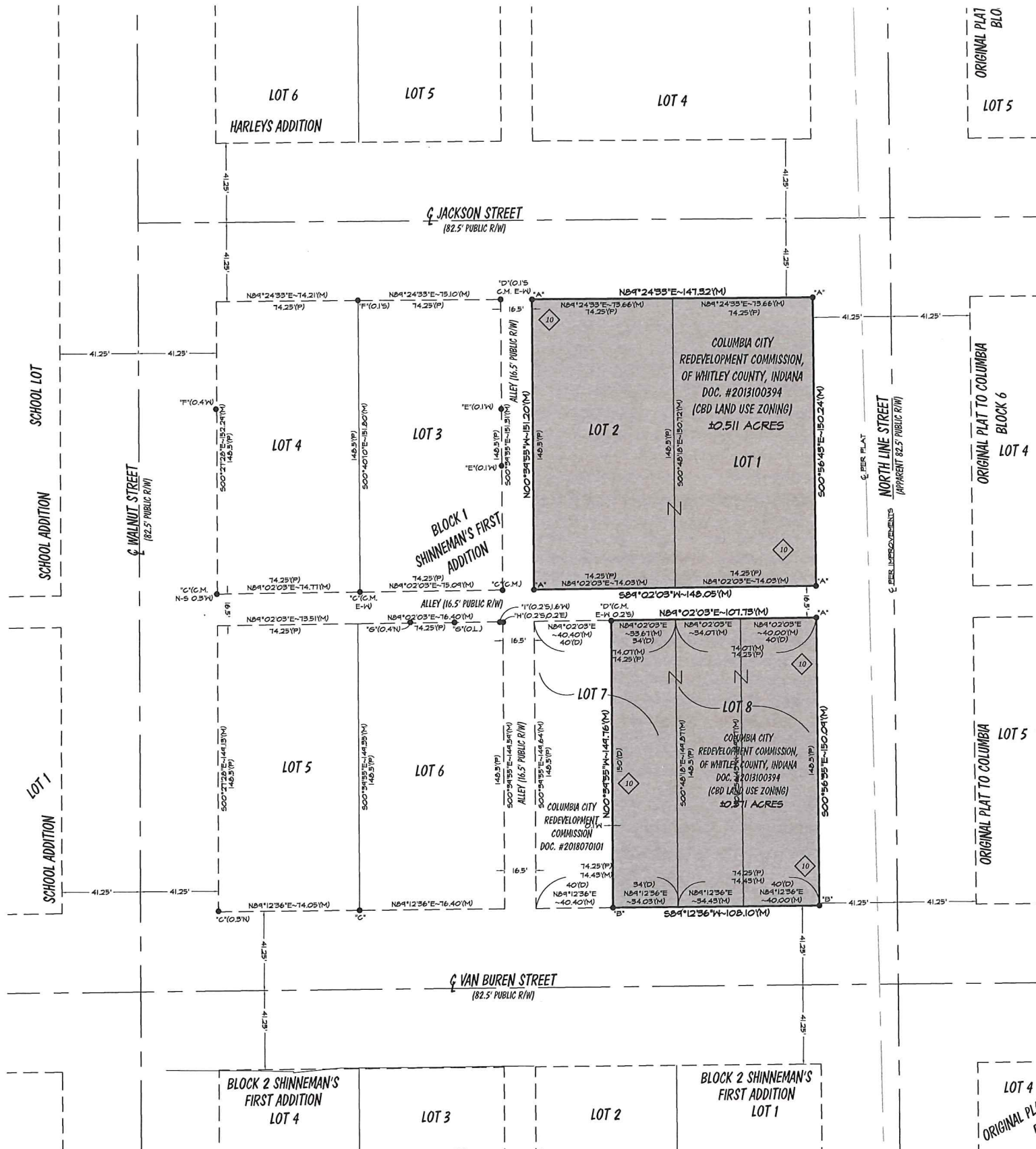
Drawing Revisions

Commission Number
182297

Date
February 8th, 2019

Title
Site Landscape Plan

Sheet Number
L1.1



Annotation Legend

P. = PLATTED DIMENSION
D. = DEED DIMENSION
M. = MEASURED DIMENSION
S. = RECORD SURVEY DIMENSION
PR. = PLAT RECORD
DOC. = DOCUMENT
PG. = PAGE NUMBER
RG. = REFERENCE CORNER
C.M. = CONTROLLING MONUMENT
F.F. = FARM FIELD TYPE FENCE
C.L. = CENTERLINE OF ROADWAY
R/W = RIGHT OF WAY LINE
POB = POINT OF BEGINNING
POC = POINT OF COMMENCEMENT
SPC = INDIANA STATE PLANE ZONE EAST COORDINATES
O.L. = ON LINE

Monument Legend

"A" - 5/8" BY 24" REBAR WITH "FORESIGHT CONSULTING, LLC - BOUNDARY" IDENTIFICATION CAP SET.
"B" - SURVEY MARKER NAIL WITH "FORESIGHT CONSULTING, LLC" IDENTIFICATION
"C" - WALKER SET
"D" - "WALKER" IDENTIFICATION CAP FOUND
"E" - 5/8" REBAR FOUND
"F" - HAS NAIL IN "WALKER" IDENTIFICATION
"G" - WALKER FOUND
"H" - 1/2" REBAR FOUND
"I" - RAILROAD SPIKE FOUND
"J" - 3" PIPE FOUND
"K" - 1 BEAM FOUND



ALTA/NSPS Land Title Survey

SCALE: 1" = 30'



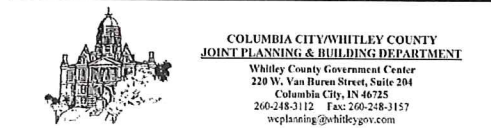
Site Location Map

SCALE: N.T.S.

Title Commitment: Schedule B - Section II Exceptions

- ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHED, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET.
- ANY DISCREPANCIES OR CONFLICTS IN BOUNDARY LINES, ANY SHORTAGES IN AREA, OR ANY ENCROACHMENT OR OVERLAPPING IN IMPROVEMENTS.
- ANY FACTS, RIGHTS, INTERESTS OR CLAIMS WHICH ARE NOT SHOWN BY THE PUBLIC RECORD BUT WHICH COULD BE ASCERTAINED BY AN ACCURATE SURVEY OF THE LAND OR BY MAKING INQUIRY OF PERSONS IN POSSESSION OF THE LAND.
- EASEMENTS, LIENS OR ENCUMBRANCES OR CLAIMS THEREOF, WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS.
- ANY LIEN, OR RIGHT TO A LIEN FOR SERVICES, LABOR OR MATERIAL IMPOSED BY LAW AND NOT SHOWN BY THE PUBLIC RECORDS.
- TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS.
- MINERALS OR MINERAL RIGHTS OR ANY OTHER SUBSURFACE SUBSTANCES (INCLUDING, WITHOUT LIMITATION, OIL, GAS AND COAL), AND ALL RIGHTS INCIDENT THERETO, NOW OR PREVIOUSLY LEASED, GRANTED, EXCEPTED OR RESERVED.
- REAL ESTATE TAXES ASSESSED FOR THE YEAR 2011 ARE DUE IN TWO INSTALLMENTS PAYABLE MAY 10, 2011 AND NOVEMBER 10, 2011.
- REAL ESTATE TAXES ASSESSED FOR THE YEAR 2012 ARE DUE IN TWO INSTALLMENTS PAYABLE MAY 10, 2012 AND NOVEMBER 10, 2012.
- RESOLUTION NO. 2011-8 DATED SEPTEMBER 11, 2011, RECORDED DECEMBER 14, 2011 AS INSTRUMENT NO. 2011020220 (NOT A PLATTABLE ITEM). THE SUBJECT PARCELS ARE IDENTIFIED WITHIN THE DECLARATORY RESOLUTION OF THE COLUMBIA CITY REDEVELOPMENT COMMISSION (RESOLUTION NO. 2011-8).
- SUBMIT CERTIFICATE OF GOOD STANDING FOR NEIGHBORHOOD HOMES & APTS, LP TO METROPOLITAN TITLE OF INDIANA, LLC.
- SUBMIT TO THE COMPANY A RESOLUTION AUTHORIZING THE PURCHASE OF SUBJECT REAL ESTATE AND DIRECTING THE PROPER OFFICIALS TO EXECUTE THE CLOSING DOCUMENTS ON BEHALF OF THE NEIGHBORHOOD HOMES & APTS, LP.
- PRIOR TO CLOSING SUBMIT A COPY OF THE PARTNERSHIP AGREEMENT FOR NEIGHBORHOOD HOMES & APTS, LP TO METROPOLITAN TITLE OF INDIANA, LLC. THIS COMMITMENT IS SUBJECT TO SUCH FURTHER REQUIREMENTS AS MAY THEN BE DEEMED NECESSARY.
- COVENANTS, CONDITIONS, RESTRICTIONS, UTILITY AND DRAINAGE EASEMENTS AND SETBACK LINES AND ANY AMENDMENTS THERETO AS DISCLOSED ON THE RECORDED PLAT OF SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CITY OF COLUMBIA CITY, INDIANA.

