

Case Number: PC 20-13

Meeting Date: November 5, 2020

Project Address: 5050 W State Road 46

Project Type: Development Plan

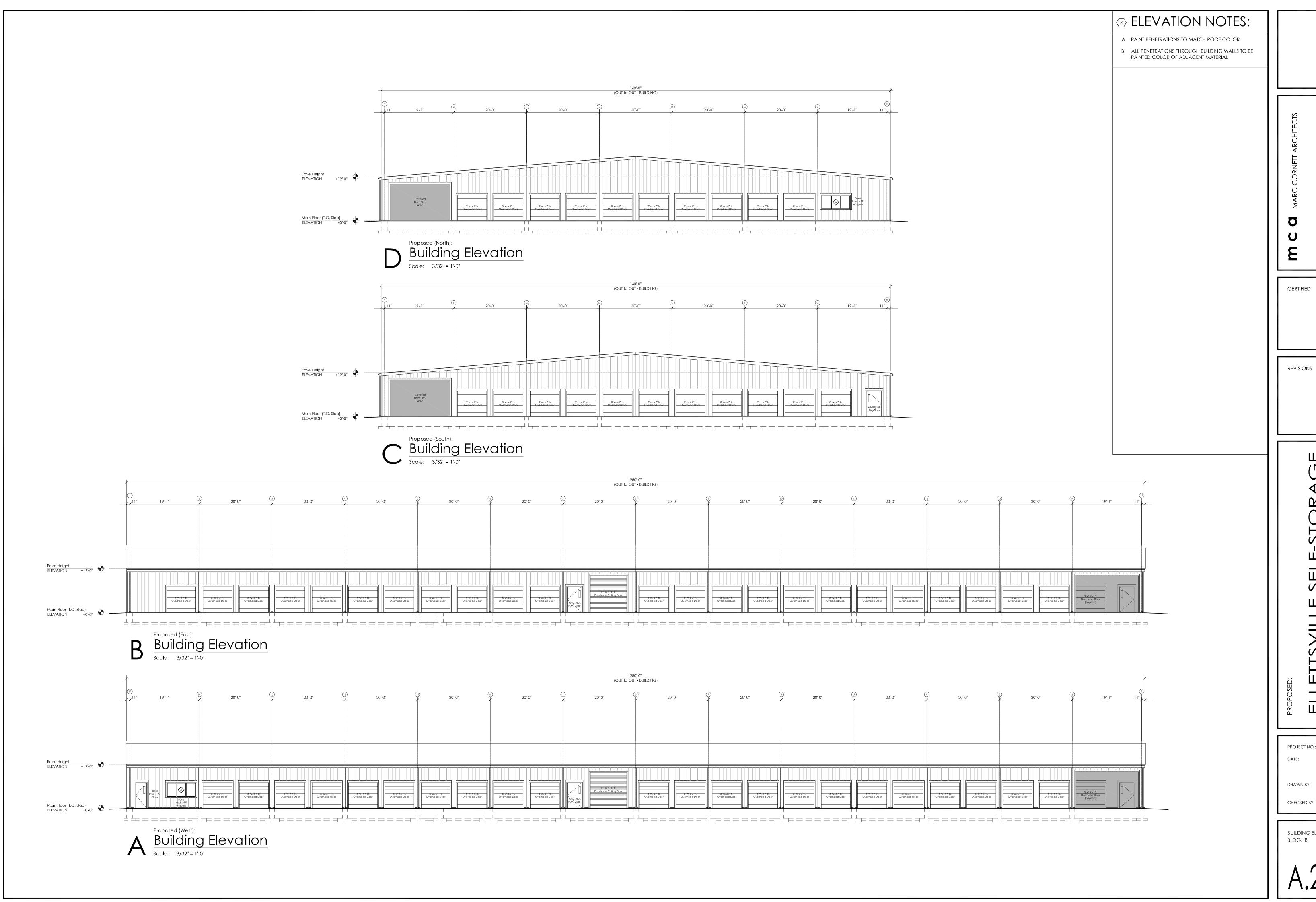
Description: Indoor/Outdoor

Self-Storage Units

39,200 square feet

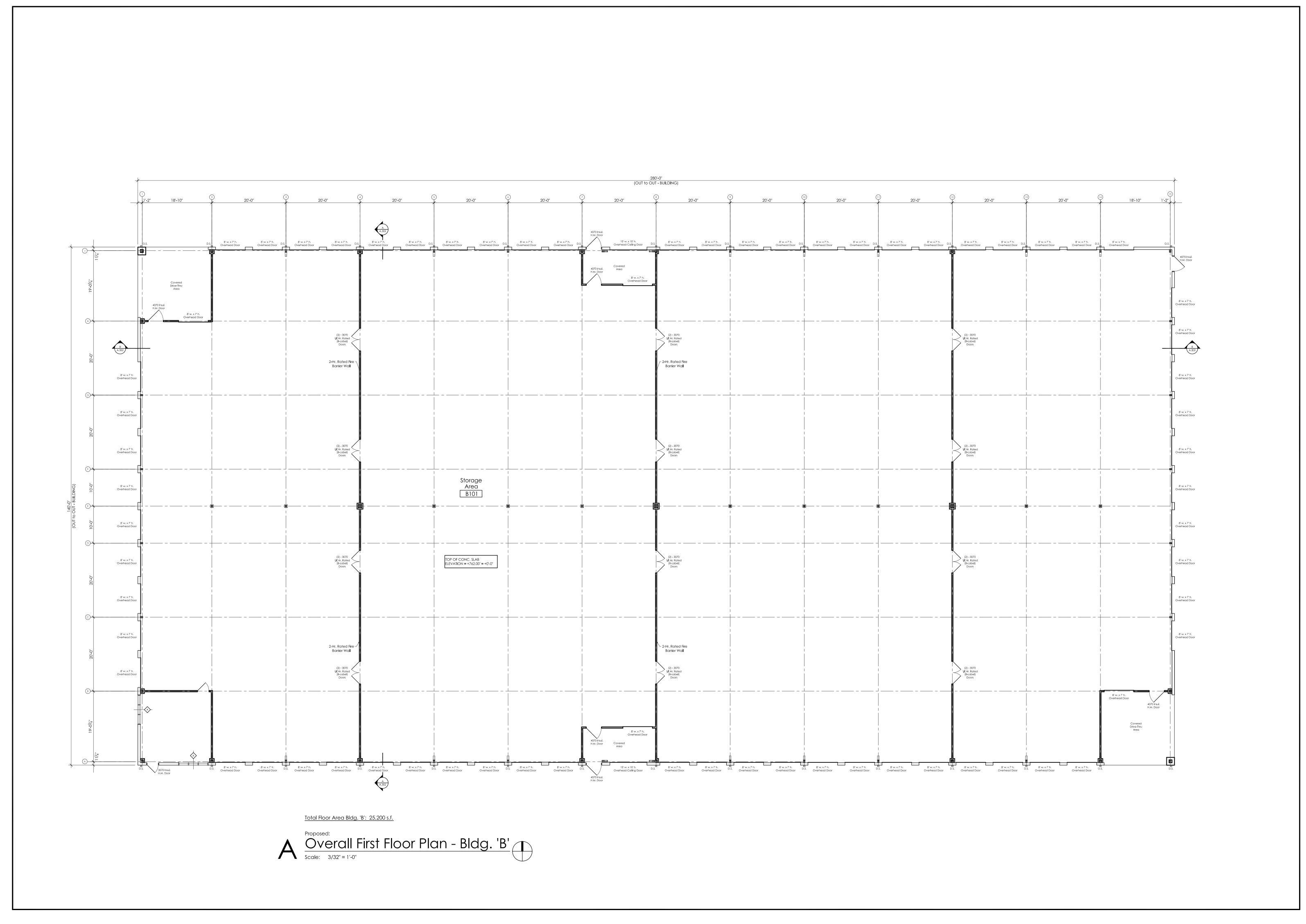


Town of Ellettsville, Planning Dept. 10/26/20



PROJECT NO.: 2020-09 CHECKED BY:

BUILDING ELEVATIONS -BLDG. 'B'



2

101 EAST KIRKWOOD AVE.
BLOOMINGTON, INDIANA 47408

CERTIFIED

revisions

F-STORAGE

ELLETTSVILLE SEL
5050 W. STATE ROAD 46
BLOOMINGTON

PROJECT NO.: 2020-09

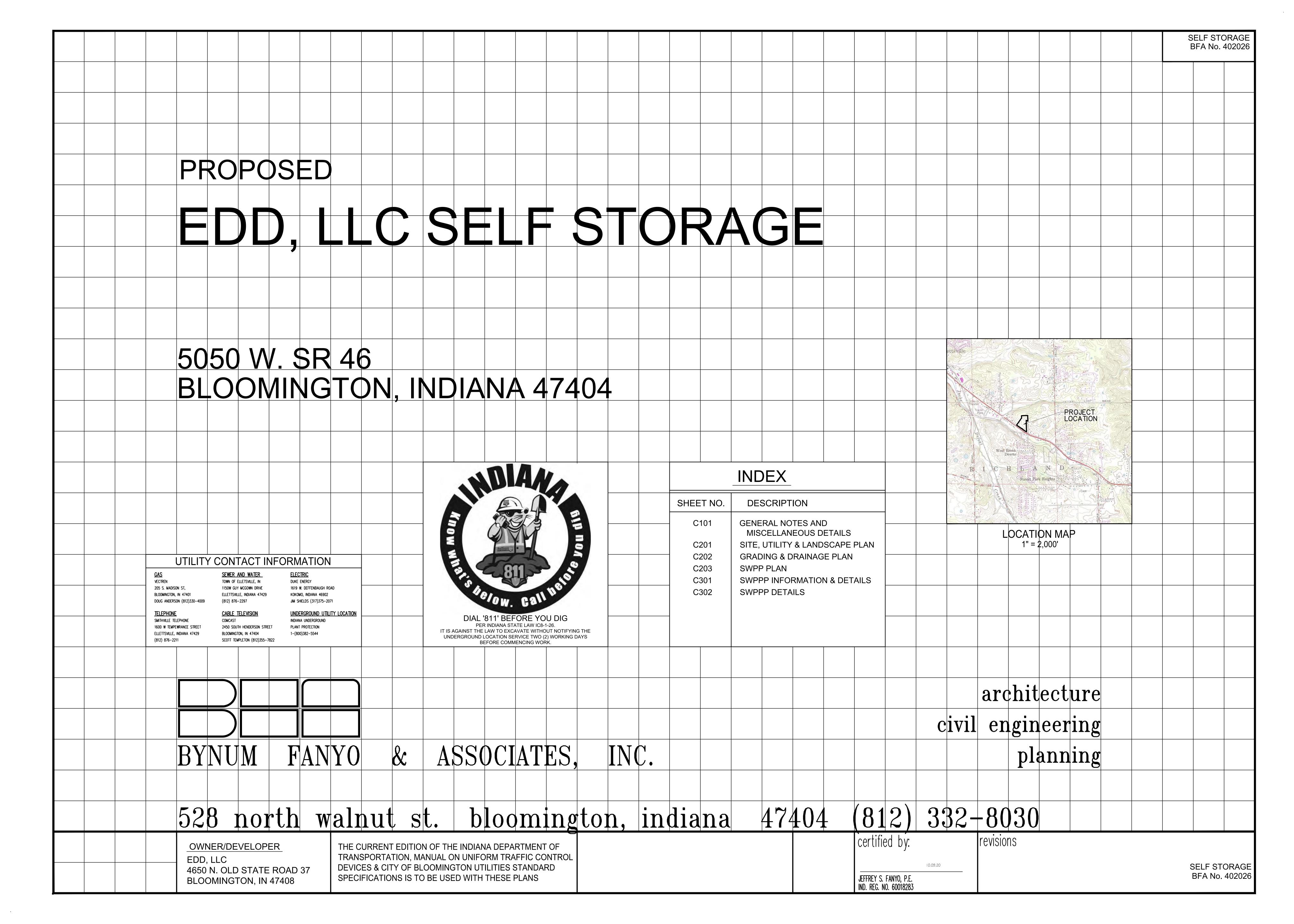
DATE: 9.09.20

DRAWN BY:

CHECKED BY: MHC

OVERALL FIRST FLOOR PLAN - BLDG. 'B'

A.102



GENERAL NOTES

- 1. BOUNDARY AND TOPO BY BYNUM FANYO AND ASSOCIATES, 528 NORTH WALNUT STREET, BLOOMINGTON, INDIANA 47404. PHONE (812) 332-8030 2. DEVELOPER: EDD, LLC, 4650 N. OLD STATE ROAD 37, BLOOMINGTON, IN 47408. CONTACT DOUG DUNCAN.
- 3. PROJECT ADDRESS: 5050 W. SR 46, BLOOMINGTON, INDIANA 47404.
- 4. ALL WORK IS TO BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. 5. ALL PERMITS ARE TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- 6. THE CURRENT EDITION OF THE INDIANA DEPARTMENT OF TRANSPORTATION. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES & CITY OF BLOOMINGTON UTILITIES STANDARD SPECIFICATION IS TO BE USED WITH THESE PLANS.
- 7. EXISTING UTILITIES ON SITE SHALL BE RELOCATED AS REQUIRED. CONTRACTOR SHALL PAY ALL COSTS ASSOCIATED WITH RELOCATION.
- 8. SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.