Board of Zoning Appeals Special Exception Approval



COLUMBIA CITY/WHITLEY COUNTY
JOINT PLANNING & BUILDING DEPARTMENT
Whitley County Government Center
220 W. Van Buren Street, Suite 204
Columbia City, IN 46725
260-248-3112 Fax: 260-248-3157
wcpb@whitley.gov

January 11, 2019
Columbia City Redevelopment Commission
112 South Chauncey Street
Columbia City, IN 46725
RE: Petition 19-C-SE-2
Redevelopment Commission.

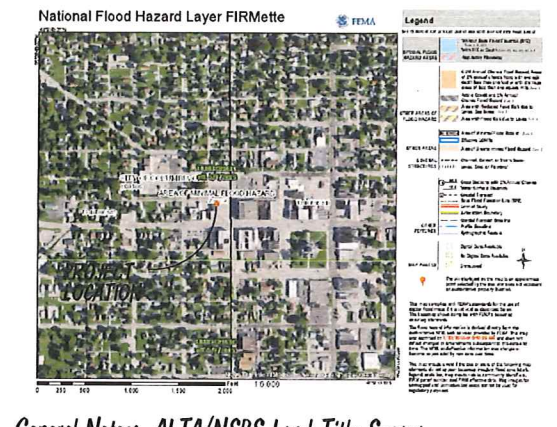
On January 8, 2019 the Columbia City Board of Zoning Appeals voted to approve your petition request for a Special Exception to allow for apartments as part of a mixed-use development located at 366 West Van Buren Street. The approval was granted with the following conditions:

- The Special Exception is for a mixed-use concept of commercial space and apartment units in a multi-story building.
- The floor area of the units shall comply with the Ordinance requirements or receive a Variance approval from the Columbia City Board of Zoning Appeals.
- Short metal and plan concrete block shall not be used as exterior siding materials on the building facades facing the streets.
- The Development Plan review will include these Special Exception criteria along with those required by the Development Plan section.

If you should have any further questions, please feel free to contact our office at (260) 248-3112. Our office hours are Monday - Friday, 8:00 a.m. to 4:30 p.m. Thank you!

Sincerely,
Amanda Thompson
Assistant Planner/Office Manager

Whitley County Government is an Equal Opportunity Employer and does not discriminate upon the basis of race, age, gender, religion, sex, national origin, disability or any other characteristic protected by law. Whitley County will provide reasonable accommodations to qualified individuals with a disability.



General Notes: ALTA/NSPS Land Title Survey

- THE LOCATION AND DIMENSIONS OF ALL BUILDING STRUCTURES ON THE FACE OF THIS SURVEY (IF APPLICABLE) ARE NOT INTENDED FOR STRUCTURAL DESIGN.
- UTILITIES DEPICTED ON THE WITHIN PLAT OF SURVEY WERE LOCATED FROM ABOVE-GROUND VISIBLE EVIDENCE AND APPURTENANCES. NO PRIVATE UTILITY LOCATION SERVICES WERE REQUESTED FOR THIS SURVEY. NO RECORDED UTILITY DOCUMENTS WERE PROVIDED FOR USE BY FORESIGHT CONSULTING, LLC FOR THE COMPLETION OF THIS SURVEY.
- DISTURBING UNDERGROUND UTILITIES MAY RESULT IN SUBSTANTIAL PENALTIES AND DAMAGES FOR WHICH YOU WILL BE RESPONSIBLE. BEFORE DIGGING OR EXCAVATING ON YOUR PROPERTY YOU ARE REQUIRED TO CHECK FOR THE PRESENCE OF UTILITIES BY CALLING 1-800-368-5844. ADDITIONAL UTILITIES MAY NOT BE INCLUDED IN THE ONE-CALL UTILITY SERVICE AND IT IS YOUR ADDITIONAL RESPONSIBILITY TO CONTACT EACH OF THESE UTILITY PROVIDERS.
- THE PROFESSIONAL SERVICES PROVIDED DO NOT INCLUDE AND SHOULD NOT BE CONSTRUED TO BE AN OPINION OF THE TITLE.
- METROPOLITAN TITLE OF INDIANA, LLC/FIRST AMERICAN TITLE INSURANCE COMPANY TITLE COMMITMENT FILE NO. 181804 WITH AN EFFECTIVE DATE OF DECEMBER 12TH, 2018 AT 8:00 AM HAS BEEN UTILIZED AND RELIED UPON FOR THE PURPOSE OF COMPLETING THIS ALTA/NSPS LAND TITLE SURVEY.
- THE LAND DESCRIBED IN THE SURVEY IS THE SAME AS DESCRIBED IN THE TITLE INSURANCE COMMITMENT.
- THERE ARE NO PARTY WALLS OR VISIBLE ENCROACHMENTS ON THE SUBJECT PROPERTY BY STREETS, ALLEYS OR BUILDINGS, STRUCTURE OR OTHER IMPROVEMENTS SITUATED ON ADJACENT PROPERTY, EXCEPT AS SHOWN ON THIS SURVEY.
- AT THE TIME OF FIELD SURVEYING OPERATIONS NO VISIBLE EVIDENCE OF SIGNIFICANT EARTH MOVING OR DISTURBING WORK WAS OBSERVED WITHIN THE BOUNDARIES OF THE SUBJECT PROPERTY (ALTA/NSPS TABLE A ITEM NO. 16).
- NO PROPOSED CHANGES TO STREET RIGHT OF WAY LINES WERE FOUND OR PROVIDED THIS SURVEY (ALTA/NSPS TABLE A ITEM NO. 17).
- NO VISIBLE EVIDENCE OF A WETLAND DELINEATION WAS OBSERVED DURING THE COURSE OF LAND SURVEYING FIELD OPERATIONS. FORESIGHT CONSULTING, LLC WAS NOT PROVIDED WITH A WETLAND DELINEATION REPORT OR OTHER DOCUMENTATION THAT WOULD INDICATE THAT A WETLAND WAS OR HAS BEEN DELINEATED ON THE SUBJECT PARCEL (ALTA/NSPS TABLE A ITEM NO. 18).
- A ZONING REPORT WAS NOT PROVIDED TO ADDRESS LAND USE ZONING AND SETBACKS FOR THE PREPARATION OF THIS SURVEY. THE EXISTING SITE IS ZONED CBD (CENTRAL BUSINESS DISTRICT) ACCORDING TO THE WHITLEY COUNTY ZONING DEPARTMENT. THE PROJECT RECEIVED A SPECIAL EXCEPTION APPROVAL FROM THE WHITLEY COUNTY/COLUMBIA CITY BOARD OF ZONING APPEALS FOR THE PROPOSED PROJECT USE. REFER TO LAND USE ZONING INFORMATION SHEET SVL2 AND SPECIAL EXCEPTION APPROVAL LETTER THIS SHEET FOR ADDITIONAL INFORMATION.
- THE SITE LIES WITHIN A "ZONE X" DEFINED AS "AREAS OF MINIMAL FLOODING" BASED UPON THE FLOOD INSURANCE RATE MAP (FIRM) 18183C0282G WITH AN EFFECTIVE DATE OF MAY 24TH, 2015 (REFER TO FIRMETTE IMAGE THIS SHEET).
- THE BOUNDARIES OF THE SUBJECT PARCEL, WITH THE EXCEPTION OF THE WESTERN BOUNDARY OF THE SOUTHERN RIGHT OF WAY LINES, ARE CONTIGUOUS WITH THE RIGHT OF WAY LINES OF STREETS AND ALLEYS WITHIN THE MUNICIPAL CITY OF COLUMBIA CITY, INDIANA.

Real Estate Description per Title Commitment

THE EAST FORTY (40) FEET OF LOT EIGHT (8) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, INDIANA, BLOCK NO. ONE (1) OF SAID ADDITION AND DESCRIBED AS FOLLOWS, TO-WIT:

COMMENCING AT THE SOUTHEAST CORNER OF SAID ABOVE DESCRIBED LOT EIGHT (8) IN BLOCK NO. ONE (1) IN SHINNEMAN'S FIRST ADDITION TO THE TOWN OF COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, INDIANA, RUNNING THENCE NORTH ON THE EAST LINE OF SAID LOT TO THE NORTH LINE OF SAID LOT, THENCE WEST ALONG THE NORTH LINE OF SAID LOT FORTY (40) FEET, THENCE SOUTH PARALLEL TO THE EAST LINE OF SAID LOT TO THE SOUTH LINE OF SAID LOT, THENCE EAST ON SAID SOUTH LINE TO THE PLACE OF BEGINNING.

ALSO
THIRTY-FOUR (34) FEET OF THE EAST SIDE OF LOT NUMBER SEVEN (7) IN BLOCK NUMBER ONE (1) IN SHINNEMAN'S FIRST ADDITION TO THE TOWN OF COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:
SOUTHEAST CORNER OF LOT NUMBER SEVEN (7) AND RUNNING THENCE WEST ON THE SOUTH LINE THEREOF AND ALONG VAN BUREN STREET IN SAID CITY, THIRTY-FOUR (34) FEET; THENCE NORTH PARALLEL WITH THE EAST LINE THEREOF ONE HUNDRED FIFTY (150) FEET TO THE NORTH LINE OF SAID LOT, THENCE EAST ALONG THE NORTH LINE THEREOF THIRTY-FOUR (34) FEET TO THE NORTHEAST CORNER OF SAID LOT NUMBER SEVEN (7), THENCE SOUTH ALONG THE EAST LINE OF SAID LOT TO THE PLACE OF BEGINNING.