PARKING AND PAVEMENT NOTES

1. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC DEVICES, CURRENT EDITION AS

2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS INDICATED OTHERWISE.

AMENDED.

- 3. CONTRACTOR SHALL FURNISH AND INSTALL PAVEMENT MARKINGS AS SHOWN ON
- 4. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL SIGNS, PAVEMENT
- 5. JOINTS OR SCORE MARKS ARE TO BE SHARP AND CLEAN WITHOUT SHOWING

MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES WITH OTHER CONTRACTORS ON

EDGES OF JOINTING TOOLS. 6. CONTRACTOR SHALL SAW-CUT TIE-INS AT EXISTING CURBS AS NECESSARY TO

INSURE SMOOTH TRANSITIONS. CONTRACTOR SHALL SAW-CUT AND TRANSITION TO

MEET EXISTING PAVEMENT AS NECESSARY AND AS DIRECTED BY INSPECTOR TO

INSURE POSITIVE DRAINAGE. (TYPICAL AT ALL INTERSECTIONS).

7. CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY A.G.C. OF AMERICA, INC. AND THE HEALTH AND SAFETY REGULATIONS FOR CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.

GRADING NOTES

- 1. NEW FINISHED CONTOURS SHOWN ARE TOP OF FUTURE PAVING IN AREAS TO RECEIVE PAVEMENT AND TOP OF TOPSOIL IN AREAS TO BE SEEDED OR PLANTED.
- 2. AREAS OUTSIDE OF THE PARKING LOT PERIMETERS SHOWN TO BE SEEDED OR PLANTED SHALL RECEIVE 6" OF TOPSOIL. THIS TOPSOIL IS TO BE PLACED AND LEVELED
- 3. CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING, OR CONNECTING TO SAID FACILITIES. CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION WITH ALTERATION OF OR RELOCATION OF THE
- 4. ALL AREAS NOT COVERED BY BUILDING OR PAVING ARE TO BE VEGETATED (SEEDED OR PER LANDSCAPE PLAN).
- 5. UNUSABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE BY CONTRACTOR.
- 6. BEFORE ANY MACHINE WORK IS DONE, CONTRACTOR SHALL STAKE OUT AND MARK THE ITEMS ESTABLISHED BY THE SITE PLAN. CONTROL POINTS SHALL BE PRESERVED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. THE LACK OF PROPER WORKING POINTS AND GRADE STAKES MAY REQUIRE CESSATION OF OPERATIONS UNTIL SUCH
- 7. THESE DOCUMENTS ARE SCHEMATIC IN NATURE AND CANNOT SHOW EVERY ITEM NEEDED FOR A COMPLETE OPERATIONAL STORM SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE OPERATING STORM SYSTEM.

POINTS AND GRADES HAVE BEEN PLACED TO THE OWNER'S SATISFACTION.

8. ALL FILL SHALL BE FREE OF VEGETABLE MATTER, RUBBISH, LARGE ROCK, AND OTHER DELETERIOUS MATERIAL. THE FILL MATERIAL SHOULD BE PLACED IN LAYERS NOT TO EXCEED SIX (6) INCHES IN LOOSE THICKNESS AND SHOULD BE SPRINKLED WITH WATER AS REQUIRED TO SECURE SPECIFIED COMPACTION. EACH LAYER SHOULD BE UNIFORMLY COMPACTED BY MEANS OF SUITABLE EQUIPMENT AS DICTATED BY THE TYPE OF FILL MATERIAL. UNDER NO CIRCUMSTANCES SHOULD A BULLDOZER OR SIMILARLY TRACKED VEHICLE BE USED AS COMPACTING EQUIPMENT. MATERIAL CONTAINING AN EXCESS OF WATER SHOULD BE SPREAD AND DRIED TO A MOISTURE CONTENT THAT WILL PERMIT PROPER COMPACTION. ALL FILL SHOULD BE COMPACTED TO THE SPECIFIED PERCENTAGE OF THE MAXIMUM DENSITY OBTAINED IN ACCORDANCE WITH ASTM DENSITY TEST D-698 (98 PERCENT OF MAXIMUM DRY DENSITY). IF THE SPECIFIED COMPACTION LIMITS ARE NOT MET, SUCH AREAS SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED LIMITS ARE REACHED.

ON-SITE UTILITY NOTES

- 1. ALL WATER PIPE 6" AND LARGER SHALL BE PRESSURE CLASS 350 DIP WATER PIPE CONFORMING TO ALL STATE AND LOCAL STANDARDS.
- 2. WATER MAIN FITTINGS 6" AND LARGER SHALL BE DUCTILE IRON CONFORMING TO AWWA/ANSI STANDARD SPECIFICATIONS C153/A21.53, LATEST REVISION. 3. 2" WATER MAINS SHALL BE SDR-21 (PR200) AND 4" PIPE MAY BE EITHER SDR-21 (PR200) OR C900 (DR-14).
- 4. MECHANICAL RESTRAINTS SHALL BE PROVIDED AT ALL FIRE LINE BENDS, OFFSETS, TEES, PLUGS, ETC. SEE THE RESTRAINT DETAIL ON SHEET C302.
- 5. ALL WATER LINE GATE VALVES OTHER THAN AIR RELEASE VALVES AND TAPPING VALVES SHALL BE CAST IRON BODY, FULLY BRONZE MOUNTED, WITH RESILIENT SEAT AND NON-RISING STEM AND SHALL BE MANUFACTURED BY M & H VALVE COMPANY, DARLING VALVE AND MANUFACTURING COMPANY, KENNEDY VALVE COMPANY, OR MUELLER COMPANY.
- 6. HYDRANT LOCATION SHALL BE APPROVED BY THE LOCAL FIRE MARSHALL.
- 7. ALL FIRE HYDRANTS SHALL BE MANUFACTURED BY KENNEDY GUARDIAN OR MUELLER CENTURION.
- 8. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED BEFORE ACCEPTANCE. SEE SITE WORK SPECIFICATIONS.
- THE WATER AND SEWER LINE IS TEN FEET (10'). THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS EIGHTEEN INCHES (18").

9. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF

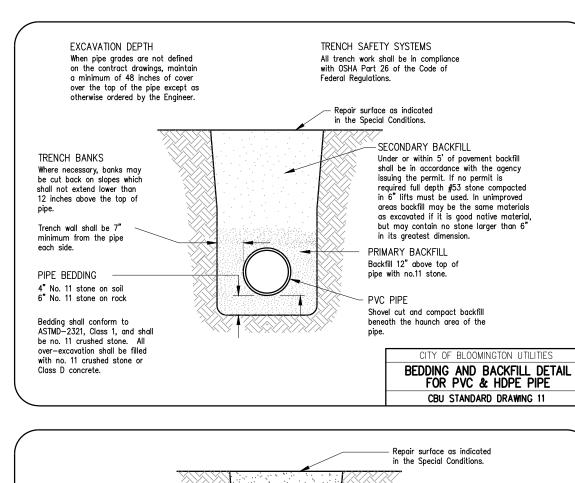
- 10. 6" GRAVITY SANITARY SEWER PIPE SHALL BE CONSTRUCTED OF SDR-35 PVC.
- 11. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS. 12. SEE SITE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS.
- 13. SITE CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
- 14. ALL WORK ON THIS PLAN SHALL BE DONE IN STRICT ACCORDANCE WITH SITE WORK SPECIFICATIONS.
- 15. ALL CATCH BASIN GRATE AND FRAMES ON INDOT STYLE INLETS ARE TO BE EAST JORDAN BRAND. 19. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE
- BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
- 20. BUILDING CONTRACTOR SHALL PROVIDE & INSTALL A PERMANENT INDICATING VALVE 12" ABOVE THE FLOOR ON THE FIRE LINE AT THE TERMINATION POINT. THIS VALVE WILL BE USED TO HYDROSTATIC PRESSURE TEST AGAINST & WILL REMAIN AS PART OF THE SYSTEM ONCE ALL TESTING IS COMPLETED. THE FIRE LINE MAIN WILL NOT BE DISMANTLED FOR CONNECTION TO THE FIRE SUPPRESSION SYSTEM. SITE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE FIRE MAIN WITH THE BUILDING CONTRACTOR.
- 21. ALL PROJECTS WILL REQUIRE A PRE-CONSTRUCTION MEETING WITH THE CITY OF BLOOMINGTON UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR AND/OR DEVELOPER MUST CONTACT TOM AXSOM AT (812)349-3633 TO SCHEDULE
- 22. CONTRACTOR SHALL NOTIFY THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT ONE (1) WORKING DAY PRIOR TO CONSTRUCTION OF ANY WATER. STORM OR SANITARY SEWER UTILITY WORK. A CBU INSPECTOR MUST HAVE NOTICE SO WORK CAN BE INSPECTED, DOCUMENTED, AND PROPER AS-BUILT MADE. WHEN A CONTRACTOR WORKS WEEKENDS, A CBU DESIGNATED HOLIDAY, OR BEYOND NORMAL CBU WORK HOURS. THE CONTRACTOR WILL PAY FOR THE INSPECTOR'S OVERTIME. FOR CBU WORK HOURS AND HOLIDAY INFORMATION, PLEASE CONTACT THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT AT (812)349-3660.

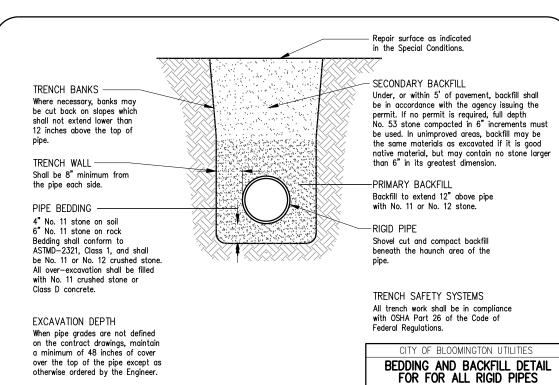
LANDSCAPE NOTES

- 1. ALL PLANT MATERIAL SHALL ARRIVE ONSITE IN A HEALTHY, VIGOROUS CONDTION AND BE FREE OF PESTS AND DISEASE.
- 2. ALL PLANTS SHALL BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
- 3. ALL TREES SHALL BE STRAIGHT—TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED. 4. ALL TREES SHALL BE GUYED OR STAKED PLUMB AS SHOWN IN THE DETAILS.
- 5. ALL PLANTING MASS BEDS SHALL BE SPADE CUT UNLESS SPECIFIED WITH A MOW STRIP OR OTHER INSTALL EDGING. TREES TO HAVE A 5' DIAMETER MULCH RING. 6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED WHERE SPECIFIED.
- 7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION. PLANTING LOCATIONS MAY REQUIRE ADJUSTMENTS IN FIELD TO AVOID OVERHEAD AND UNDERGROUND UTILITIES.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES AND SPECIES
- SHOWN ON THESE PLANS BEFORE PRICING THE WORK. 9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING AND LAWN AREAS INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, PRUNING, FERTILIZING, ETC., UNTIL WORK IS ACCEPTED IN FULL BY THE OWNER.
- 10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
- 11. THE OWNER SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
- 12. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST OR DRIP IRRIGATION SYSTEM PRIOR TO INSTALLATION. WATER ALL SPECIMENS WITHIN 24 HOURS OF PLANTING.
- 13. ANY NEW OR TRANSPLANTED PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES PRIOR TO TOTAL ACCEPTANCE OF THE WORK SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY AND SIZE TO MEET ALL PLANT LIST SPECIFICATIONS.
- 14. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
- 15. ALL SHRUB, GROUNDCOVER, ANNUAL AND HERBACEOUS PERENNIAL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH HARDWOOD MULCH TO A MINIMUM DEPTH OF FOUR INCHES.
- 16. DURING THE GROWING SEASON ALL ANNUALS AND HERBACEOUS PERENNIALS SHALL REMAIN IN A HEALTHY CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
- 17. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN ON PLANS.
- 19. ALL DISTURBED AREAS NOT INCLUDED IN LANDSCAPE MULCH BEDS ARE TO BE DEBRIS-RAKED AND FINED-GRADED AS NEEDED. THEN MULCH SEEDED (OR SODDED. PER PLAN) AND WATERED UNTIL A HEALTHY STAND OF TURF IS ESTABLISHED. 20. ANY PLANT OR OTHER LANDSCAPE MATERIAL SUBSTITUTIONS INSTALLED WITHOUT DESIGNER AND/OR OWNER APPROVAL SHALL BE REPLACED AT CONTRACTOR'S

DURING AND AFTER INSTALLATION.

EXPENSE. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE OWNER BEFORE,





THIN BRANCHES AND FOLIAGE AS NEEDED

NO MORE THAN UP TO 25% OF CANOPY

SPECIMEN SHAPE. IMMEDIATELY PAINT

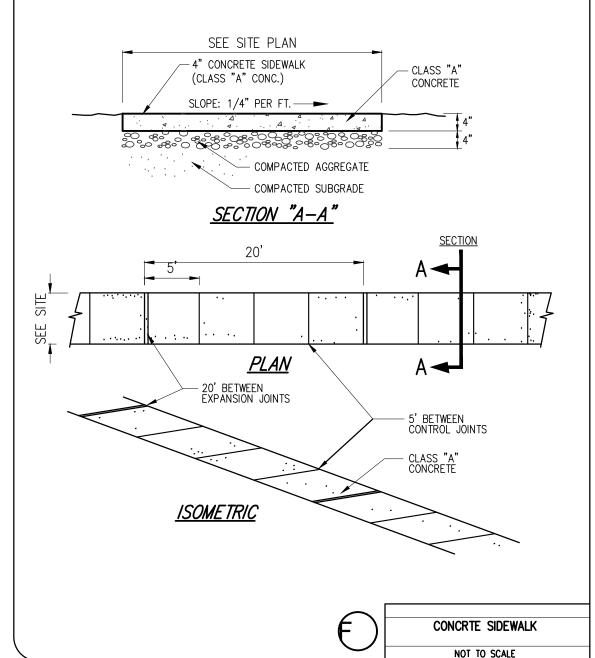
ALL CUTS OVER 1/2" WITH APPROVED

MASS WHILE RETAINING NORMAL

TREE PRUNING PAINT.

ONE COAT (DARK) WALNUT

CBU STANDARD DRAWING 1:



DRILL AND PLACE 1" EPOXY

DOWEL BARS (2' LONG @ 18"

C-C) THROUGH EXP. JOINTS

<u>TYPE EJ</u>

EXPANSION JOINT

50' MAXIMUM SPACINGS

-D50=6" RIP RAP ON FILTER

CONTROL BLANKET WHERE

SPECIFIED ON SHEET C301

OR SURFACE APPLIED EROSION

CONSTRUCTION SHALL BE IN

SPECS., CURRENT EDITION.

NOTE: CONCRETE MATERIALS AND

ACCORDANCE WITH INDOT STANDARD

EXPANSION JOINTS TO BE INSTALLED AT

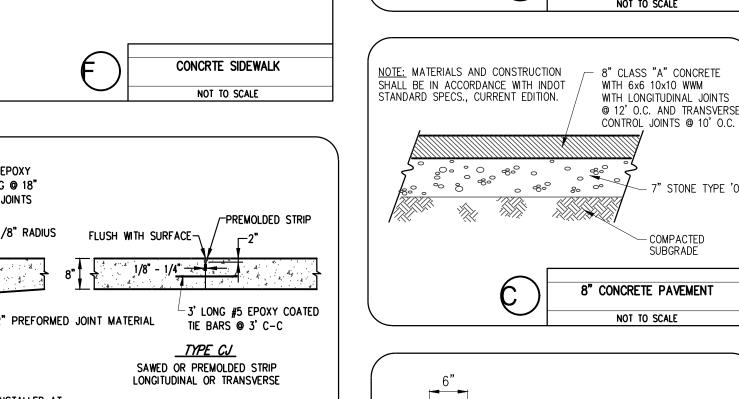
— CONCRETE

TAPER

Match Proposed

SECTION A-A (Reversed for Type H.

5'-0 min. H



BYNUM FANYO & ASSOCIAT

PAVEMENT JOINT DETAILS

NOT TO SCALE

#4 DEFORMED

BAR (TYP. OF 3)

CONCRETE PAVED SIDE DITCH TYPE 'A'

NOT TO SCALE

ioint filler w/ Sealant

NOTE: MATERIALS AND CONSTRUCTION

SHALL BE IN ACCORDANCE WITH INDOT STANDARD SPECS., CURRENT EDITION.

BITŰMINOUS

330#/ SYD (3

BITUMINOUS BAS

" COMPACTE

AGGREGATE BAS

SIZE NO. 53

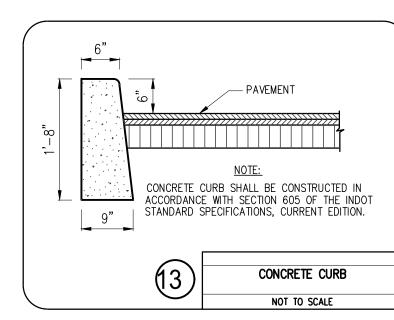
COMPACTED

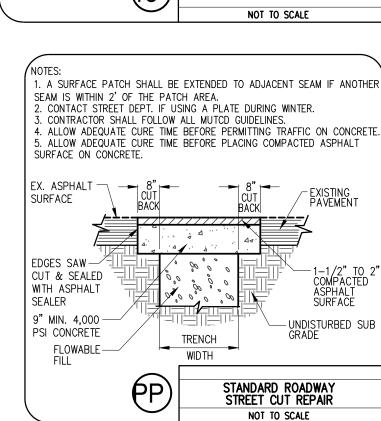
SUBGRADE

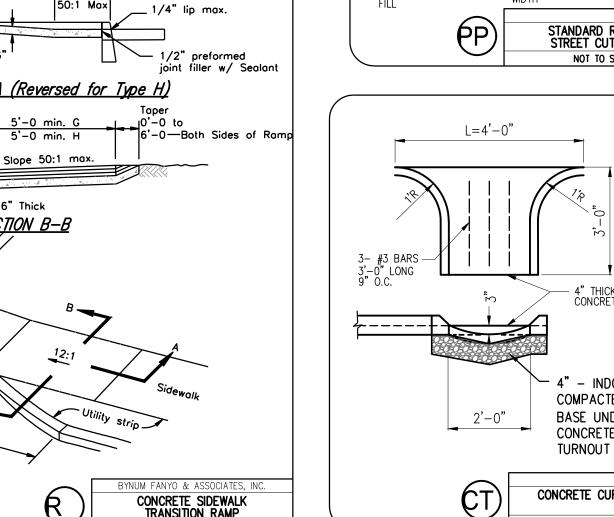
BITUMINOUS ASPHALT PAVEMENT

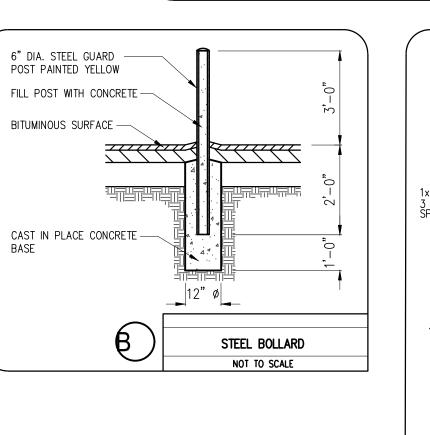
BITUMINOUS ASPHALT PAVEMENT

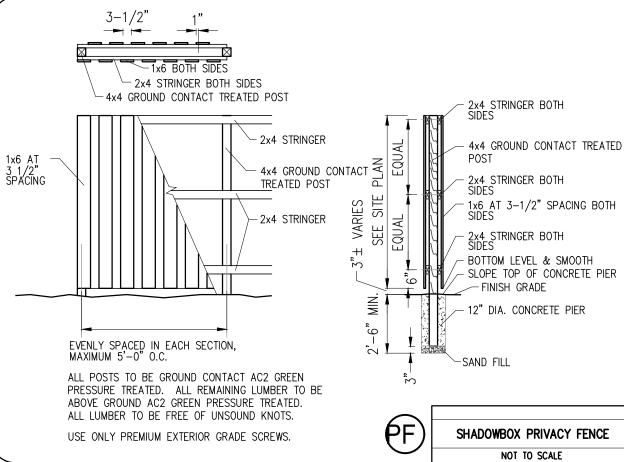
SURFACE

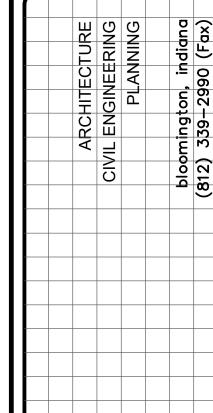




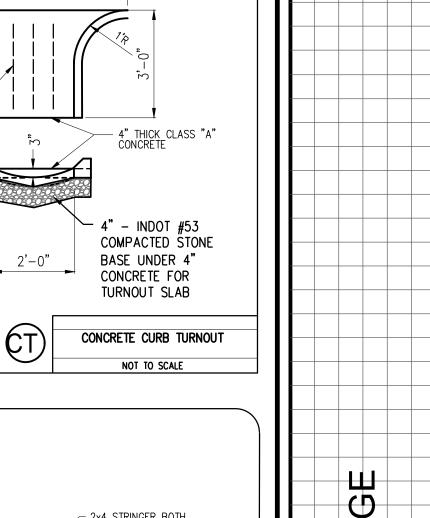






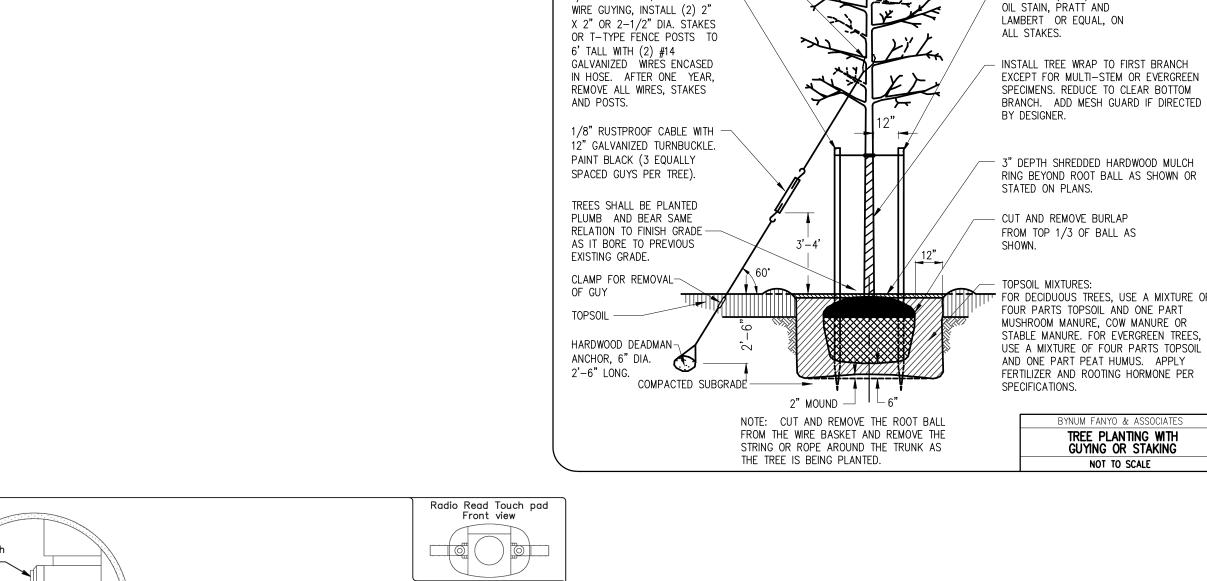


10.09.20



GENERAL NOTES & MISC. DETAILS

lesigned by: **JBT** drawn by: **JBT** checked by: **JSF** sheet no: C101 roject no.: 402026