ALSO
COMMENCING ON THE SOUTH LINE OF, AND AT A POINT FORTY (40) FEET WEST OF THE SOUTHWEST CORNER OF LOT NUMBER EIGHT (8), IN BLOCK NUMBER ONE (1) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CALLED CITY OF COLUMBIA CITY, RUNNING NORTH PARALLEL WITH THE EAST LINE OF SAID LOT TO THE NORTH LINE THEREOF, THENCE WEST ON THE NORTH LINE TO THE NORTHWEST CORNER OF SAID LOT, THENCE SOUTH ON THE WEST LINE OF SAID LOT TO THE SOUTHWEST CORNER THEREOF, THENCE EAST ON THE SOUTH LINE OF SAID LOT TO A POINT FORTY (40) FEET WEST OF THE SOUTHEAST CORNER OF SAID LOT BEING THE POINT OF COMMENCEMENT.

ALSO
LOTS ONE (1) AND TWO (2) IN BLOCK ONE (1) IN SHINNEMAN'S FIRST ADDITION TO COLUMBIA, NOW CITY OF COLUMBIA CITY.

Professional Surveyor's Certification

TO, NEIGHBORHOOD HOMES & APTS, LP, COLUMBIA CITY REDEVELOPMENT COMMISSION OF WHITLEY COUNTY, CREA SLP, LLC, INDIANA, FIRST MERCHANTS BANK, METROPOLITAN TITLE COMPANY OF INDIANA, LLC, AND EACH OF THEIR SUCCESSORS AND ASSIGNS:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS," WHITLEY COUNTY, INDIANA, AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6b, TO, 10, 11, 13, 14, 15, 16, 17, 18, AND 19 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, I HEREBY CERTIFY THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

DATED JANUARY 11TH, 2019
BY: TODD R. BAUER, PS - INDIANA PROFESSIONAL SURVEYOR

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THIS PLAT REPRESENTS A SURVEY CONDUCTED UNDER MY SUPERVISION IN ACCORDANCE WITH TITLE 36B (IAC, ARTICLE 1, RULE 12) SECTIONS 1 THROUGH 30 FOR AN SUBURBAN CLASSIFICATION BOUNDARY RETRACEMENT SURVEY.

COMMISSION NUMBER: 182297
SURVEYED FOR: NEIGHBORHOOD HOMES & APTS, LP

DATES OF FIELDWORK: JULY 5TH & 9TH, 2018
IN WITNESS WHEREOF, I HERETO PLACE MY HAND AND SEAL, THIS 11TH DAY OF JANUARY, 2019

I AFFIRM, UNDER THE PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW.

PRO FORMA
RELEASED FOR CLIENT REVIEW
Todd R. Bauer, PS No. 24800001
tbaue@tbaue.biz

ForeSight Consulting, LLC

Professional Engineers & Surveyors

1910 St. Joe Center Road, Suite #51

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ForeSight

Certification:

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Performed for:

ALTA/NSPS LAND TITLE SURVEY FOR:

Lots 1, 2, 8, and Part of lot 7 in

Shinnemans's First Addition

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number

182297

Date

January 11th, 2019

Title

Sheet Number

SV1.1

SHEET 1 OF 2

Professional Surveyor's Report

IN ACCORDANCE WITH TITLE 36, ARTICLE I, RULE 12, SECTIONS 1 THROUGH 21 OF THE INDIANA ADMINISTRATIVE CODE, THE FOLLOWING REPORT IS SUBMITTED REGARDING THE VARIOUS UNCERTAINTIES IN THE LOCATIONS OF THE LINES AND CORNERS ESTABLISHED ON THIS PARCEL AS A RESULT OF:

- VARIANCES IN REFERENCE MONUMENTS.
- DISCREPANCIES IN RECORD DESCRIPTIONS AND/OR PLATS.
- INCONSISTENCIES IN LINES OF OCCUPATION AND/OR POSSESSION.
- RELATIVE POSITIONAL ACCURACY (RPA): THE ACCEPTABLE RELATIVE POSITIONAL ACCURACY FOR THE VARIOUS SURVEY CLASSIFICATIONS ARE AS FOLLOWS:
 - URBAN SURVEYS: 0.21 FEET PLUS 90 PARTS PER MILLION.
 - SUBURBAN SURVEYS: 0.18 FEET PLUS 100 PARTS PER MILLION.
 - RURAL SURVEYS: 0.26 FEET PLUS 200 PARTS PER MILLION.

VARIANCES IN DEED V.S. MEASURED DIMENSIONS

THERE MAY BE VARIANCES BETWEEN THE DEED DIMENSIONS AND THE MEASURED DIMENSIONS ALONG THESE ADJOINING LINES SHOWN ON THIS PLAT OF SURVEY. LIKEWISE, THERE MAY BE FOUND SURVEY MONUMENTS NEAR, BUT NOT PRECISELY AT, SOME BOUNDARY CORNERS. WHEN THE MAGNITUDE OF THESE VARIANCES ARE LESS THAN THE RELATIVE POSITIONAL ACCURACY STATED ABOVE AND ARE LESS THAN THE UNCERTAINTY IDENTIFIED FOR THE REFERENCE MONUMENTATION, THE DIFFERENCES HAVE BEEN CONSIDERED INSIGNIFICANT AND ARE SHOWN ONLY FOR THE PURPOSES OF MATHEMATICAL CLOSURE. WHEN SUCH MEASURED VARIANCES ARE GREATER THAN THE RELATIVE POSITIONAL ACCURACY AND THE UNCERTAINTY IN REFERENCE MONUMENTS, THESE VARIANCES ARE WORTHY OF DISCUSSION AND ARE ADDRESSED IN THIS REPORT.

BOUNDARY RESOLUTION - BASIS OF THE ESTABLISHED BOUNDARY OF THE SUBJECT PARCEL

THIS SURVEY AND ASSOCIATED REPORT ARE BASED IN PART UPON THE OPINIONS FORMED IN ACCORDANCE WITH THE INDIANA LAND SURVEYING ACT AND THE RULES TO CONDUCT A SURVEY IN ACCORDANCE WITH "LAW OR A PRECEDENT" (365 IAC 1-12-11(5)), RULES OF THE INDIANA STATE BOARD OF REGISTRATION FOR LAND SURVEYORS). SINCE INDIANA HAS NO STATUTES ADDRESSING HOW TO RESOLVE BOUNDARY LINES, SOLUTION BASED ON PRINCIPLES DERIVED FROM COMMON LAW PRECEDENT MUST BE RELIED UPON AS THE BASIS FOR A BOUNDARY RESOLUTION.

HORIZONTAL POSITIONING METHOD/OS

THE HORIZONTAL LOCATION OF ALL TOWNS AND ESTABLISHED MONUMENTS ARE BASED UPON STANDARD SURVEYING MEASUREMENT TECHNIQUES USING A POSITIONAL SOLUTION DERIVED BY USING RTK GLOBAL POSITIONING (GPS) OBSERVATIONS WITH TRIMBLE 5800 RS RECEIVERS USING THE INDIANA DEPARTMENT OF TRANSPORTATION "INCORS" VIRTUAL REFERENCE LAND SURVEYING NETWORK.

PURPOSE OF SURVEY

THE PURPOSE OF THIS SURVEY WAS TO RETRACE THE BOUNDARIES OF THE LANDS OF COLUMBIA CITY REDEVELOPMENT COMMISSION, OF WHITLEY COUNTY, INDIANA AS RECORDED IN DOCUMENT NUMBER 2013000344 WITHIN THE OFFICE OF RECORDER OF WHITLEY COUNTY, INDIANA FOR THE PURPOSE OF A REAL ESTATE TRANSACTION AND FUTURE DEVELOPMENT.

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS BASED UPON INDIANA STATE PLANE COORDINATE ZONE EAST GEODETIC GRID BEARING VALUES AS SHOWN AND REPRESENTED ON THE PLAT OF THIS SURVEY.

TITLE COMMITMENT

METROPOLITAN TITLE OF INDIANA, LLC/FIRST AMERICAN TITLE INSURANCE COMPANY TITLE COMMITMENT FILE NO. 1514104A WITH AN EFFECTIVE DATE OF DECEMBER 12TH, 2018 AT 8:00 AM HAS BEEN UTILIZED AND RELIED UPON FOR THE PURPOSE OF COMPLETING THIS ALTANSPS LAND TITLE SURVEY.

REFERENCE INFORMATION UTILIZED FOR THIS SURVEY

THE PLAT OF SHINNEMAN'S FIRST ADDITION FOR THE SUBJECT PARCEL AND THE ADJOINING PARCELS WERE UTILIZED DURING THE COURSE OF THIS BOUNDARY SURVEY.

THE PLAT OF SHINNEMAN'S FIRST ADDITION AS RECORDED WITHIN THE OFFICE OF THE RECORDER OF WHITLEY COUNTY, INDIANA.

THE ORIGINAL PLAT TO COLUMBIA AS RECORDED WITHIN THE OFFICE OF THE RECORDER OF WHITLEY COUNTY, INDIANA.

THE PLAT OF SCHOOL ADDITION AS RECORDED WITHIN THE OFFICE OF THE RECORDER OF WHITLEY COUNTY, INDIANA.

THE PLAT OF HARLEY'S ADDITION AS RECORDED WITHIN THE OFFICE OF THE RECORDER OF WHITLEY COUNTY, INDIANA.

AVAILABILITY AND CONDITION OF REFERENCE MONUMENTS

THE BOUNDARY LINES OF THE LANDS OF COLUMBIA CITY REDEVELOPMENT COMMISSION, OF WHITLEY COUNTY, INDIANA AS RECORDED IN DOCUMENT NUMBER 2013000344 WITHIN THE OFFICE OF RECORDER OF WHITLEY COUNTY, INDIANA, ARE DEPENDENT UPON THE CONTROLLING LINES OF THE AFOREMENTIONED SHINNEMAN'S FIRST ADDITION.

A "WALKER" IDENTIFICATION CAP WAS FOUND AT THE SOUTHEAST CORNER OF LOT NUMBER 3 (WEST RIGHT OF LINE OF THE NORTH-SOUTH ALLEY), AND A 5/8" REBAR WAS FOUND NEAR THE NORTHEAST CORNER OF LOT 3. THESE MONUMENTS CORRELATED WELL WITH PHYSICAL IMPROVEMENTS, AND TWO MAGNALS WITH "WALKER" IDENTIFICATION MARKERS FOUND ALONG THIS LINE, AND WERE USED TO ESTABLISH THE RIGHT OF WAY LINES OF THE NORTH-SOUTH ALLEY.

A "WALKER" IDENTIFICATION CAP WAS FOUND NEAR THE SOUTHWEST CORNER OF LOT 4. THIS MONUMENT CORRELATED WELL WITH PHYSICAL IMPROVEMENTS, AND "WALKER" IDENTIFICATION CAPS FOUND AT THE SOUTHEAST AND SOUTHWEST CORNERS OF LOT NUMBER 3, AND WERE USED TO ESTABLISH THE RIGHT OF WAY LINES OF THE EAST-WEST ALLEY.

A 5/8" REBAR WAS FOUND NEAR THE NORTHEAST CORNER OF THE SOUTHERN PORTION OF THE SUBJECT PARCEL. THIS MONUMENT WAS IN GENERAL HARMONY WITH RECORD DIMENSIONS AND PHYSICAL IMPROVEMENTS, DUE TO A LACK OF MONUMENTS FOUND AT THE CORNERS OF THE SUBJECT PARCEL. THIS IS BEST AND TO BE BEST AVAILABLE EVIDENCE, AND WAS USED TO ESTABLISH THE WEST LINE OF THE SOUTHERN PORTION OF THE SUBJECT PROPERTY.

VARIOUS OTHER MONUMENTS WITH NO HISTORY WERE LOCATED DURING THE COURSE OF LAND SURVEYING FIELD OPERATIONS. THESE WERE USED AND CONSIDERED WHEN ESTABLISHING THE BOUNDARIES OF THE SUBJECT PARCEL AND ADJOINING PARCELS, AND HAVE BEEN LABELED AND SHOWN ON THE PLAT OF THIS SURVEY.

DISCREPANCIES IN RECORD DESCRIPTIONS AND/OR PLATS

THERE IS AN UNCERTAINTY IN THE LOCATION OF THE RIGHT OF WAY LINES OF NORTH LINE STREET. IT IS BELIEVED THAT THE ORIGINAL PLAT TO COLUMBIA WAS PLATTED TO THE WEST LINE OF SECTION 11 THAT RAN ALONG NORTH LINE STREET. IT IS BELIEVED THAT THIS CREATED RIGHT OF WAY LINE FOR NORTH LINE STREET MAY NOT BE PARALLEL. IT IS BELIEVED THAT THE ADJOINING PLATS TO WEST, INCLUDING THE PLAT SHINNEMAN'S FIRST ADDITION, DEDICATED ADDITIONAL RIGHT OF WAY IN ORDER TO CREATE AN EQUIDISTANT 82.5 FOOT RIGHT OF WAY FOR NORTH LINE STREET. HOWEVER, DUE TO A LACK OF MONUMENTATION ALONG THESE RIGHT OF WAY LINES AND THE ILLEGIBLE PARTIALLY ILLEGIBILITY OF THE TEXT OF THE PLATS, THERE IS AN UNCERTAINTY IN THESE RIGHT OF WAY LINES.

ADDITIONAL MINOR DISCREPANCIES IN RECORD DESCRIPTIONS AND PLATS WERE ENCOUNTERED DURING THIS RETRACEMENT SURVEY. THESE MINOR DISCREPANCIES INCLUDE PRIMARILY VARIANCES IN THE RECORD DISTANCES AND BEARINGS WHEN COMPARED TO THE MEASURED DISTANCES AND BEARINGS, AND OTHER SIGNIFICANT ISSUES EXIST IN DETERMINING THE BOUNDARY OF THE SUBJECT PARCEL.

DISCREPANCIES IN LINES OF OCCUPATION AND/OR POSSESSION

THE WEST ADJOINER'S BUILDING IS A MAXIMUM OF 0.6 FEET EAST OF THE WEST LINE OF THE SOUTHERN PARCEL.

VARIOUS UTILITIES LIE ON AND CROSS OVER THE SUBJECT PROPERTY. WITHOUT THE BENEFIT OF AN EASEMENT, THESE UTILITIES MAY BE CONSIDERED AN ENCROACHMENT, AND/OR BE SUBJECT TO PRESCRIPTIVE RIGHTS.

NO OTHER SIGNIFICANT DISCREPANCIES WERE FOUND IN LINES OF OCCUPATION DURING THE COURSE OF LAND SURVEYING FIELD OPERATIONS.

THEORY OF LOCATION

AS STATED ABOVE, THE BOUNDARY LINES OF THE LANDS OF COLUMBIA CITY REDEVELOPMENT COMMISSION, OF WHITLEY COUNTY, INDIANA AS RECORDED IN DOCUMENT NUMBER 2013000344 WITHIN THE OFFICE OF RECORDER OF WHITLEY COUNTY, INDIANA, ARE DEPENDENT UPON THE CONTROLLING LINES OF THE AFOREMENTIONED SHINNEMAN'S FIRST ADDITION.

THE PLAT OF SHINNEMAN'S FIRST ADDITION MAKES NO REFERENCE TO THE TYPE OR CHARACTERISTICS OF MONUMENTS SET AT THE TIME OF THE ORIGINAL SURVEY. THEREFORE, IT CANNOT BE SAID WITH CERTAINTY THAT ANY MONUMENTS FOUND THIS SURVEY ARE ORIGINAL UNDISTURBED CONTROLLING MONUMENTS, DUE TO LACK OF CONTROLLING MONUMENTS, THE PHYSICAL IMPROVEMENTS OF VAN BUREN STREET, NORTH LINE STREET, JACKSON STREET, AND WALNUT STREET WERE USED TO ESTABLISH THEIR RESPECTIVE RIGHT OF WAY LINES.

A LINE WAS CREATED BETWEEN THE 5/8" REBAR FOUND NEAR THE NORTHEAST CORNER AND THE "WALKER" IDENTIFICATION CAP FOUND AT THE SOUTHEAST CORNER OF LOT 3 WHICH WAS THEN EXTENDED TO THE SOUTH RIGHT OF WAY LINE OF THE NORTH-SOUTH ALLEY. THE SOUTH RIGHT OF WAY LINE OF VAN BUREN STREET TO ESTABLISH THE EAST LINES OF LOTS 3 AND 6, BEING ONE AND THE SAME AS THE WEST RIGHT OF WAY LINE OF THE NORTH-SOUTH ALLEY.

A LINE WAS THEN CREATED PARALLEL, AND 16.5 FEET EQUIDISTANT OF THE PREVIOUSLY ESTABLISHED WEST RIGHT OF WAY LINE OF THE NORTH-SOUTH ALLEY TO ESTABLISH THE EAST RIGHT OF WAY OF SAID ALLEY, BEING ONE AND THE SAME AS THE WEST LINES OF LOTS 2 AND 7.

A LINE WAS SUBSEQUENTLY CREATED BETWEEN THE "WALKER" IDENTIFICATION CAPS FOUND NEAR THE SOUTHWEST CORNER OF LOT 4, AND AT THE SOUTHEAST CORNER OF LOT 3. THIS LINE WAS THEN TRUNCATED AT THE EAST RIGHT OF WAY LINE OF WALNUT STREET, AND EXTENDED TO THE WEST RIGHT OF WAY LINE OF NORTH LINE STREET TO ESTABLISH THE NORTH RIGHT OF WAY LINE OF THE EAST-WEST ALLEY, SAID LINE BEING ONE AND THE SAME AS THE SOUTH LINE OF LOTS 1 THROUGH 4.

A LINE WAS THEN CREATED PARALLEL, AND 16.5 FEET EQUIDISTANT TO THE PREVIOUSLY ESTABLISHED NORTH RIGHT OF WAY TO ESTABLISH THE SOUTH RIGHT OF WAY LINE OF SAID EAST-WEST ALLEY.