DO NOT CUT PLANT LEADER —

GUYS SECURED TO SINGLE

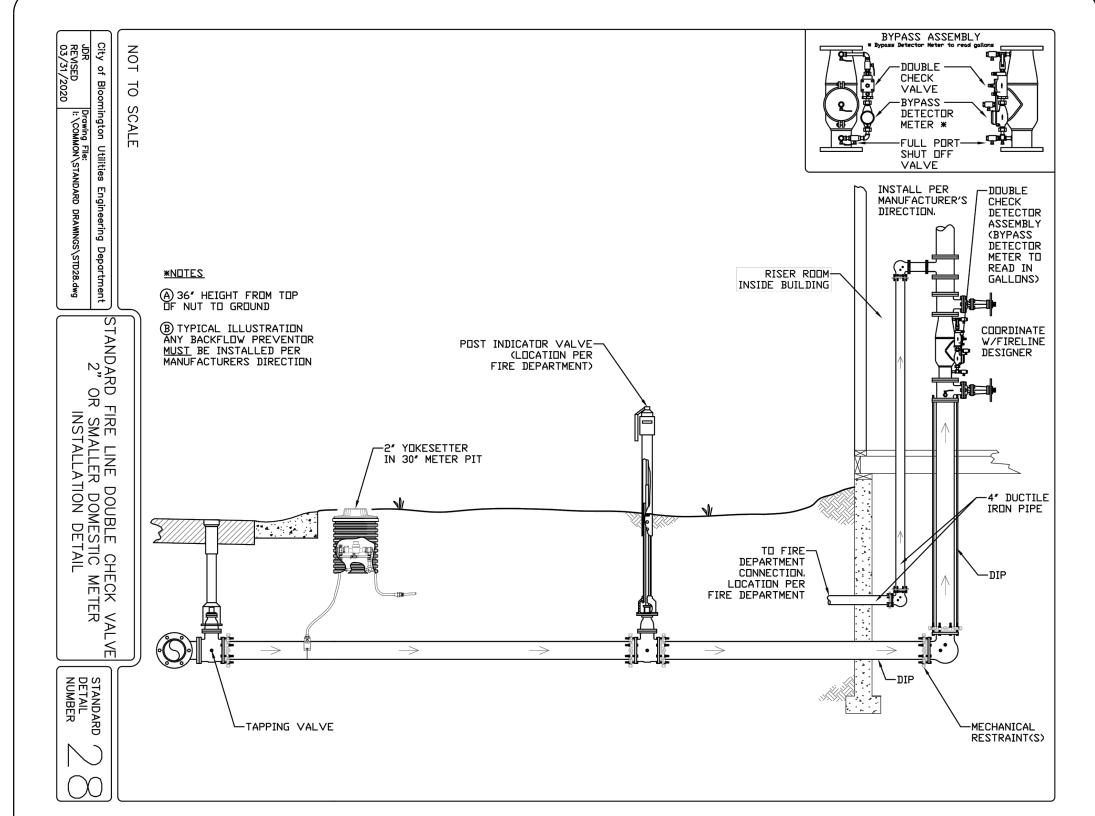
RING OF #10 GALVANIZED

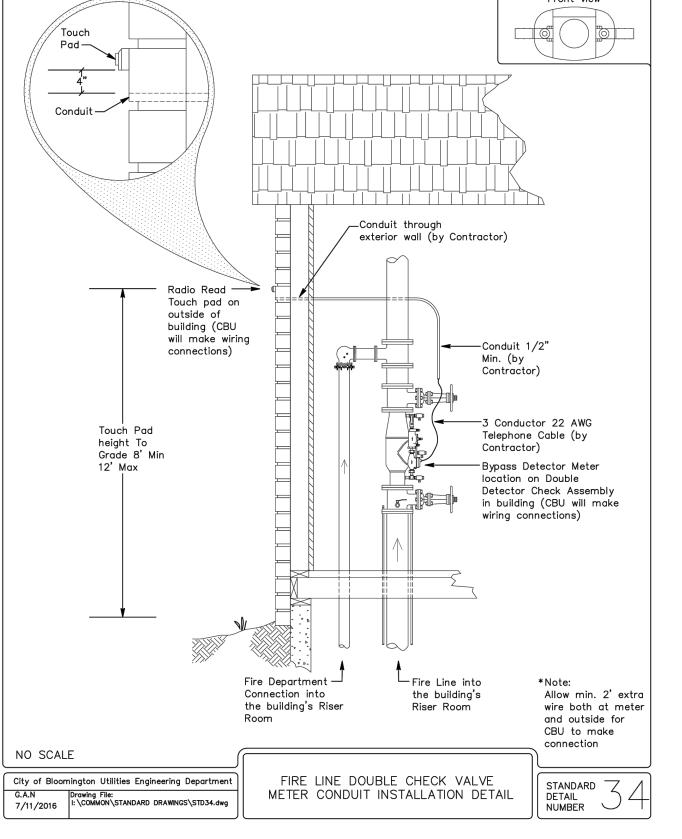
WIRE ENCASED IN RUBBER

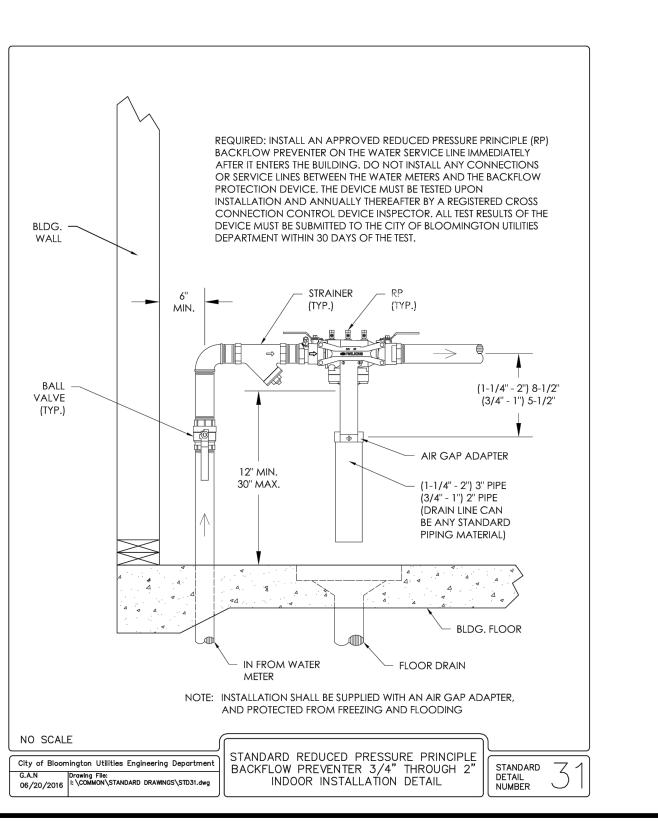
FOR ALL TREES UP TO 2-

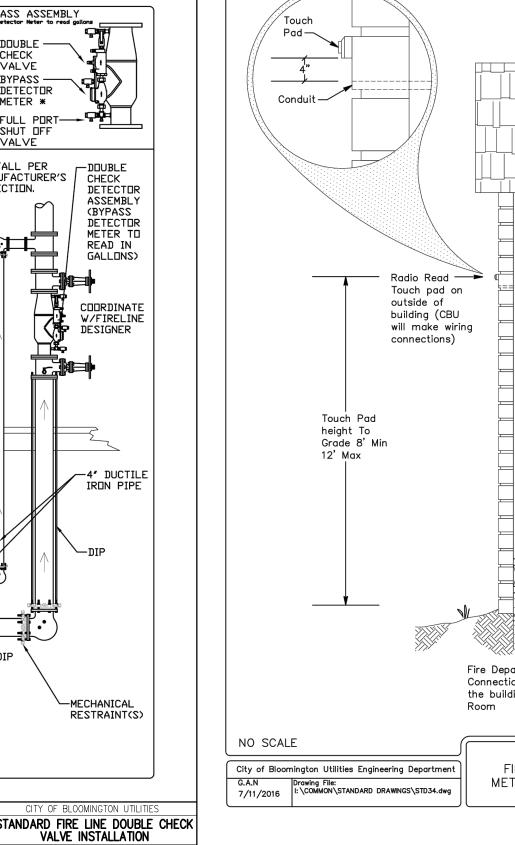
1/2" IN CALIPER, IN LIEU OF

HOSE.

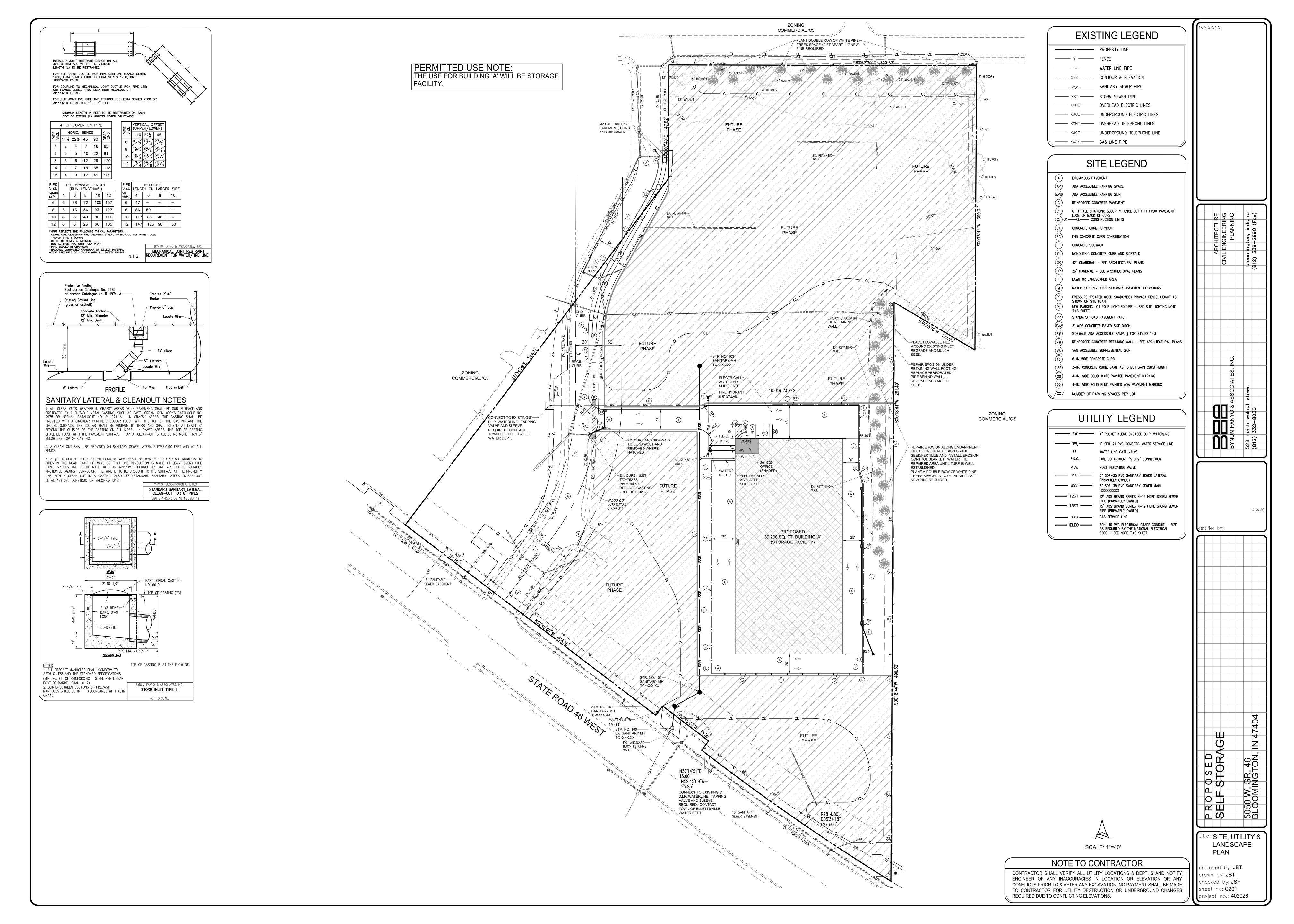


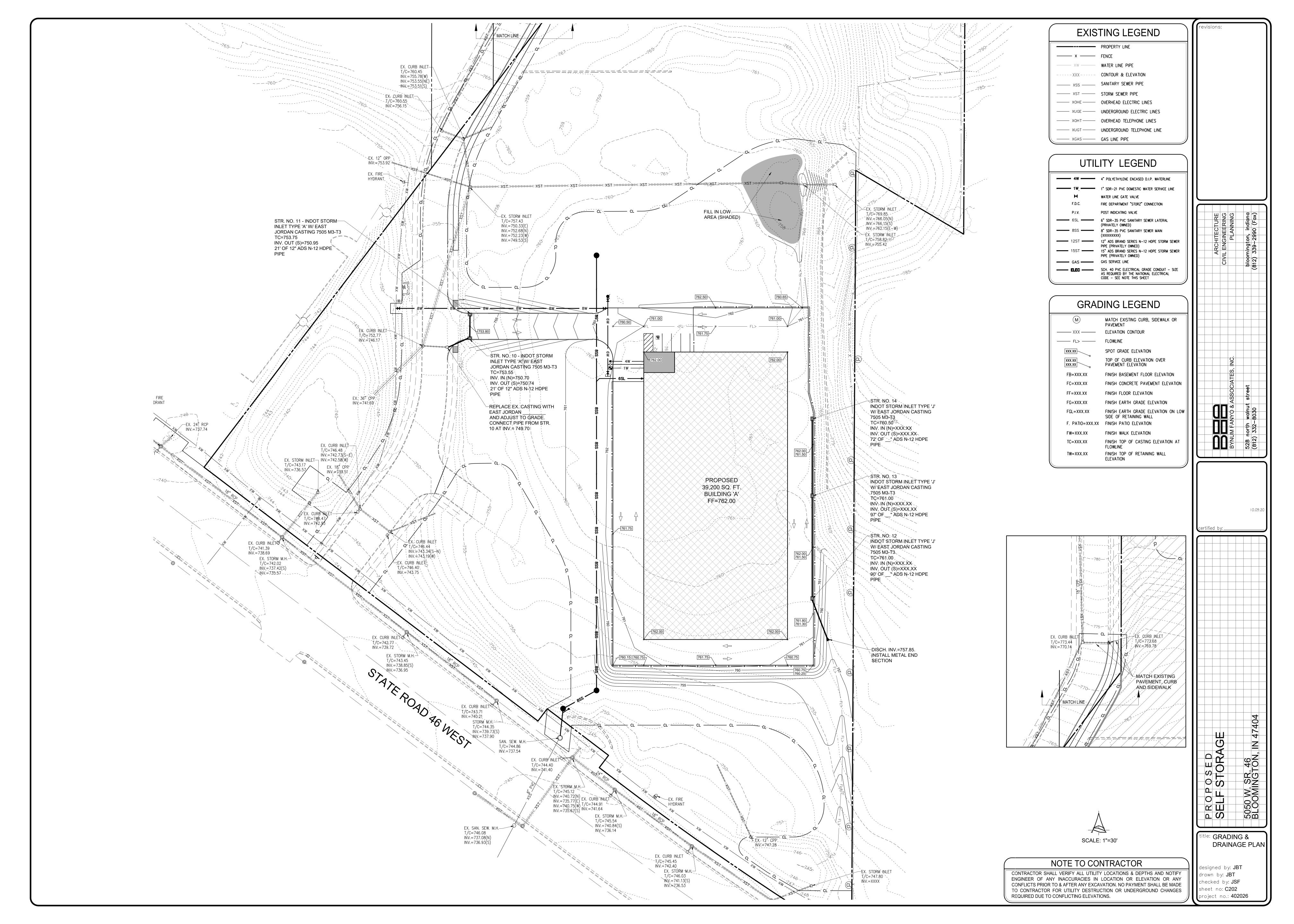


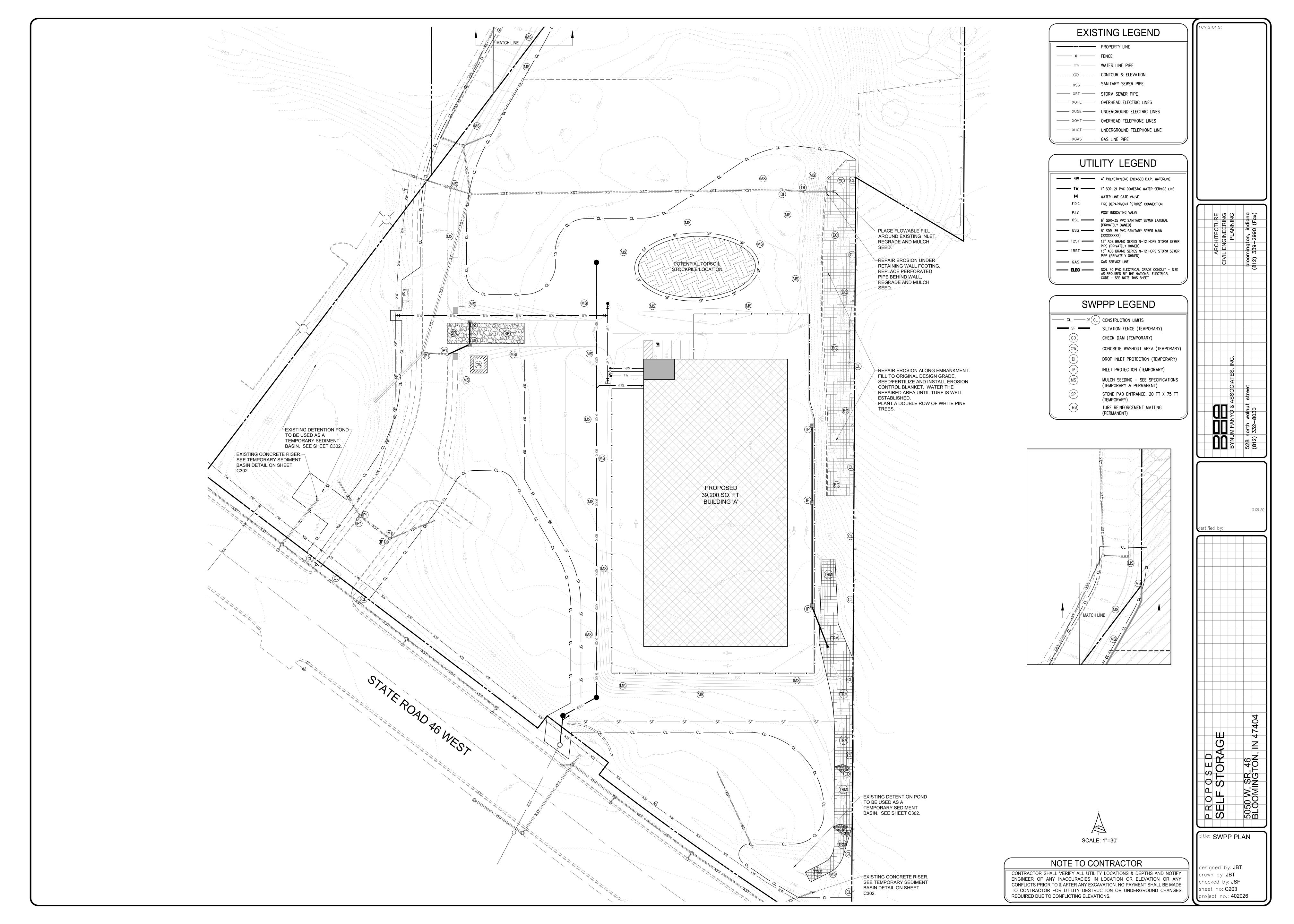




CBU STANDARD DRAWING 28







RULE 5 NARRATIVE

SECTION A - CONSTRUCTION PLAN ELEMENTS

A1. PLAN INDEX SHOWING LOCATIONS OF REQUIRED ITEMS: REFER TO THIS A2. 11 X 17 INCH PLAT SHOWING BUILDING LOT NUMBER/BOUNDARIES AND **ROAD LAYOUT/NAMES:** DOES NOT APPLY.

A3. NARRATIVE DESCRIBING PROJECT NATURE AND PURPOSE: THIS PROJECT WILL CONSIST OF THE CONSTRUCTION OF 6 BUILDINGS WITH ASPHALT DRIVE

A4. VICINITY MAP SHOWING PROJECT LOCATION: SEE COVER SHEET.

A5. LEGAL DESCRIPTION: SE QUARTER SECTION 5. TOWNSHIP 8 NORTH. RANGE 1 WEST IN PERRY TWP, MONROE COUNTY, INDIANA. 39.2193°N / 86.5999°W.

A6. LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS: LOCATION

OF PROPOSED SITE IMPROVEMENTS IS INDICATED ON PLAN SHEETS C201 AND C202. DEMOLITION OF EXISTING SITE IS SHOWN ON SHEET C201.

A7. HYDROLOGIC UNIT CODE: THE SITE DRAINS TO HUC14 AREA 05120202010100.

A8. NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS: NO OTHER STATE OR FEDERAL PERMITS ARE REQUIRED FOR THIS PROJECT. A9. SPECIFIC POINTS WHERE STORM WATER DISCHARGE WILL LEAVE THE SITE: SEE SHEET C202 AND C203.

A10. LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON/OR ADJACENT TO THE SITE: THERE ARE NO WETLANDS, LAKES OR NAMED WATERCOURSES ON OR IMMEDIATELY ADJACENT TO THE SITE. A11. IDENTIFY ALL RECEIVING WATERS: UNNAMED TRIBUTARY TO JACKS

DEFEAT CREEK IS THE RECEIVING WATER FOR THIS PROJECT. A12. IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUNDWATER: THERE IS NO EVIDENCE OF ANY CAVES OR SINKHOLES WITHIN THE CONSTRUCTION

A13. 100 YEAR FLOOD PLAINS, FLOODWAYS, AND FLOODWAY FRINGES: THERE ARE NO REGULATED FLOODPLAINS, FLOODWAYS OR FRINGES WITHIN THE PROPERTY LIMITS.

A14. PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK **DISCHARGE:** 100 YEAR PRE=XX / 100 YEAR POST=XX CFS

A15. ADJACENT LAND USE, INCLUDING UPSTREAM WATERSHED: ADJACENT LAND USES CONSIST OF A MIX OF COMMERCIAL AND RESIDENTIAL TO THE NORTH, SOUTH AND WEST AND ALL COMMERCIAL TO THE EAST.

A16. LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS: SEE THE CONSTRUCTION LIMITS ON PLAN SHEETS C201-C204 AND C206. A17. IDENTIFICATION OF EXISTING VEGETATIVE COVER: THE EXISTING SITE IS APPROXIMATELY 70% PAVED WITH SOME GRASS AND TREES.

A18. SOIL MAP INCLUDING DESCRIPTIONS AND LIMITATIONS: SEE THIS SHEET. A19. LOCATION, SIZE AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS: SEE PLAN SHEETS C203 AND C204.

A20. PLAN FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT: SEE SHEETS C201-C204 AND C206 FOR PROPOSED PARKING SPACES, SEWER AND STORM SEWER EXTENSIONS AND TREE PLANTINGS WITHIN

A21. LOCATIONS OF PROPOSED SOIL STOCKPILES, BORROW AND/OR DISPOSAL **AREAS:** SEE SHEET C203.

EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO SHOW DETAILED DRAINAGE PATTERNS: SEE SHEETS C202 AND C203. EXISTING CONTOURS SHOWN ARE AT 1 FT INTERVALS.

A23. PROPOSED FINAL TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO SHOW **DETAILED DRAINAGE PATTERNS:** SEE PLAN SHEETS C202 AND C203. PROPOSED CONTOURS SHOWN ARE AT 1 FT INTERVALS.

<u>SECTION B - CONSTRUCTION COMPONENT</u>

B1. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH THE CONSTRUCTION ACTIVITIES: SEE THE TABLE ENTITLED "POTENTIAL STORMWATER POLLUTANTS MATERIAL HANDLING AND SPILL PREVENTION" ON A. THE MOST ABUNDANT POLLUTANT CAUSED BY CONSTRUCTION WOULD BE SOIL SUSPENDED IN STORM WATER RUNOFF. B. FUEL, OILS, AND OTHER FLUIDS ASSOCIATED WITH THE CONSTRUCTION EQUIPMENT COULD POSSIBLY RUNOFF AS WELL. TRASH ASSOCIATED WITH HUMAN ACTIVITY, INCLUDING CONSTRUCTION

RELATIVE TO LAND DISTURBING ACTIVITIES: THE FOLLOWING IS THE SEQUENCE FOR EROSION CONTROL IMPLEMENTATION: 1. THE CONTRACTOR SHALL ENSURE ALL PERSONNEL ON THE PROJECT ARE FAMILIAR WITH THE APPROPRIATE EROSION CONTROL MEASURES. THIS

2. SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

SHALL INCLUDE A VISUAL PRESENTATION OF SATISFACTORY AND UN-SATISFACTORY EXAMPLES OF EROSION CONTROL FEATURES AND

2. CONTACT THE TOWN OF ELLETTSVILLE PLANNING DEPT. PRIOR TO COMMENCING CONSTRUCTION.

3. INSTALL SILT FENCE WHERE SHOWN IN THE PLANS.

4. INSTALL SEDIMENT BASKETS IN THE EXISTING INLETS ALONG MORTON

6. PERFORM CONSTRUCTION ACTIVITIES AS SHOWN ON THE PLANS.

DO NOT DISTURB TURF AREAS OUTSIDE OF CONSTRUCTION LIMITS SO THAT

5. INSTALL STONE PAD ENTRANCE TO THE SITE.

TURF ACTS AS A VEGETATIVE FILTER STRIP. 7. ALL EROSION CONTROL STRUCTURES SHALL BE KEPT IN WORKING ORDER AND INSPECTIONS ARE CONDUCTED WEEKLY, AFTER EACH

MEASURABLE RAIN EVENT, AND DAILY AS NECESSARY WITH EVERY DAY 8. UPON COMPLETION OF CONSTRUCTION OF ALL IMPROVEMENTS

REDISTRIBUTE TOP SOIL TO ALL PROPOSED GRASSED AREAS. MULCH SEED ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF ALL EARTHMOVING AND UNDERGROUND UTILITY WORK IN ACCORDANCE WITH THE MULCH SEEDING SPECIFICATIONS ON SHEET C402. WATER SEEDED AREAS UNTIL MATURE TURF IS ESTABLISHED. FERTILIZER MAY BE USED ONLY IF SOIL TESTING INDICATES THE NEED FOR FERTILIZER.

9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON THE ESTABLISHMENT OF MATURE GRASS TURF.

B3. STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS: SEE SHEET C203 AND THE DETAIL ON SHEET C403.