THE WEST LINE OF THE SOUTHERN SUBJECT PARCEL WAS THEN ESTABLISHED AS A LINE PARALLEL TO THE PREVIOUSLY ESTABLISHED RIGHT OF WAY LINES OF THE NORTH-SOUTH ALLEY, BEGINNING AT THE 5/8" REBAR NEAR THE NORTHEAST CORNER OF SAID PARCEL, EXTENDING SOUTH TO THE PREVIOUSLY ESTABLISHED NORTH RIGHT OF WAY LINE OF VAN BUREN STREET, AND NORTH TO THE PREVIOUSLY ESTABLISHED SOUTH RIGHT OF WAY LINE OF THE EAST-WEST ALLEY.

Columbia City CBD Land Use Zoning Information

§ 6.04 CENTRAL BUSINESS DISTRICT.

A. The Central Business District is designed to:

1. Accommodate and encourage the most desirable, most productive, most intense use of land, without regard to the regulation of percent of land coverage or parking space requirements within the central core area of the city.

2. Preserve and promote the public and private investment of the existing central core area.

B. Permitted uses: Permitted uses are the same as those for the General Business District under § 6.03 A.1. - 3. of this Chapter.

C. Performance standards: The following regulations shall apply in the Central Business District (CBD) in addition to the General Provisions in Chapter 2. Commercial accessory uses are subject to the same provisions as the principal use unless otherwise noted in this ordinance.

1. Height requirement: Except as otherwise provided, the following height requirements shall apply to all buildings, structures, and uses in this district.

- All primary structures shall not exceed a height of 50 feet.

2. Ground floor area: The minimum ground floor area is not applicable to business districts for business uses. The minimum ground floor area shall be 950 square feet for a single-story dwelling unit. The minimum ground floor area shall be 800 square feet for a multiple-story dwelling unit. The minimum ground floor area excludes all garages, porches, basements, and breezeways. In a multi-family dwelling, each dwelling unit shall have at least 750 square feet of floor area.

D. Other regulations: Other regulations are the same as for the General Business District in § 6.03 B., except for:

1. The CBD is exempt from the off-street parking and loading requirements in Chapter 10.

2. The CBD setbacks are the same as for the General Business District, except that currently existing structures may add on so long as they do not encroach any further into a required setback and any new structural development may go before the Executive Committee for approval of a closer setback.

E. The CBD was established by city Ordinance Number 984, which contains those properties located in the following map (Figure 6.1) as part of the City Central Business District Economic Revitalization Area.

Before additional area, contiguous to that area presently designated CBD, be considered for inclusion within the CBD District consideration should be given to the appropriateness of the General Business District. This alternate designation is intended to create a less congested district than that of the CBD.

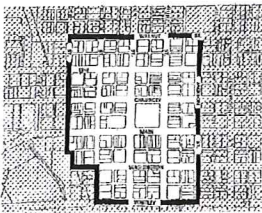


FIGURE 6.1
Central Business District

(1980 Code, § 6.04) (Ord. 1995-7, passed 6-5-1995; Am. Ord. 2001-22, passed 12-27-2001)

(General Business District Performance Standards)

B. Performance standards: The following regulations shall apply in the General Business District (GB) in addition to the General Provisions in Chapter 2. Commercial accessory uses are subject to the same provisions as the principal use unless otherwise noted in this ordinance.

- Lot area: The lot shall contain not less than 5,000 square feet.
- Lot width: The minimum lot width shall be 50 feet and when the depth is less than the width, the lot depth shall be 50 feet.
- Lot frontage: All lots within the GB District shall maintain a minimum of 50 feet of frontage on a publicly or privately maintained street.
- Yard and setback requirements:
 - Front yard: Not less than 25 feet from the property line.
 - Side yards: Least width of either side yard shall not be less than ten feet except in the case of a corner lot, where the side yard on the street side shall not be less than the required front yard setback.
 - Rear yard: Not less than ten feet.
- Height requirement: Except as otherwise provided, the following height requirements shall apply to all buildings, structures, and uses in this district.
 - All primary structures shall not exceed a height of 50 feet.
- Ground floor area: The minimum ground floor area is not applicable to business districts for business uses. The minimum ground floor area shall be 950 square feet for a single-story dwelling unit. The minimum ground floor area shall be 800 square feet for a multiple-story dwelling unit. The minimum ground floor area excludes all garages, porches, basements and breezeways. In a multi-family dwelling, each dwelling unit shall have at least 750 square feet of floor area.
- Lot coverage: The maximum lot coverage in a General Business District is 50% of the entire lot.

(a) Front yard: Not less than 25 feet from the property line.

(b) Side yards: Least width of either side yard shall not be less than ten feet except in the case of a corner lot, where the side yard on the street side shall not be less than the required front yard setback.

(c) Rear yard: Not less than ten feet.

5. Height requirement: Except as otherwise provided, the following height requirements shall apply to all buildings, structures, and uses in this district.

(a) All primary structures shall not exceed a height of 50 feet.

6. Ground floor area: The minimum ground floor area is not applicable to business districts for business uses. The minimum ground floor area shall be 950 square feet for a single-story dwelling unit. The minimum ground floor area shall be 800 square feet for a multiple-story dwelling unit. The minimum ground floor area excludes all garages, porches, basements and breezeways. In a multi-family dwelling, each dwelling unit shall have at least 750 square feet of floor area.

7. Lot coverage: The maximum lot coverage in a General Business District is 50% of the entire lot.

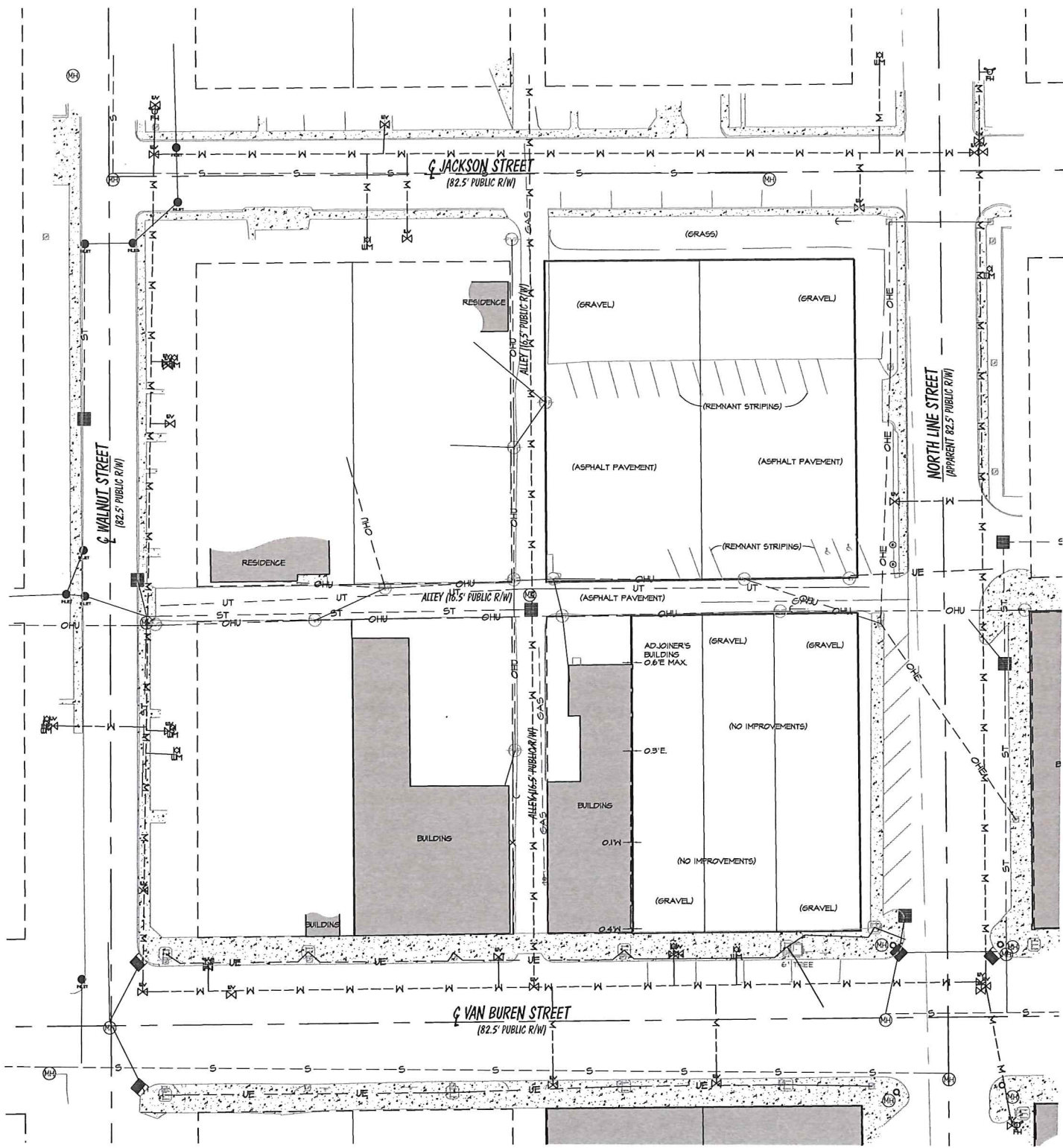
C. Other regulations:

1. Off-street parking: For residential uses, two parking spaces per dwelling unit, excluding garages. Other off-street parking requirements as set forth in Chapter 10.

2. Sign requirements: Sign requirements as set forth in Chapter 11.

3. Operations in an enclosed building: All operations shall be conducted within a fully enclosed building. The Board of Zoning Appeals may allow for outdoor storage and/or retail use in conjunction with a permitted use as a special exception as set forth in Chapter 12, Board of Zoning Appeals.