B4. SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS: SHEET FLOW AREAS SHALL BE TEMPORARILY OR PERMANENTLY SEEDED DEPENDING ON THE STAGE OF CONSTRUCTION.

B5. SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS: THERE WILL BE NO SIGNIFICANT CONCENTRATED FLOW AREAS THAT WILL REQUIRE SEDIMENT CONTROL OTHER THAN SEEDING.

B6. STORM SEWER INLET PROTECTION MEASURE LOCATION: SEE SHEET C203. THE EXISTING INLETS ALONG MORTON ST. ARE TO BE PROTECTED VIA THE INLET PROTECTION DETAIL SHOWN ON THIS SHEET.

B7. RUNOFF CONTROL MEASURES: SEE SHEET C203 AND THE DETAILS B8. STORMWATER OUTLET PROTECTION SPECIFICATIONS: STORM SEWER PIPES

WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM. B9. GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS: DOES

NOT APPLY TO THIS PROJECT. B10. LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE: SEE PLAN SHEETS C203 AND C204

AS WELL AS THE DETAILS ON C402 AND C403. B11. TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON: FOR WINTER/LATE WINTER PERIODS UTILIZE THE "DORMANT SEEDING & FROST SEEDING" PRACTICE. THERE SHOULD BE NO DELAY IN APPLYING SEED TO IDLE/INACTIVE AREAS OR AREAS THAT ARE ANTICIPATED TO BECOME IDLE/INACTIVE FOR MORE THAN 14 DAYS.

B12. PERMANENT SURFACE STABILIZATION SPECIFICATIONS: PERMANENT STABILIZATION SHALL OCCUR AS EARLY AS POSSIBLE DURING CONSTRUCTION OR AREAS TO BE IDLE OR INACTIVELY WORKED FOR 6 MONTHS OR MORE.

<u>SECTION C - POST CONSTRUCTION COMPONENT</u>

PREPARED FOR THIS PROJECT.

C1. DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH WITH THE PROPOSED LAND USE: THE MAIN POST CONSTRUCTION POLLUTANTS WILL COME FROM THE PROPOSED DRIVE AISLES. POLLUTANTS MAY INCLUDE CAR FUEL, OIL, ANTIFREEZE, SUSPENDED SOLIDS, NITROGEN, PHOSPHORUS, COPPER, LEAD, AND ZINC.

C2. SEQUENCE DESCRIBING STORM WATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES: THE SITE CURRENTLY CONTAINS A DETENTION/WATER QUALITY POND.

C3. DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES: THE SITE CURRENTLY CONTAINS A DETENTION/WATER QUALITY

C4. LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS OF

EACH STORMWATER QUALITY MEASURE: SEE PLAN SHEETS C203 AND C204 AS WELL AS THE DETAILS BEGINNING ON SHEET C403. C5. DESCRIPTION OF MAINTENANCE GUIDELINES FOR PROPOSED POST CONSTRUCTION WATER QUALITY MEASURES: SEE THE BMP O&M MANUAL

ALL SPILLS REPORTED TO IDEM WITHIN 24 HOURS AFTER INCIDENT. ALSO, PROVIDE TO THE MONROE COUNTY HIGHWAY DEPARTMENT STORMWATER SERVICES 24 HOURS AFTER ANY REQUEST AS INDICATED ABOVE. CONTACT AT (812) 349-2960

B13. MATERIAL HANDLING AND SPILL PREVENTION PLAN: ALL MATERIALS

THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL CLEAN-UP KIT ON SITE

FOR RECOVERY OF PETROLEUM PRODUCT SPILLS AT ALL TIMES. IF A

ALLOWED TO LEAVE THE SITE, THE CONTRACTOR IS OBLIGATED TO NOTIFY

IDEM'S SPILL LINE AT (317) 233-7745 WITHIN 24 HOURS. THE CONTRACTOR

SHALL BE RESPONSIBLE FOR ALL FINES AND ANY LIABILITY ASSOCIATED WITH

SUCH AN EVENT. SEDIMENT LADEN WATER, WHICH OTHERWISE WOULD FLOW FROM THE PROJECT SITE, SHALL BE TREATED BY FROSION AND SEDIMENT

CONTROL MEASURES APPROPRIATE TO MINIMIZE SEDIMENTATION. ALL WATER

(INCLUDING STORMWATER, GROUNDWATER, OR ANY OTHER WATER) THAT

LEAVES THE CONSTRUCTION SITE MUST HAVE A TOTAL SUSPENDED SOLIDS

LEVEL OF LESS THAN 50 PARTS PER MILLION OR HAVE NO VISIBLE SEDIMENT.

THIS CAN BE DETERMINED ON SITE BY TAKING A SETTLEABLE SOLIDS SAMPLE

SHOULD BE EXPECTED THAT ALL MATERIALS NECESSARY TO CONSTRUCT THE

PROPOSED SITE IMPROVEMENTS WILL BE ENCOUNTERED ON SITE AT ONE TIME

OR ANOTHER. ALL MATERIALS THAT APPEAR ON SITE WILL BE ACCOMPANIED

WITH MSDS SHEETS IN ACCORDANCE WITH OSHA GUIDELINES AND THE CODE

OF FEDERAL REGULATION (CFR). MSDS SHEETS PROVIDE AMONG OTHER

ITEM B1 ABOVE FOR ADDITIONAL INFORMATION.

THINGS, THE PROCEDURES FOR CLEAN-UP OF SPILLS AND LEAKS. REFER TO

WITH AN IMHOFF CONE WITH A RESULT OF LESS THAN 0.5 ML PER LITER. IT

REPORTABLE AMOUNT OF SEDIMENT LADEN WATER OR OTHER POLLUTANT IS

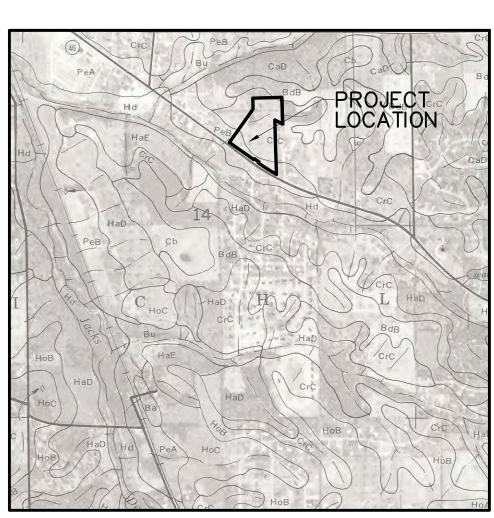
ON-SITE WILL BE HANDLED PER THE REQUIREMENTS OF THE MSDS SHEETS.

B14. MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED POLLUTION PREVENTION MEASURE: MONITORING AND MAINTENANCE OF ALL POLLUTION PREVENTION MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INSPECT ALL MEASURES AT LEAST ONCE A WEEK AND AFTER EACH STORM EVENT. THE CONTRACTOR SHALL PREPARE A WRITTEN REPORT FOR EACH INSPECTION NOTING CONDITIONS AND MAINTENANCE PROVIDED. A COPY OF EACH REPORT SHALL BE KEPT ON FILE AT THE PROJECT SITE. REFER TO EACH PREVENTION MEASURE DETAIL FOR CONSTRUCTION AND MAINTENANCE GUIDELINES.

ALL SPILLS REPORTED TO IDEM WITHIN 24 HOURS AFTER INCIDENT. ALSO, PROVIDE TO THE MONROE COUNTY HIGHWAY DEPARTMENT STORMWATER SERVICES 24 HOURS AFTER ANY REQUEST AS INDICATED ABOVE. CONTACT AT (812) 349-2960.

SUBMIT SELF-MONITORING INSPECTION TO THE MS 4 ASSISTANT WITHIN 48 HOURS OF ANY REQUEST

B15. EROSION & SEDIMENT CONTROLS SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS: THIS ITEM DOES NOT APPLY TO THIS PROJECT.



SOILS MAP SCALE: 1"=1/4 MILE

BdB - Bedford silt loam, 2 to 6 percent slopes. This gently sloping, moderately well drained soil is moderately deep to a fragipan. It is on narrow to broad ridgetops of the loess-covered uplands. Areas are generally narrow and long. They range from 3 to 100 acres and have a dominant size of

The available water capacity of this Bedford soil is moderate, and permeability is moderately above the fragipan and very slow within the fragipan. Surface runoff content from cultivated areas is medium. The organic matter content of the surface layer is low. The soil has a seasonal high water table at a depth of 2 to 4 feet during March and April. Because the fragipan is at a depth of 20 to 36 inches, root penetration is restricted and the water

This soil is moderately limited for dwellings without basements because of wetness and shrinking and swelling. It is severely limited for dwellings with basements because of wetness. This soil is severely limited for local roads and streets by potential frost action and low strength. The limitation is severe for septic tank absorption fields because of wetness and the very slowly permeable fragipan.

table is perched.

CrC — Crider silt loam, 6 to 12 percent slopes. This moderately sloping, deep, well drained soil is on narrow and broad convex ridgetops of the uplands. Areas are generally elongated. They range from 3 to 200 acres and have a dominant size of about 40 acres. The available water capacity of this Crider soil is high, and permeability is moderate. Runoff from cultivated areas is medium.

The organic matter content of the surface layer is low. This soil is moderately limited for dwellings with and without basements because of slope. This soil is severely limited for local roads and streets by low strength. Limitations are moderate for septic tank absorption fields because of slope and moderate

PeB - Pekin silt loam, 2 to 6 percent slopes. This gently sloping, moderately well drained soil is moderately deep to a fragipan. It is on broad low terraces along drainageways. Also, it is subject to rare flooding. Areas are generally narrow and irregular in shape. They range from 3 to 100 acres and have a dominant size of about 10 acres. The available water capacity of this Pekin soil is moderate, and

permeability is moderate above the fragipan and very slow within the fragipan. Surface runoff from cultivated areas is medium. The organic matter content of the surface layer is moderate. This soil has a seasonal high water table at a depth of 2 to 6 feet during March or April. Because the fragipan is at a depth of 24 to 36 inches, the water table is perched and root penetration is restricted. This soil is severely limited for dwellings and generally is unsuited to this use because of rare flooding. Wetness is also a severe limitation where houses are constructed with basements. This soil is severely limited for local roads because of potential frost action. The limitations for septic tank absorption fields are also severe because of wetness and the very slowly permeable fragipan.

Potential Storm Water Pollutants Material Handling and Spill Prevention Trade Name Remedial Action /Material Description **Pollutants** (1), (2), (3) Liquid or solid grains Normal Business Colorless, blue or yellow-Percholoroethylene, Seal drains and inlets with plasti Solvents methylene chloride, and or tape and collect excess,

trichloroethylene, petroleum (1), (2), (3), (4) distillates Site Construction Black solid Oil, petroleum distillates runoff before curing is complete Bridge Construction White solid Concrete washout areas shall be utilized and concrete disposed of properly once hardened (2) Roadway Striping Various colored liquids Metal oxides, stoddard Care should be taken to solvent, talc, calcium minimize carbonate, arsenic Site Construction Creamy white liquid Naphtha Compounds Construction Equipment Equipment washing shall be Vastewater from equipment .

executed In a location which does not cause wastewater to drain washing directly to storm sewers or ditches (i e. flat vegetated area) (2) Brown oily petroleum Storm structures incorporate a Construction Equipment, hooded outlet preventing hydrocarbon floatables from exiting site, (3), (4) On site storage tanks, cars. Colorless, pale brown or Benzene, ethyl benzene. Storage tanks shall have pink petroleum hydrocarbon toluene, xylene, MTBE mergency storage capacity below construction equipment, fueling operations tank in case of rupture, 3'x3'x6" spill pans shall be used during fueling. (3), (4) Bpetroleum distillate, oil and Storage tanks shall hove On site storage tanks cars, construction grease, naphthalene, xylenes emergency storage capacity below equipment, fueling lank in case of rupture, 3x3x6" spill pans shall be used during operations fueling. (3), (4) "x3'x6" spill pans shall be used Cleaning Operations, Coal oil, petroleum during fueling operations and hydrocarbon cleaning of equip. to catch excess, (1), (2), (3), (4) Construction Equipment, Ethylene glycol, propylene Coolant glycol, heavy metals

This table was provided for general information only to supplement information used in the Rule 5 permitting process. The contractor is responsible for material handling and spill mitigation procedures.

Trash. debris. refuse

Soil sediment

Trash. debris. refuse

Erosion control measures (this

Trash cans shall be utilized on

during and after construction

1. All excess materials shall be collected and disposed of in accordance with all federal, state and local regulations. 2 Material shall not be applied immediately preceding, during or following rainfall (when applicable). 3. Spillage should be cleaned immediately by a trained individual and disposed of per Note (2). 4. Store in sealed containers appropriate for specific use.

Soil Erosion

Solid Waste

Exposed Soi

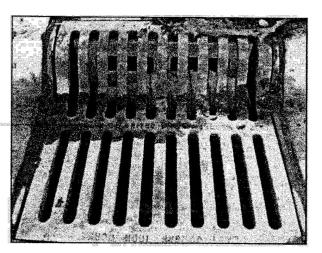
Normal Business

Operation

TEMPORARY CURB & PAVED AREA INLET PROTECTION

Insert (Basket) Curb Inlet Protection

Insert (basket) curb inlet protection is a temporary sediment control measure consisting of a metal frame or basket that is used to support a geotextile fabric. The system is installed under the storm sewer grate.





Purpose

To minimize sediment from entering the storm sewer system while allowing runoff to enter the storm sewer system in the event of excessive storm events. This measure traps sediment associated with small storm events below the grade of the paved area. This measure does not place an obstruction in the street to trap sediment and is especially conducive to stages of construction when the public has access to the project site.

Note: This measure should be used in conjunction with other sediment control measures.

Specifications

Contributing Drainage Area:

One-quarter acre maximum.

Runoff from a two-year frequency, 24-hour storm event entering a storm drain without bypass flow.

Location

At curb inlets on paved roads and parking lots.

• Down grade from construction activities (e.g., individual home sites).

Materials

 Metal frame or basket with a top width and length such that the frame fits into the inlet. (The frame is supported by the structural integrity of the storm

• The metal frame or geotextile should be designed with a bypass to allow storm water to flow into the storm sewer system during excessive storm events.

• The system should be designed for ease of maintenance.

Geotextile fabric.

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month mini- mum life at temperatures of 0°F to 120°F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear incl 70 lbs./linear incl
Slurry Flow Rate	0.3 gal./min./sq. ft.	4.5 gal./min./sq.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq.

Installation

1. Remove the storm sewer grate and place the frame into the grate opening.

2. Place geotextile fabric into the frame and secure according to the manufac-

turer's recommendations. 3. Replace the storm sewer grate.

Maintenance

Inspect daily.

Remove accumulated sediment and debris after each storm event. Deposit

sediment in an area where it will not re-enter the paved area or storm drains. Replace or clean geotextile fabric as needed.

When the contributing drainage area has been stabilized, remove inlet pro-

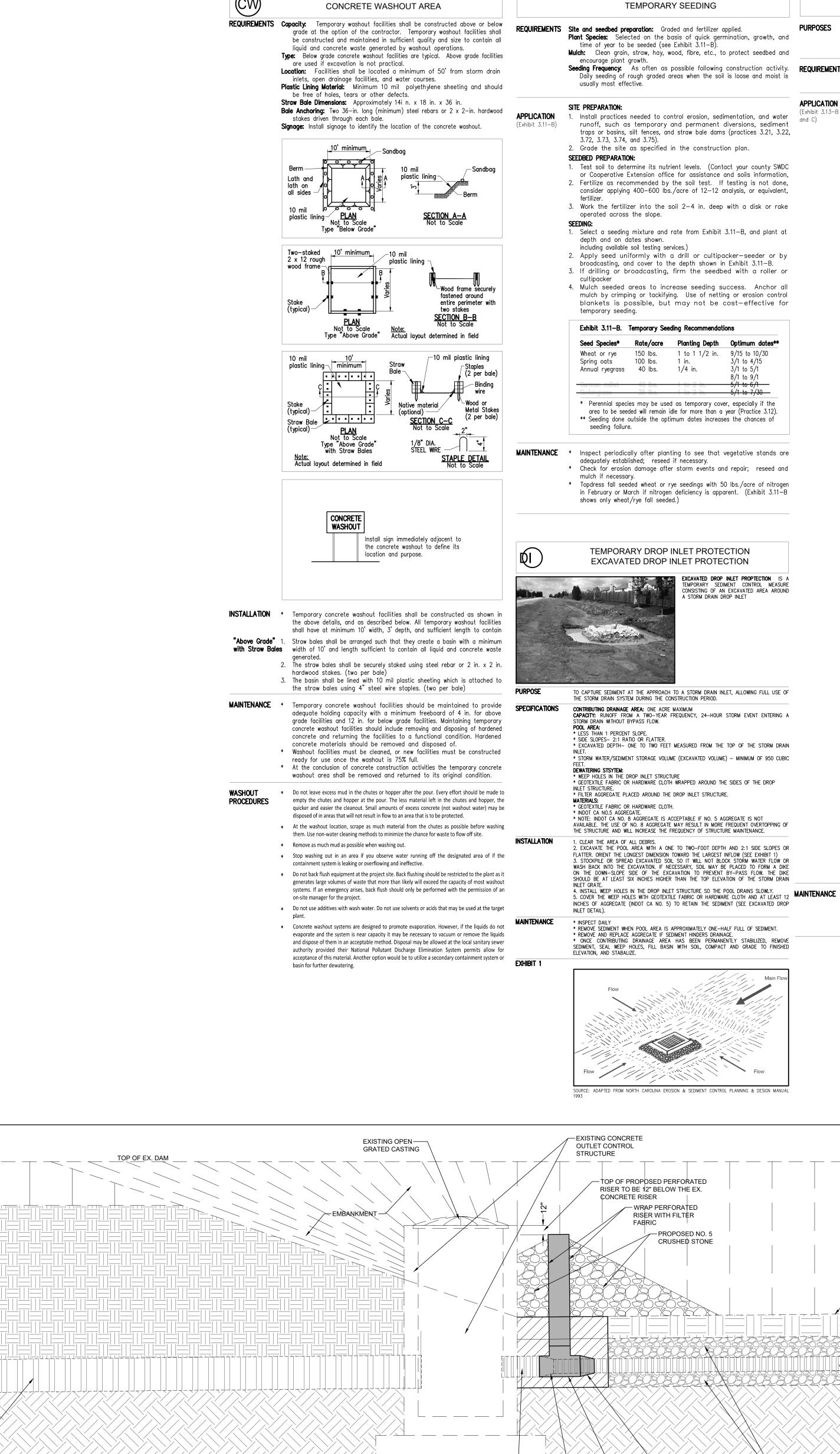
le:SWPPP **INFORMATION 8** DETAILS

10.09.2

9

50 W. SI

lesigned by: **JBT** drawn by: **JBT** checked by: **JSF** sheet no: C301 roject no.: **402026**



PRE CONSTRUCTION NOTE: EXCAVATE AND REMOVE THE EXISTING 8" TO 6" REDUCER, INSTALL

8"X8"X8" TEE, , THE PROPOSED 8" TO 6" REDUCER

AND CONNECT THE PROPOSED REDUCER TO THE

PROPOSED FILTER FABRIC AND PILE PROPOSED

EXISTING 6" UNDERDRAIN PIPE. INSTALL THE

PROPOSED 8" PERFORATED RISER WRAP WITH

NO. 5 CRUSHED STONE AROUND IT AS SHOWN.

EXISTING DISCHARGE -

TEMPORARY



* To provide early germination and soil stabilization in the spring. * To reduce sediment runoff to downstream areas. * To improve the visual aesthetics of the construction area.

Seeding Frequency: As often as possible following construction activity. REQUIREMENTS Site and seedbed preparation: Graded as needed, and lime and fertilizer applied. **Plant species:** Selected on the basis of soil type, adaptability to the region, and planned use of the area (see Exhibits 3.13—B and 3.13—C).

> APPLICATION SITE PREPARATION: Grade the area to be seeded. 2. Install needed erosion/water runoff control practices, such as temporary or permanent diversions, sediment basins, silt fences, or straw bale dams (Practices 3.21, 3.22, 3.72, 3.74 or 3.75). FOR DORMANT SEEDING

* To repair previous seedings.

Site and seedbed preparation and mulching can be done months ahead of actual seeding or if the existing ground cover is adequate, seeding can be directly into it. Seeding dates: Dec. 1-Feb. 28 (north of US 40), Dec. 10-Jan. 15 (south of US 40).

PRACTICE 3.11

1. Broadcast Fertilizer as recommended by a soil test; or if testing was not done consider applying 400-600 lbs./ acre of 12-12-12 analysis or equivalent, 2. Apply mulch upon completion of grading (Practice 3.15). Select an appropriate seed species or mixture from Exhibit 3.13—B or Exhibit 3.13—C, and broadcast on top of the mulch and/or into existing ground

cover at rate shown. FOR FROST SEEDING Seed is broadcast over the prepared seedbed and incorporated into the soil by natural freeze—thaw action. Seeding dates: Feb. 28-Mar. 28 (north of US 40), Feb. 15-Mar. 15 (south of US 40). 1. Broadcast Fertilizer as recommended by a soil test; or if testing was not done consider applying 400-600 lbs./ acre of 12-12-12 analysis or equivalent,

> Apply mulch upon completion of grading (Practice 3.15). Select an appropriate seed species or mixture from Exhibit 3.13-B or Exhibit 3.13—C, and broadcast on top of the mulch and/or into existing ground cover at rate shown. Do not work the seed into the soil.

> > Exhibit 3.13-B. Temporary Dormant or Frost Seeding Recommendations. Rate per acre Wheat or rve 150lbs. Spring oats 150 lbs. 60 lbs. Annual ryegrass * Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year (Practice 3.12).

Exhibit 3.13-C. Permanent Dormant of Frost Seeding Recommendations. This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties, slope aspect and the tolerance of each species to shade and droughtiness. Seed species* Rate per acre Optimum soil pH OPEN AND DISTRIBUTED AREAS (REMAINING IDLE MORE THAN 1 YR) 50 to 75 lbs. 1. Perennial ryearass 5.6 to 7.0 + white or ladino clover* 1 1/2 to 3 lbs. 30 lbs. 2. Kentucky bluegrass 5 lbs. + switchgrass + timothy + perennial ryegrass 1 1/2 to 3 lbs. + white or ladino clover* 5.6 to 7.0 3. Perennial ryegrass 22 to 45 lbs. 22 to 45 lbs. + prairie switchgrass 50 to 75 lbs. 5.5 to 7.5 4. Prarie switch arass + white or ladino clover* 1 1/2 to 3 lbs STEEP BANKS AND CUTS, LOW MAINTENANCE AREAS (NOT MOWED). 2. Prarie switch grass 50 to 75 lbs. 5.5 to 7.5 + white or ladino clover* 1 1/2 to 3 lbs 5.5 to 7.5 3. Prarie switch arass 50 to 75 lbs. + red clover* 15 to 30 lbs. 4. Orchardgrass 30 to 45 lbs. 5.6 to 7.0 15 to 30 lbs. + red clover* + ladino clover* 1 1/2 to 3 lbs. + prairie euitaharase 30 to 45 lbs. LAWNS AND HIGH MAINTENANCE AREAS

160 to 210 lbs. 2. Perennial ryegrass (turf-type) 70 to 90 lbs. 5.6 to 7.0 105 to 135 lb 5.6 to 7.5 3. Prarie switch grass (turf-type) 195 to 250 lbs. 30 to 45 lbs. + bluegrass CHANNELS AND AREAS OF CONCENTRATED FLOW 150 to 225 lbs. 5.6 to 7.0 Parennial ryegrass + white or ladino clover* $1 \frac{1}{2}$ to 3 lbs. 5.5 to 7.5 30 lbs. 2. Kentucky bluegrass + switchgrass 5 lbs. + timothy + perennial ryegrass 15 lbs. + white or ladino clover* 1 1/2 to 3 lbs. 3. Prarie switch grass 150 to 225 lbs. 5.5 to 7.5 + white or ladino clover* 1 1/2 to 3 lbs. 5.5 to 7.5 4. Prarie switch grass 150 to 225 lbs. + perennial bluegrass 22 to 30 lbs. 22 to 30 lbs. + kentucky bluegrass * For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring—seeded, although the grass may be fall—seeded and the legume frost—seeded; (c) if legumes are fall—seeded, do so in early fall.

rate by 50% over the conventional rate. Apply 200—300 lbs./acre of 12—12—12 or equivalent fertilizer between Apr. 5 and May 10 or during periods of vigorous growth. * Re—seed and mulch any areas that have inadeauate cover by mid to late Ap For best results, re-seed within the recommended dates shown in Practices 3.11

for temporary seeding or 3.12 for permanent seeding.

QUALITY POND FLOOR

-EX. 6" PERFORATED UNDERDRAIN PIPE

- FXISTING CRUSHED

AGGREGATE ABOVE AND

BELOW THE UNDERDRAIN

—PROPOSED 8" TO 6"

EX. 8" TO 6" 8"X8"X8" TEE REDUCER

POST CONSTRUCTION NOTE: AFTER THE SITE

WORK IS COMPLETED AND NEW GRASS IS AT A

MATURE HEIGHT EXCAVATE AND REMOVE ALL

NOTE AND RESTORE ALL BACK TO ORIGINAL.