Columbia City Zoning Ordinance
Chapter 6
Page 8



BUILDING & IMPROVEMENTS DETAIL

SCALE: 1" = 30'



Professional Surveyor's Certification

TO: NEIGHBORHOOD HOMES & APTS LP, COLUMBIA CITY REDEVELOPMENT COMMISSION OF WHITLEY COUNTY, GRETA SLP LLC, INDIANA, FIRST MERCHANTS BANK, METROPOLITAN TITLE COMPANY OF INDIANA, LLC, AND EACH OF THEIR SUCCESSORS AND ASSIGNS.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTANSPS LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6B, TO, 7(B), 8, 9, 10C, 11, 13, 16, 17, 18 AND 19 OF TABLE A, THEREOF, PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION. UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION AS A LAND SURVEYOR REGISTERED IN THE STATE OF INDIANA, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

DATED JANUARY 11TH, 2019
BY: TODD R. BAUER, PS - INDIANA PROFESSIONAL SURVEYOR

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THIS PLAT REPRESENTS A SURVEY CONDUCTED UNDER MY SUPERVISION IN ACCORDANCE WITH TITLE 365 IAC, ARTICLE I, RULE 12, SECTIONS 1 THROUGH 30 FOR AN SUBURBAN CLASSIFICATION BOUNDARY RETRACEMENT SURVEY.

COMMISSION NUMBER: 182297
SURVEYED FOR: NEIGHBORHOOD HOMES & APTS, LP

DATES OF FIELDWORK: JULY 5TH & 9TH, 2019

IN WITNESS WHEREOF, I HERETO PLACE MY HAND AND SEAL, THIS 11TH DAY OF JANUARY, 2019

I AFFIRM, UNDER THE PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW.

Todd R. Bauer, PS No. 25800001
todd@4site.biz

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Certification:

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Performed for:

ALTANSPS LAND TITLE SURVEY FOR:

**Lots 1, 2, 8, and Part of lot 7 in
Shinnemans's First Addition**

306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number

182297

Date

January 11th, 2019

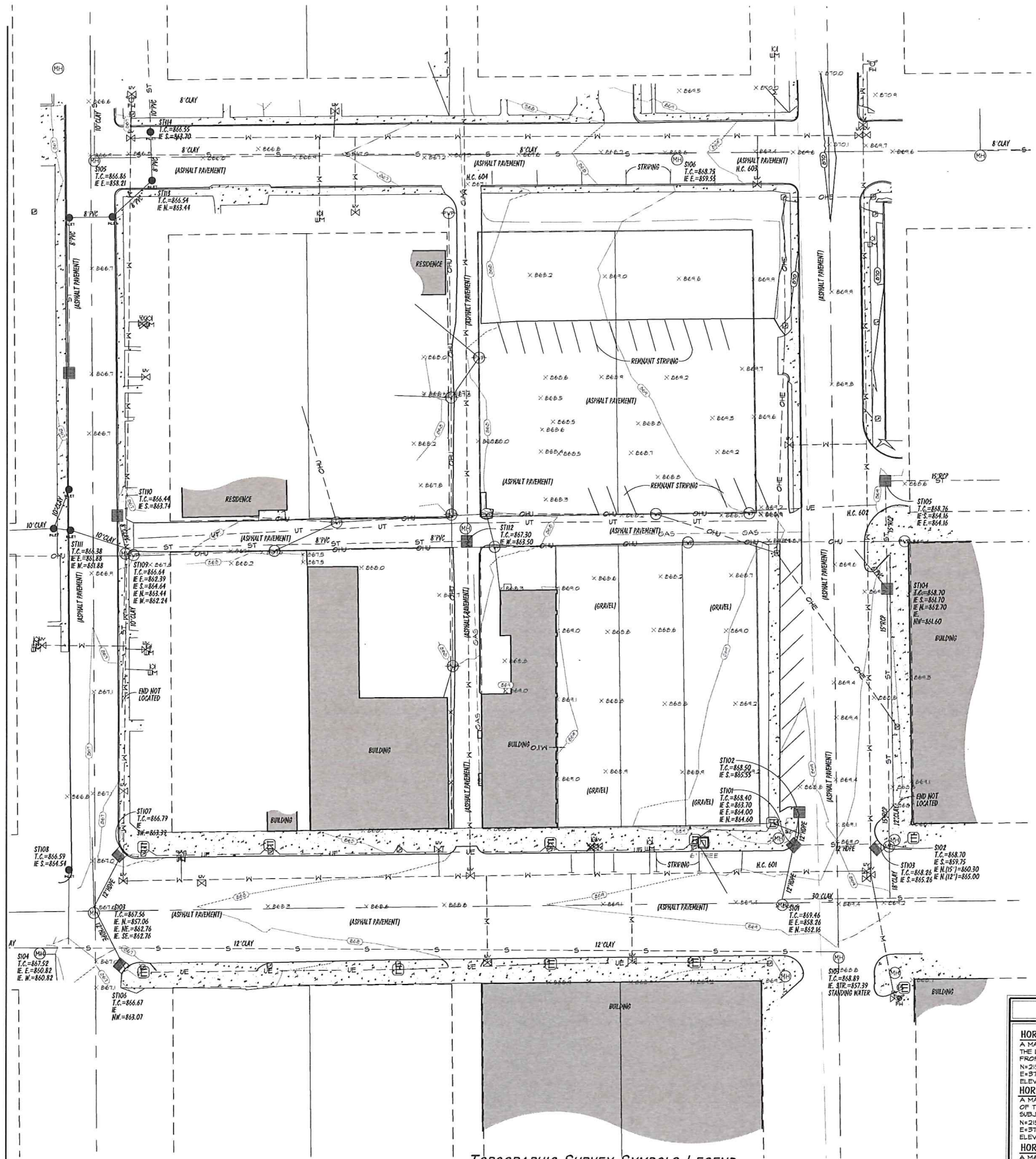
Title

Sheet Number

SV1.2

SHEET 2 OF 2

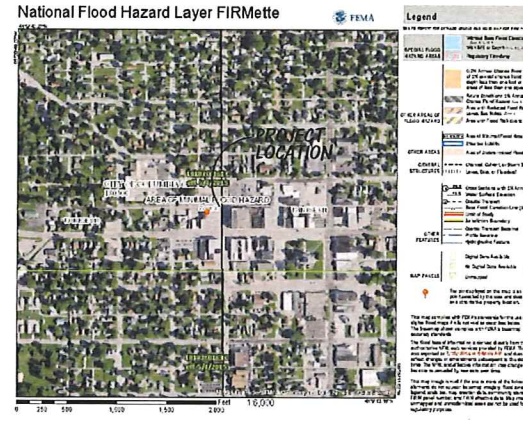
EXPERIENCE. INNOVATION. RESULTS.



SITE TOPOGRAPHIC SURVEY
SCALE: 1" = 30'

TOPOGRAPHIC SURVEY SYMBOLS LEGEND

MANHOLE	FORESIGHT CONSULTING CONTROL	SHRUB	CABLE TV PEDESTAL
CLEAN OUT	P.K. NAIL FOUND	BOLLARD	TELEPHONE PEDESTAL
ROUND INLET	IRON PIN FOUND	FLAG POLE	FLAG POLE
SQUARE INLET	RIGHT-OF-WAY MARKER	YARD LIGHT	HOODED AREAS
CURB-CAST INLET	SECTION CORNER	POST	UNDERGROUND FIBER
DOWN SPOUT	BENCH MARK	POST INDICATOR VALVE	OPTIC CABLE
MONITORING WELL	SIGN	FIRE HYDRANT	WATER LINE
WELL	EXISTING FINISH FLOOR	YARD HYDRANT	STORM SEWER LINE
WATER VALVE	GUY ANCHOR	GAS METER	SANITARY SEWER LINE
HANDICAP STRIPING	PARKING BLOCK	GAS VALVE	OVERHEAD TELEPHONE
HANDICAP ACCESS RAMP	ELECTRIC BOX	GAS PUMP	OVERHEAD ELECTRIC
SOIL BORING	ELECTRIC PANEL	POWER POLE	OVERHEAD UTILITY
CONIFEROUS TREE	MAIL BOX	UNDERGROUND ELECTRIC	UNDERGROUND TELEPHONE
DECIDUOUS TREE	AIR CONDITIONING UNIT	UNDERGROUND GAS LINE	



GENERAL NOTES

- THE LOCATION AND DIMENSIONS OF ALL BUILDING STRUCTURES ON THE FACE OF THIS SURVEY (IF APPLICABLE) ARE NOT INTENDED FOR STRUCTURAL DESIGN.
- UTILITIES DEPICTED ON THE WITHIN PLAT OF SURVEY WERE LOCATED FROM ABOVE-GROUND PHYSICAL EVIDENCE AND APPEARANCES. NO UTILITY LOCATION SERVICE WAS REQUESTED FOR THIS SURVEY.
- DISTURBING UNDERGROUND UTILITIES MAY RESULT IN SUBSTANTIAL PENALTIES AND DAMAGES FOR WHICH YOU WILL BE LIABLE. BEFORE DIGGING OR EXCAVATING ON YOUR PROPERTY YOU ARE REQUIRED TO CHECK FOR THE PRESENCE OF UTILITIES BY CALLING 1-800-382-5544. ADDITIONAL UTILITIES MAY NOT BE INCLUDED IN THE ONE-CALL UTILITY LOCATION SERVICE AND IT IS YOUR ADDITIONAL RESPONSIBILITY TO CONTACT EACH OF THESE UTILITY PROVIDERS.
- THE IDENTIFICATION AND DELINEATION OF WETLANDS WERE NOT A PART OF THE SURVEYING SERVICES PROVIDED. FEDERAL AND STATE LEGISLATION HAS DEFINED AND ESTABLISHED RESTRICTIONS FOR THE PROTECTION OF WETLANDS. THE PRESENCE OF WETLANDS ON OR NEAR YOUR PROPERTY WILL LIMIT OR RESTRICT THE USE AND IMPROVEMENT OF YOUR PROPERTY. YOU SHOULD CONSULT WITH YOUR STATE ENVIRONMENTAL PROTECTION AGENCY FOR A MORE DETAILED EXPLANATION ON IDENTIFYING WETLANDS AND LAWS MEANT TO ENSURE THEIR PROTECTION.
- ELEVATIONS ON THIS SURVEY ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM 1988.