COMPONENTS LISTED IN THE PRE CONSTRUCTION

REDUCER

└─EX. 8" PIPE

NOTE: If using mixtures other than those listed here, increase the seeing

PRACTICE 3.12 PERMANENT SEEDING

REQUIREMENTS Site and seedbed preparation: Graded, and lime and fertilizer applied. **Plant Species:** Selected on the basis of soil type, soil pH, region of the state, time of year, and planned use of the area to be seeded (see encourage plant growth. The mulch may need to be anchored to reduce

removal by wind or water, or erosion control blankets may be considered. APPLICATION Permanently seed all final grade areas (e.g., landscape berms, drainage swales, (Exhibit 3.12—B, erosion control structures, etc.) as each is completed and all areas where C, and D) additional work is not scheduled for a period of more than a year. SITE PREPARATION: 1. Install practices needed to control erosion, sedimentation, and runoff

prior to seeding. These include temporary and permanent diversions, sediment traps and basins, silt fences, and straw bale dams (Practices 3.21, 3.22, 3.72, 3.73, 3.74, and 3.75). Grade the site and fill in depressions that can collect water. 3. Add topsoil to achieve needed depth for establishment of vegetation (Practice 3.02).

SEEDBED PREPARATION: 1. Test soil to determine pH and nutrient levels. (Contact your county SWDC or Cooperative Extension office for assistance and soils information, including available soil testing services.) 2. If soil pH is unsuitable for the species to be seeded, apply lime according to test recommendations 3. Fertilize as recommended by the soil test. If testing was not done,

consider applying 400-600 lbs./acre of 12-12-12 analysis, or equivalent, fertilizer. 4. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2—4 in. deep with a disk or rake operated across the slope (Exhibit 3.12—B).

Optimum seeding dates are Mar. 1—May 10 and Aug. 10—Sept. 30. Permanent seeding done between May 10 and Aug. 10 may need to be irrigated. As an alternative, use temporary seeding (Practice 3.11) until the preferred date for permanent seeding. 1. Select a seeding mixture and rate from Exhibit 3.12—C, based on site **INSTALLATION** maintenance. 2. Apply seed uniformly with a drill or cultipacker—seeder (Exhibit

3.12-D) or by broadcasting, and cover to a depth of 1/4-1/2 in. 3. If drilling or broadcasting, firm the seedbed with a roller or 4. Mulch all seeded areas (Practice 3.15).Consider using erosion blankets on sloping areas (Practice 3.17). (NOTE: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

Exhibit 3.12-C. Permanent Seeding Recommendations This table provides several seeding options. Additional seed species and 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 droughtiness. Seed species and mixtures Rate per acre Optimum soil pH OPEN AND DISTURBED AREAS (REMAINING IDLE MORE THAN 1 YR.) 35 to 50 lbs. 5.6 to 7.0 I. Perennial rvearass + white or ladino clover* 1 to 2 lbs. 20 lbs. 5.5 to 7.5 2. Kentucky bluegrass + switcharass 3 lbs. + timothy 4 lbs. + perennial ryegrass + white or ladino clover* 1 to 2 lbs. 5.6 to 7.0 Perennial ryegrass 15 to 30 lbs. + prarie switch grass 15 to 30 lbs. 35 to 50 lbs. 5.5 to 7.5 4. Prarie switch arass + ladino or white clover* 1 to 2 lbs STEEP BANKS AND CUTS, LOW MAINTENANCE AREAS (NOT MOWED)

35 to 50 lbs. 5.5 to 7.5 2. Prarie switch grass + white or ladino clover* 1 to 2 lbs. 3. Prarie switch grass 35 to 50 lbs. 5.5 to 7.5 + red clover* 10 to 20 lbs. (Recommended north of US 40) 20 to 30 lbs. 5.6 to 7.0 4. Orchardarass + red clover* 10 to 20 lbs + ladino clover* 1 to 2 lbs. + prairie switchgross 20 to 30 lbs. (Recommended south of US 40) LAWNS AND HIGH MAINTENANCE AREAS 105 to 150 lbs. 5.5 to 7.0

2. Perennial ryegrass (turf-type) 45 to 60 lbs. 5.6 to 7.0 70 to 90 lbs + bluearass 5.5 to 7.5 3. Prarie switch grass(turf-type)130 to 107 lbs. + bluegrass 20 to 30 lbs. CHANNELS AND AREAS OF CONCENTRATED FLOW 5.6 to 7.0 1. Perennial ryegrass 100 to 150 lbs. + white or ladino clover* 1 to 2 lbs 5.5 to 7.5 2. Kentucky bluegrass 20 lbs. + switchgrass + timothv 4 lbs. + perennial ryegrass 10 lbs. + white or ladino clover* 1 to 2 lbs. 5.5 to 7.5 3. Prarie switch grass 100 to 150 lbs. 1 to 2 lbs + ladino or white clover* 5.5 to 7.5 Prarie switch grass 100 to 150 lbs. + Perennial ryegrass 15 to 20 lbs. + Kentucky bluegrass 15 to 20 lbs.

* For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded (Practice 3.13); and (c) if legumes are fall—seeded, do so in early

NOTE: An oat or wheat companion or nurse crop may be used with any of the above permanent seeding mixtures. If so, it is best to seed during the fall seeding period, especially after Sept. 15. and at the following rates: spring oats—1.4 to 3/4 bu./acre; wheat—no more than 1/2 bu./acre.

MAINTENANCE * Inspect periodically, especially after storm events, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish—green seedlings; uniform density with nurse plants, legumes, and grasses well inter-mixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)

* Plan to add fertilizer the following growing season according to soil test MAINTENANCE recommendations. * Repair damaged, bare or sparse areas by filling any gullies, re-fertilizing, over- or re-seeding, and mulching * If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over—seeding or by re—seeding and mulching after re-preparing the seedbed.

* If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.) * If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

BYNUM FANYO & ASSOCIATES, INC.

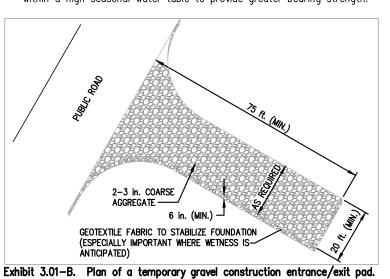
TEMPORARY SEDIMENT BASIN

PRACTICE 3.01 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PAD

* To provide a stable entrance/exit condition from the construction site. * To keep mud and sediment off public roads.

Mulch: Clean grain, straw, hay, wood, fibre, etc., to protect seedbed and REQUIREMENTS Material: 2-3 in. washed stone (INDOT CA No. 2) over a stable foundation. (Exhibit 3.01-B) **Thickness:** 6 in. minimum Width: 20 ft. minimum or full width of entrance/exit roadway, whichever is

Length: 75 ft. minimum. The length can be shorter for small sites such as for an individual home. Washing facility (optional): Level area with 3 in. washed stone minimum or a commercial rack, and waste water diverted to a sediment trap or basin (Practice 3.72) Geotextile fabric underliner: May be used under wet conditions or for soils within a high seasonal water table to provide greater bearing strength.



. Avoid locating on steep slopes or at curves in public roads. conditions, soil pH, intended land use, and expected level of (Exhibit 3.01-C) 2. Remove all vegetation and other objectionable material from the foundation area, and grade and crown for positive drainage. 3. If slope towards the road exceeds 2%, construct a 6-8 in.—high water bar (ridge) with 3:1 side slopes across the foundation area about 15 ft.

(see Exhibit 3.01-C).

4. Install pipe under the pad if needed to maintain proper public road drainage. 5. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability. 6. Place stone to dimensions and grade shown in the erosion/sediment control plan, leaving the surface smooth and sloped for drainage. 7. Divert all surface runoff and drainage from the stone pad to a sediment

from the entrance to divert runoff away from the road (Practice 3.24)

Exhibit 3.01-C. Temporary construction entrance/exit pad with diversion

ridge where grade exceeds 2%.

MAINTENANCE * Inspect entrance pad and sediment disposal area weekly and after storm events or heavy use. Reshape pad as needed for drainage and runoff control. * Top dress with clean stone as needed.

* Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or basin. * Repair any broken road pavement immediately.

PRACTICE 3.61-B

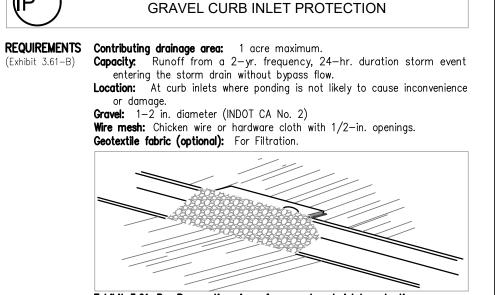


Exhibit 3.61-B. Perspective view of a gravel curb inlet protection. **INSTALLATION** 1. Install gravel curb inlet protections as soon as the streets are paved in (Exhibit 3.61-B) a new development situation or before land-disturbing activities in

2. Place wire mesh over the curb inlet opening and/or grate so it extends at at least 12 in. beyond both top and bottom of the opening/grate. 3. Install geotextile fabric over the wire mesh for additional filtration 4. Pile gravel over the wire mesh to anchor it against the curb, covering the inlet opening completely.

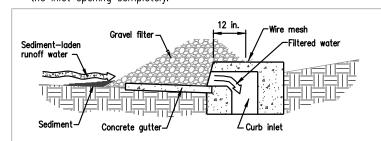


Exhibit 3.61-C. Cross-section detail of a gravel curb inlet protection After each storm event, remove sediment and replace the gravel; replace

Periodically remove sediment and tracked—on soil from the street (but not by flushing with water) to reduce the sediment load on the curb inlet * Inspect periodically, and repair damage caused by vehicles. * When the contributing drainage area has been stabilized, remove the gravel,

wire mesh, geotextile fabric, and any sediment, and dispose of them

(SF) SEDIMENT BARRIERS & FILTERS Silt Fence A silt fence is a temporary barrier of entrenched geotex tile fabric stretched across and attached to supporting posts and installed on the contour to intercept and treat sediment-laden storm water runoff from small, unvegetated drainage areas.

To trap sediment from small, disturbed areas by reducing the velocity of sheet flow. Silt fences capture sediment by ponding water to allow deposition, not by Note: Silt fence is not recommended for use as a diversion and should not be used across a stream, channel, ditch, swale, or anywhere that

> Drainage Area Limited to one-quarter acre per 100 linear feet of fence Further restricted by slope steepness (see Table 1). Effective Life

Six months (maximum). Location Installed parallel to the slope contour. Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow

Accessible for maintenance (removal of sediment and silt fence repair).

Table 1. Slope Steepness Restrictions Percent Slope Maximum Distance 100 feet 5% – 10%¹ 20:1 to 10:1 50 feet 10% – 20%¹ 10:1 to 5:1 25 feet Consider other alternatives. Note: Multiple rows of silt fence are not recommended on the same slope Trench Depth – eight inches minimum.

 Width – four inches minimum. After installing fence, backfill with soil material and compact (to bury and anchor the lower portion of the fence fabric). Note: An alternative to trenching is to use mechanical equipment to plow

Materials and Silt Fence Specifications Fabric woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.

SILT FENCE Table 2. Geotextile Fabric Specifications for Silt Fence (minimum) Physical Property Woven
Geotextile Fabric iltering efficiency Textile strength at 20% elongation
Standard strength
Standard strength
Extra strength
S0 lbs. per linear inch
50 lbs. per linear inch
70 lbs. per linear inch Slurry flow rate 0.3 gal./min./square feet 4.5 gal./min./square feet Water flow rate 15 gal./min./square feet 220 gal./min./square fee 70% 85% 7 feet Note: Silt fences can be purchased commercially,

 Height a minimum of 18 inches above ground level (30 inches maximum). Reinforcement fabric securely fastened to posts with wood lathe. Support Posts

 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric). • Eight feet maximum if fence is supported by wire mesh fencing. Six feet maximum for extra-strength fabric without wire backing.

2. Excavate an eight-inch deep by four-inch wide trench along the entire length

Prefabricated silt fence (see Exhibits 1, 2, and 3) 1. Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).

3. Install the silt fence with the filter fabric located on the up-slope side of the excavated trench and the support posts on the down-slope side of the trench.

4. Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 1

inches of the filter fabric should extend into the trench. (If it is necessary to join the ends of two fences, use the wrap joint method shown in Exhibit 3.) 5. Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up-slope side of the trench. 6. Backfill the trench with soil material and compact it in place. Note: If the silt fence is being constructed on-site, attach the filter fabric to the support posts (refer to Tables 1 and 2 for spacing and geotextile specifications) and attach wooden lathe to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following

Inspect within 24 hours of a rain event and at least once every seven calendar

specifications as outlined within this measure. • Remove deposited sediment when it is causing the filter fabric to bulge or ment deposits, grade the site to blend with the surrounding area, and

steps 1 through 6 above.

Exhibit 3

• If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Note: All repairs should meet when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sedi-

e:SWPPP DETAILS

10.09.2

esigned by: **JBT** drawn by: **JBT** checked by: JSF sheet no: C302 roject no.: 402026