Topographic Survey Positional Accuracy Standards
Based on the National Society of Professional Surveyors Model Standards for Topographic Surveys

Item	Vertical Accuracy Tolerance (Feet)	Horizontal Accuracy Tolerance (Feet)
Contour Line (1 Foot Interval)	0.65' plus or minus	1' plus or minus
Contour Line (5 Foot Interval)	3.20' plus or minus	4' plus or minus
Contour Line (10 Foot Interval)	6.50' plus or minus	8' plus or minus
Finish Floor Elevations	0.05' plus or minus	1' plus or minus
Spot Paving Elevations	0.20' plus or minus	2' plus or minus
Sewer Invert Elevations	0.05' plus or minus	1' plus or minus
Well Defined Planimetric Features	0.10' plus or minus	1' plus or minus

Positional Accuracy is given at the 95% confidence interval level

PROFESSIONAL SURVEYOR CERTIFICATION

THE UNDERSIGNED PROFESSIONAL SURVEYOR, REGISTERED UNDER THE LAWS OF THE STATE OF INDIANA, HEREBY CERTIFIES THAT HE HAS CONDUCTED THIS TOPOGRAPHICAL AND UTILITY SURVEY, UNDER HIS DIRECT SUPERVISION.

COMMISSION NUMBER: 182271
CLIENT: KEIGAND CONSTRUCTION
DATES OF FIELD WORK: JULY 5TH & 9TH, 2018
FIELD WORK COMPLETED: JULY 5TH, 2018

IN WITNESS WHEREOF, I HERETO PLACE MY HAND AND SEAL THIS 10TH DAY OF FEBRUARY, 2018.

Todd R. Bower
Todd R. Bower, P.S. No. 24800007
todd@4site.biz

ForeSight Consulting, LLC
Civil Engineering ~ Land Surveying
1910 St. Joe Center Road, Suite #51
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Certification:

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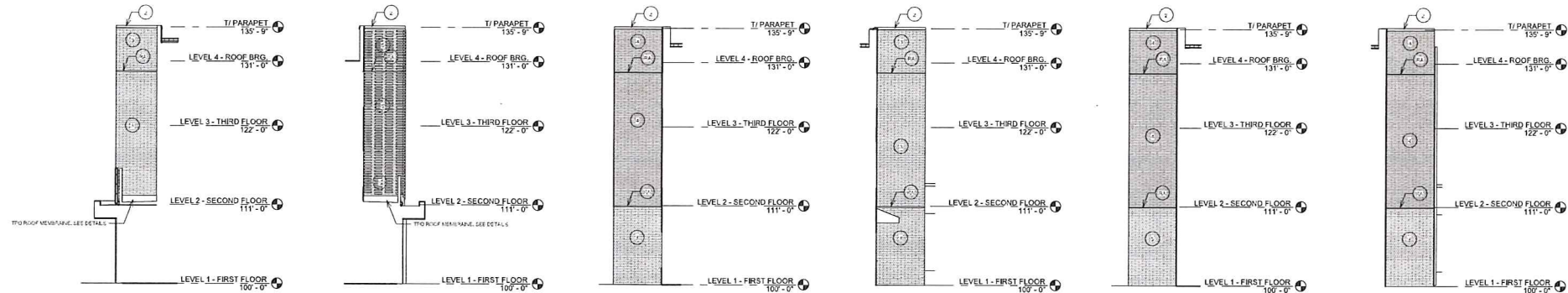
SITE TOPOGRAPHIC SURVEY FOR:
Lots 1, 2, 8, and Part of lot 7 in
Shinnemans' First Addition
306 West Van Buren Street, Columbia City, Indiana 46725

Drawing Revisions

Commission Number	182297
Date	July 10th, 2018
Title	

Sheet Number
SV2.1

Sheet Title/Date: 2/7/2019, 3:46:12 PM
Drawing Name: Elevations.dwg



- Tag
- Text
- 1 FIBER CEMENT PANEL SIDING WITH EXTRUDED ALUMINUM REVEALS. SEE SECTIONS & TYPICAL DETAILS FOR MORE INFO.
- 2 PREFINISHED ALUMINUM COPING. SEE TYPICAL PARAPET DETAILS & SPEC FOR MORE INFO.
- 3 BRICK VENEER (NORMAN SIZE), COLOR "A", SEE WALL SECTIONS AND DETAILS FOR MORE INFO.
- 4
- 5
- 6 BRICK VENEER (NORMAN SIZE), COLOR "A" WITH A STAGGERED CORBEL PATTERN. SEE WALL SECTIONS AND DETAILS FOR MORE INFO.
- 7 ~24" TALL EXTRUDED ALUMINUM LETTER SIGNAGE. SIGNAGE VERBIAGE SHOWN FOR REFERENCE ONLY. VERIFY WITH OWNER. PROVIDE SHOP DRAWINGS FOR REVIEW. SEE SPECIFICATIONS FOR MORE INFO. PROVIDED ADEQUATE BLOCKING IN WALL BEYOND FOR MOUNTING.
- 8 ACM PANEL CANOPY. SEE SECTION DETAILS AND SPEC FOR MORE INFO.
- 9 7" X 7" SQUARE PREFINISHED ALUMINUM DOWNSPOUT WITH COLLECTOR BOX. SEE SCUPPER DETAIL FOR MORE INFO.
- 10 3" X 4" SQUARE PREFINISHED ALUMINUM DOWNSPOUT WITH COLLECTOR BOX. SEE SECTION & PLAN DETAILS FOR MORE INFO. CONNECT DOWNSPOUT TO UNDERGROUND STORM DRAIN. SEE CIVIL.
- 11 WALL MOUNTED LIGHT FIXTURE. SEE ELECTRICAL.
- 12 EXHAUST LOUVERS. PAINT TO MATCH SIDING OR BRICK. COORDINATE LOCATION TO ALIGN WITH REVEALS AND ALIGN WITH OTHER LOUVER ABOVE/BELOW OR LEFT/RIGHT. SEE MECHANICAL FOR MORE INFO.
- 13 CANVAS AWNING ON ALUMINUM SUB FRAME WITH 1" STRAIGHT HEM. PROVIDE ADEQUATE BLOCKING IN WALL FOR AWNING ATTACHMENT.
- CJ VERTICAL MASONRY CONTROL JOINT.
- E2.4 EXTRUDED ALUMINUM EZ-7 2-PIECE VERTICAL U-PANEL TRIM. SEE TYPICAL EZ-TRIM DETAILS FOR MORE INFO.
- E2.7 EXTRUDED ALUMINUM EZ-7 2-PIECE VERTICAL U-PANEL TRIM. SEE TYPICAL EZ-TRIM DETAILS FOR MORE INFO.
- E2.20 EXTRUDED ALUMINUM EZ-20 2-PIECE VERTICAL F-TERMINATION TRIM. SEE TYPICAL EZ-TRIM DETAILS AND FIBER CEMENT CORNER DETAIL FOR MORE INFO.
- RA BRICK RELIEF ANGLE. PROVIDE FLASHING AND WEEPS PER DETAIL. SEE STRUCTURAL FOR MORE INFO.

14 ELEVATION 1/8" = 1'-0"

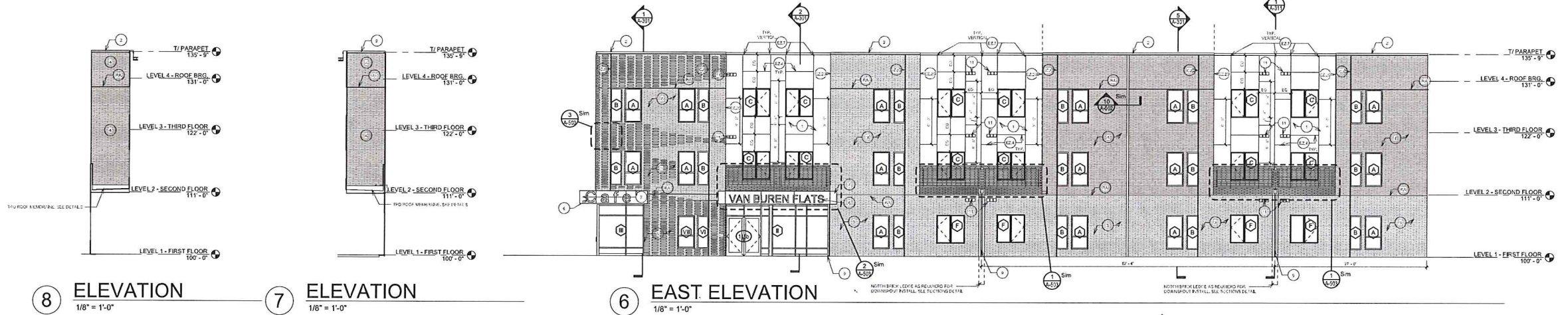
13 ELEVATION 1/8" = 1'-0"

12 ELEVATION 1/8" = 1'-0"

11 ELEVATION 1/8" = 1'-0"

10 ELEVATION 1/8" = 1'-0"

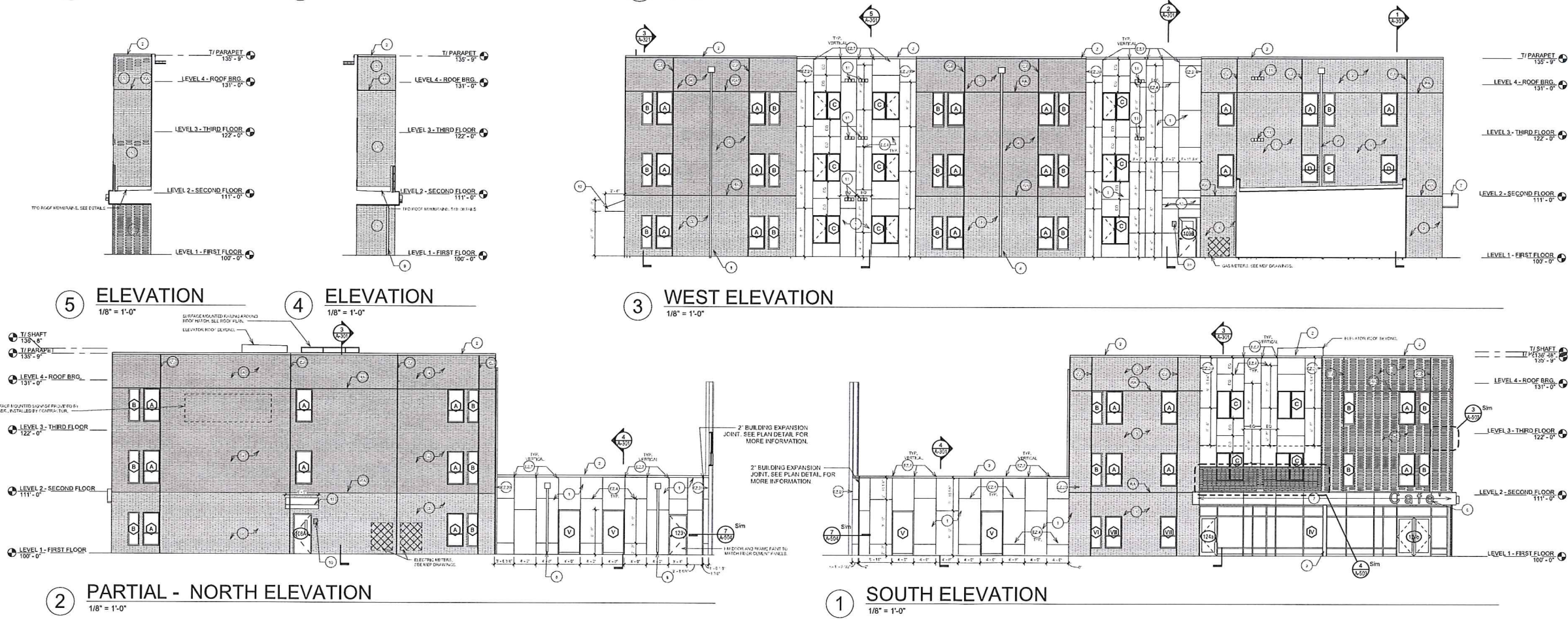
9 ELEVATION 1/8" = 1'-0"



8 ELEVATION 1/8" = 1'-0"

7 ELEVATION 1/8" = 1'-0"

6 EAST ELEVATION 1/8" = 1'-0"



5 ELEVATION 1/8" = 1'-0"

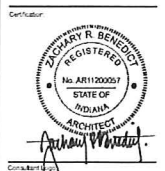
4 ELEVATION 1/8" = 1'-0"

3 WEST ELEVATION 1/8" = 1'-0"

2 PARTIAL - NORTH ELEVATION 1/8" = 1'-0"

1 SOUTH ELEVATION 1/8" = 1'-0"

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WEIGAND
CONSTRUCTION
East Wayne Blvd.

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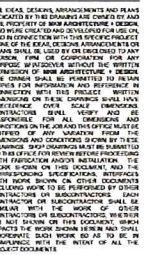
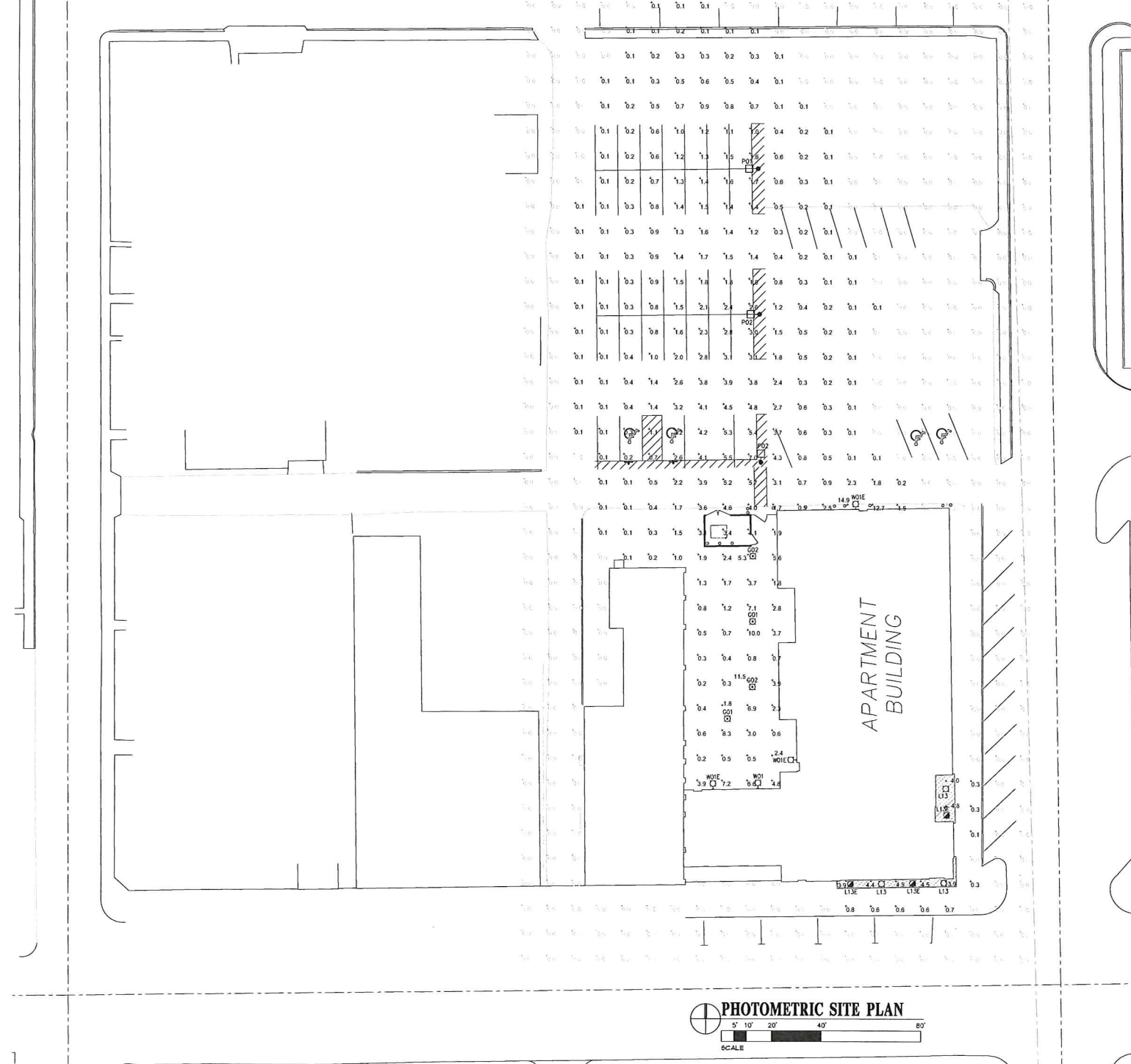
REVISION		
No.	Date	Revision

DRAWING CONTENTS
BUILDING ELEVATIONS

ISSUE DATE: 02.01.2019
PROJECT NO: 18085
DRAWING NO:

A-201

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.3 fc	14.9 fc	0.0 fc	N/A	N/A



DRAWING CONTENTS	
Electrical Site	
Lighting Plan	
ISSUE DATE	PROJECT NO
2.01.2019	15085 (152344)
DRAWING NO	

CE-202